MSTP Pamphlet 5-0.2

Operational Planning Team Leader's Guide

MAGTF Staff Training Program (MSTP)

U.S. Marine Corps
May 2017

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Operational Planning Team Leader's Guide

This pamphlet supports the academic curricula of the Marine Air Ground Task Force Staff Training Program (MSTP).

U.S. Marine Corps
May 2017

UNITED STATES MARINE CORPS
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2042 South Street
Quantico, Virginia 22134-5001

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FOREWORD

1. PURPOSE. MSTP Pamphlet 5-0.2, *Operational Planning Team Guide*, is designed to assist the cognizant staff officer in establishing an operational planning team (OPT) and describe OPT activities.

2. SCOPE. This guide seeks to provide OPT Leaders and team members with a thorough understanding of how to organize and run an OPT as a key element of the Marine Corps Planning Process (MCPP). This guide is derived from years of observations from active duty and retired military officers at the MAGTF Staff Training Program (MSTP) in Quantico, VA as well as from practitioners throughout the operating forces. While this guide's primarily focus is on OPTs at the Marine Expeditionary Force (MEF) and Marine Expeditionary Brigade (MEB) levels, the techniques it teaches apply to OPTs at any staff level.

This collection of best practices is not meant to be prescriptive or authoritative but rather to serve as a simple addendum to existing MCPP doctrine. Feedback from users throughout the Marine Corps and the Department of Defense is encouraged.

3. SUPERSESSION. MSTP Pamphlet 5-0.2, *Operational Planning Team Guide* of 14 May 2012.

4. CHANGES. Recommendations for improvements to this pamphlet are encouraged from commands as well as from individuals. The attached User Suggestion Form can be reproduced and forwarded to:

Director, MAGTF Staff Training Program Division
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Quantico, Virginia 22134-5001

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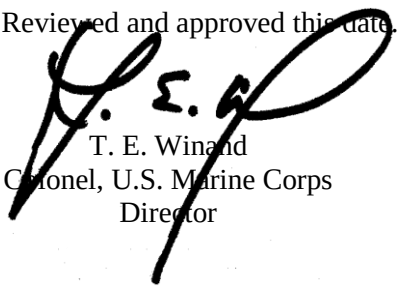

T. E. Winand
Colonel, U.S. Marine Corps
Director

Throughout this pamphlet, masculine nouns and pronouns are used for the sake of simplicity. Except where otherwise noted, these nouns and pronouns apply to either gender.

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Part I

The Operational Planning Team

An *operational planning team* (OPT) is a task-organized planning element that supports the Commander and his staff's decision-making process. Through its diverse composition, the OPT promotes an integrated planning effort that brings together the Commander, his subordinate Commanders, staff officers, and those subject matter experts necessary to develop comprehensive plans or orders. Integrating functional expertise ensures planners will consider all relevant factors, reduce omissions, and share information, resulting in a planning effort that is systemic, coordinated, and thorough.

1001. Role

The primary role of the OPT is to support the Commander in his decision making process by:

- Helping the Commander determine the correct set of problems as well as conceive and articulate a framework for solving them.
- Providing a common venue (the OPT) for the sharing of information.
- Integrating the planning efforts of the battle staff and subject matter experts (SME) throughout the Marine Air Ground Task Force (MAGTF).
- Coordinating planning activities across the warfighting functions, echelons of command, and physical battlespace to facilitate a unity of effort in support of mission accomplishment.

As a task-organized planning element, the OPT is an extension of regular staff action and coordination. At times, the staff may have a tendency to describe normal working group activity as an "OPT." This should be avoided, since an OPT is more than a working group. The effective use of an OPT harnesses the talents of an entire staff and guides it towards the creation of a coherent operations plan or executable order.

Members of the OPT must be aware of the planning activities at higher and adjacent headquarters to ensure their Commander's plans support and are coordinated with those of the other commands. The OPT also helps inform the planning activities of subordinate commands. OPTs need to share relevant information among subordinate Commanders and their staffs.

1002. Organization

a. Members

Members of the OPT should be knowledgeable in their respective functional areas and be well-versed in the Marine Corps Planning Process (MCPP). Regardless of the composition of the OPT, there must always be representatives with expertise from each warfighting function. See Figure 1-1.

The composition of the OPT will vary based on the mission, but normally consists of the following:

- Core: Future Ops / Future plans
  - OPT Leader
  - Assistant OPT Leaders/Facilitators
  - Principal staff plans officers
- Special staff representatives
- Subject matter experts as required by the mission

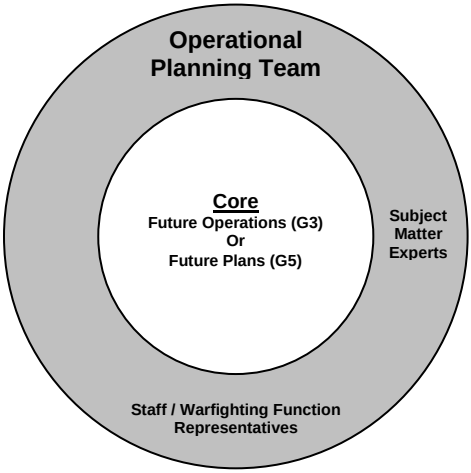


Figure 1-1: Operational Planning Team Organization

- Liaison officers (LNO) from subordinate, adjacent, and supporting commands
- Information Manager
- Recorder(s)

- Future Ops / Future Plans Clerks (C2PC operation, slide prep, general admin)

At lower levels of command with smaller staffs, such as Marine Expeditionary Units, regiments, groups, battalions, squadrons, and combat logistics elements, the planners and the executors are likely to be one and the same. As a result, they are limited by the number of events they can handle simultaneously, but within any particular event, their situational understanding is unparalleled. In these organizations, an OPT might be the Commander, executive officer, key staff officers (S-2, S-3, S-4, S-6), fire support coordinator, and other subject matter experts as required by the mission.

Higher level commands normally have dedicated planners with OPT(s) consisting of 30 or more members representing various capabilities and the relevant commands. While large groups are good for compiling information and raising situational awareness, the OPT generally functions better when informed by smaller working groups. Two examples are the OPT *core* and breakout groups.

> ***TTP:*** Small groups of no more than six to eight members provide an optimal balance between effective discussion and focused planning. These groups must always back-brief the OPT to vet information and ensure a common understanding.

> ***TTP:*** An effective model is an OPT with six to eight core members up front and functional representatives in the surrounding background to answer questions for the core members.

b. The OPT Core

The OPT Core is a select group of OPT members from the future operations section (within G-3) or future plans section (G-5) and other staff sections (e.g., the G-2 plans officer, G-3 force fires officers, G-4 plans officer, and G-6 plans officer) based upon the direction of the OPT Leader. The purpose of the OPT core is to expedite the planning process for the full OPT by remaining slightly ahead of the OPT procedurally and intellectually. The OPT core is able to brainstorm, identify problems, discuss concerns, and refine products before the full OPT meets to continue planning.

OPT core members must be able to think beyond their specialty. They should be Marine Air-Ground Task Force (MAGTF) officers – generalists who can see and understand the big picture, yet have a mastery of tactical fundamentals to understand the capabilities and limitations of the MAGTF, its adjacent organizations, and the enemy. The OPT core members must also be able to think at the level of their Commander and be capable of identifying the most essential elements among all the issues bearing on a problem. Moreover, the OPT Core is the primary group responsible for producing the plan or the order.

c. Breakout Group(s)

A breakout group is a select group of OPT members who focus on a particular element of the emerging plan, as compared to the OPT core which moves the entire planning process forward. Depending upon the task, breakout group members may be generalists (such as OPT core members) or subject matter experts (e.g. Economics, Governance, Justice).

> ***TTP:*** OPT leaders must ensure the efforts of a breakout group remain connected to the full OPT. Similarly, members of a breakout group must be prepared to incorporate their products and recommendations into the overall planning effort.

1003. Duties

a. Operational Planning Team Leader

The OPT Leader is the decision-maker—the final arbiter—in the OPT. He should be an expert in the use of the MCPP, and someone who the Commander trusts implicitly. The OPT leader interacts regularly with the Commander, Deputy Commander, Chief of Staff, and other principal staff officers. The relationships between the OPT Leader and Commanders, staff principals, and planners from higher and/or supporting commands are critical to the OPT's success.

> ***TTP:*** A SAW or SAMS graduate with the 0505 MOS should lead the OPT whenever possible.

The OPT leader normally comes from the G-3 future operations section or the G-5 plans section. He ensures the OPT's efforts adhere to the Commander's guidance throughout the planning process. He also tailors

the planning process to support the Commander and the circumstances. He establishes and manages the OPT's battle rhythm and takes responsibility for the quality and timeliness of OPT products.

b. Assistant Operational Planning Team Leaders

Depending on the size of the OPT or the complexity of the operations, there may be more than one assistant OPT leader. The assistant OPT leaders coordinate the OPT's efforts, build shared understanding, and help the OPT come to agreement. They normally function as facilitators, break-out group leaders, information managers, and/or recorders.

- **Facilitator**. The OPT facilitator directs and supervises the activities of the OPT. He enforces the OPT leader's battle rhythm and ensures all personnel participate in the process at the proper time. He coordinates and monitors the progress of designated break-out groups. Additionally, the facilitator ensures that members use doctrinal definitions when discussing military terms.

- **Information Manager**. The information manager (IM) handles and posts all information and requests for information (RFI). The information manager is responsible for ensuring the OPT compiles, organizes and posts information in a logical manner to aid the planning process and to preserve information for future reference. He coordinates with the command's information management officer to ensure compliance with the command's IM SOP.

> ***TTP:*** The IM must establish and distribute the IM plan before the OPT begins planning.

- **Recorder**. The recorder captures key information and lessons during planning, especially wargaming. He is also responsible for recording discussions with the Commander. A record of these conversations is critical to ensure the OPT is following the Commander's guidance.

c. Staff Representative

The staff representative is normally the plans officer for the respective section. He must be knowledgeable in his functional area, thoroughly familiar with the MCPP, and knowledgeable across all warfighting functions. The staff representative is the communication conduit between

the OPT and his principal staff officer. He must anticipate the needs of the OPT and task the experts in his staff section to provide information and products on time and in the correct format. The staff representative must synthesize all the input from his staff section so that the other members of the OPT understand the information. Finally, he must be able to think across the warfighting functions in terms of understanding how his functional area fits within the larger context.

> ***TTP:*** Consistent participation by the same individual on the OPT cannot be overemphasized.

Each staff section should have a designated OPT representative. A representative from the G-3 current operations section is vital to help maintain situational awareness of ongoing operations and facilitate the transition of the plan to current operations.

d. Subject Matter Experts

Subject matter experts are normally from the staff, subordinate, supporting, and adjacent commands, as well as from other departmental agencies (e.g., Office of Foreign Disaster Assistance, Federal Emergency Management Agency). These individuals provide their specific knowledge to the OPT and must be capable of "reaching back" to their parent organizations for additional support. They should be capable of operationalizing the broader concept within their functional expertise, as well as offering early cautions to initial brainstorming when they become aware of any show-stopper information.

e. Liaison Officers

The LNO is a Commander's personal representative and link to the staff, including the OPT. LNO(s) should be knowledgeable in their parent organization's capabilities and limitations and be familiar with their Commander's intent and concept of operations. They make recommendations and estimates, as well as relay their Commander's concerns to the staff. One of the most important pieces of information the LNO can pass is the current and projected capability of his command.

LNOs do not work for the OPT leader. They work for their unit Commander. However, they are equal participants in the OPT process. The OPT leader must ensure the LNOs have the sufficient time and means to remain in contact with their parent command.

f. Support Personnel

The future operations section or future plans section will normally include an operations chief and admin/ops clerks. It is impossible to overstate the value of the operations chief and his clerks. Well-trained non-commissioned officers relieve the OPT leader/facilitator(s) from routine tasks such as briefing slide preparation, Command and Control Personal Computer (C2PC) graphics development, and administrative tasks. By assuming responsibility for essential but routine tasks, they free the remainder of the OPT to plan and discuss issues.

Most importantly, the support personnel provide the information technology support to build and maintain web pages, overlays, briefs, and warning orders. They must be proficient on various systems and programs including C2PC, Microsoft Word and PowerPoint, and collaborative software programs and applications such as Command Post of the Future (CPOF), Defense Connect Online (DCO), and Adobe Connect (AC). Support personnel should also maintain a well-organized hardcopy library of relevant doctrinal publications.

> ***TTP:*** An expert in C2PC and PowerPoint that is experienced in developing slides and conveying meaning with both graphics and text should be identified and appointed early. This skillset cannot be overstated, and can save the OPT several man hours in the long run.

1004. Operational Planning Team and Staff Relationships

While the G-3 is normally responsible for the functioning of the OPT, the OPT is more than just a function of future operations. The OPT integrates the other staff sections' plans officers and subordinate, adjacent, and supporting unit LNO(s) into the planning process. The OPT transitions the approved operations plan or order to the current operations section for execution. See Figure 1-2.

a. Commander

The relationship between the Commander and the OPT leader is critical. The OPT leader must know how the Commander makes decisions in order to support the Commander's decision-making process. How does the Commander think? Is he analytical or intuitive? What are his concerns?

How does the Commander naturally assimilate information (graphically, textually, face-to-face, or some combination of them)?

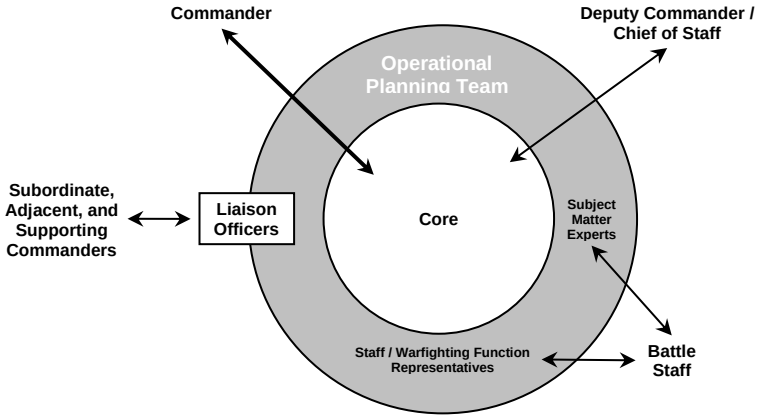


Figure 1-2: Staff Relationships

b. Deputy Commander and Chief of Staff

The Commander may delegate certain functions to the Deputy Commander. The Deputy Commander may also pass information and instructions to the OPT. The Chief of Staff directs, coordinates, and supervises the battle staff. He ensures the staff participates with the OPT in the planning effort, and establishes the command's battle rhythm. In addition to his authority over the staff, he too can receive and pass the Commander's decisions to the OPT. Additionally, the Chief of Staff directs the orders development step of the planning process, ensuring that participants are available and contributing effectively.

c. Battle Staff and Staff Representatives

See Appendix A for more information on the role of the battle staff during planning.

d. Other Planning Organizations

The OPT must also understand its relationship with the other organizations in the Command Element (Future Plans, Future Operations, Current Operations, and the Intelligence Operations Center. See Figure 1-3.

- **Future Plans**. The future plans section is under the staff cognizance of the G-5. The G-5 sends a planning representative to

the higher headquarters' staff to provide the MEF with advanced warning on possible future tasks and to shape those tasks before they become official requirements. These planners and/or LNO(s) will advise higher headquarters on the MEF's projected capabilities in order to assist the higher Commander in assigning missions, tasks, command relationships, and battlespace appropriate to the MEF. The future plans section may also provide representatives to adjacent units to de-conflict and eliminate redundancy of proposed actions between the MEF and those elements. Ultimately, liaison elements assist the OPT by ensuring MEF actions nest within higher headquarters' concept and are coordinated with adjacent units. The G-5 planners will also participate in OPT(s) that are run by the G-3 Future Operations planners. The initial role of the G-5 is to provide background information to the OPT regarding the status of operation plans (OPLAN) and Concept Plans (CONPLAN) relevant to the planning effort.

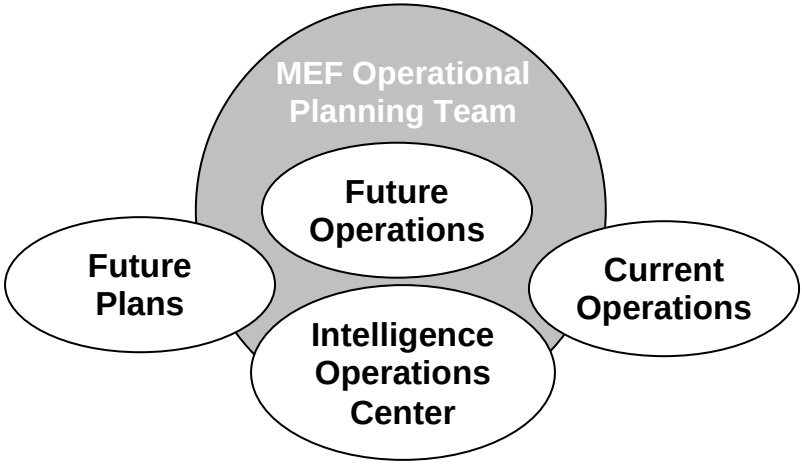


Figure 1-3: Staff Relationships

- **Future Operations.** The future operations section conducts detailed planning for the next phase of an operation, branches and sequels to the current operation, and mission changes for subordinate units. In contingency planning, the G-5 plans section will generally pass CONPLANs/OPLANs to the G-3 future operations section for detailed review and further development into an OPORD when it is relatively certain the plan will be executed. This section's responsibilities include:

- Develop branch plans and refine sequels.
- Provide direction and oversight to operational planning teams.
- Coordinate with G-5 for combatant Commander and other Service support.
- Develop potential CCIRs (FFIRs and PIRs).
- Shape the battlespace for the next MSC mission change in conjunction with the force fires coordinator and the MAGTF target board.
- Draft initial OPORD or FRAGORD.
- Transition orders to current operations for execution.

- **Intelligence Operations Center**. The intelligence operations center (IOC) is under the staff cognizance of the G-2. Intelligence personnel in the IOC analyze the enemy, terrain, and weather. They must know the OPT's time lines and what intelligence products the OPT requires. This is critical for the OPT to maintain planning tempo. For example, the G-2 must develop and continually update those Intelligence Preparation of the Battlespace (IPB) products that fall within their cognizance. The primary link between the OPT and IOC personnel is the G-2 representative in the OPT.
- **Current Operations**. The current operations section is under the staff cognizance of the G-3. It works closely with the OPT to ensure that it stays abreast of the progress of ongoing operations and of other issues that may affect planning. Likewise, the OPT remains aware of the command's current capabilities so it can predict what they are likely to be in the future. The link which the current operations representative provides between the OPT and current operations is especially important during the transition of a plan from the current operation to a future operation.

1005. Operational Planning Team Preparation

a. General

- Begin by defining the *purpose* and *scope* of the OPT. Be prepared to revise them as the situation or the OPT's understanding evolves.

- Publish an OPT convening message or letter of instruction (LOI) signed by the Chief-of-Staff.
- Schedule / reserve work spaces and billeting (if applicable). Ensure work spaces meet IM requirements for the OPT (computer access, phones, A/V projectors and screens, etc.).
- Coordinate with appropriate subject matter experts for initial OPT orientation briefs at the start of planning (G-2, Red/Green Cell, foreign area officer [FAO], etc.).
- Ensure warfighting function representatives and SME(s) have references, relevant planning factors, and materials necessary to perform their functions.
- Ensure the G-2 develops appropriate intelligence preparation of the battlespace (IPB) products (templates, matrices, enemy COA(s), etc.) and arrives prepared to brief the specifics of the enemy IOT facilitate OPT analysis of the enemy center of gravity and high-value targets.

TTP: Ensure that G-2 completes an IBP for the commander's and the staff that prior to the start of Problem Framing. A simple regurgitation of HHQ's products is not sufficient.

- Ensure the Assessment Cell is sufficiently staffed and present at the beginning of the OPT.

b. Time Management

- Use reverse planning to develop, publish, and update a detailed timeline. Begin with the end in mind (what products are required and when must they be completed). Identify milestones and required briefs. Request and incorporate timelines from higher and subordinate commands to the maximum extent possible.
- Allow time for LNOs and staff representatives to provide information to, and receive guidance from, their Commander or staff principal. Provide them with temporary SECRET Internet Protocol Router Network (SIPRNET) and Unclassified but Non-secure Internet Protocol Router Network (NIPRNET) access and email addresses.

- Create as detailed a timeline as possible. Greater detail leads to a deeper appreciation for time requirements, which facilitates adjustments to the timeline as the situation changes.
- Balance time between the OPT core, potential breakout groups, and the full OPT in order to encourage participation by all OPT members.
- Provide time up front for OPT members to study applicable references so that they are prepared to begin planning when the OPT convenes.

TTP: The OPT Leader should review the timeline daily with the members of the OPT to ensure they understand requirements for participation and creation of deliverables. This should be posted in the OPT workspace.

c. Information Management

- Coordinate with the command's Information Manager in order to ensure a common set of tactics, techniques, and procedures (TTP) for managing information. Normally, this means all will use the same SOP, which is important considering the varying commands that will source OPT members.
- Coordinate with G-2 and establish an OPT request for information (RFI) management system.
- Create an OPT webpage and build appropriate shared folders in order to maximize information sharing within the staff and echelons of the command.
- Compile and post read-ahead packages on appropriate web sites and shared drive(s) for OPT members.
- Ensure respective plans sections possess appropriate collaborative hardware and software applications in order to facilitate concurrent planning by Major Subordinate Command's (MSC) and Major Subordinate Element's (MSE) staffs.
- Coordinate with OPT Information Manager to begin building templates for required planning products, presentations, and orders.

d. Workspace Preparation

- Organize the workspace to encourage group interaction while allowing for necessary break-out group planning. Consider assigning seats to respective OPT members based on billet, expertise, and anticipated contributions to planning. Ensure collaborative tools (A/V screens, whiteboards, etc.) can be comfortably viewed by the whole OPT.
- Prioritize the products to post based upon available wall space. Post high priority items such as:
  - Mission statements and intents for higher headquarters (HHQ) two levels up
  - Doctrinal definitions for common military terms and doctrinal tasks
  - Area maps (depicting the area of operations at a minimum), and pertinent planning factors (key definitions, modified table of organization and equipment [MTOE], movement rates, consumption rates, etc.)
  - Commander's Guidance and any specific points passed by the Commander

> ***TTP:*** Planning spaces for breakout groups should be identified prior to the start of the OPT. Also, microphones should be available for briefers and the Commander if the acoustics in the room require it.

- Leave wall space for OPT-developed products such as the draft mission statement and intent as well as course of action (COA) graphics and narratives.

1006. Operational Planning Team Considerations

a. General

- Think at the Commander's level. Know the issues that will concern him, including the concerns of his HHQ.
- When the Commander has seen something and indicates he understands and approves of it, do not change it without an overwhelming reason. If something must be changed, ensure he is not surprised; pre-brief him or the Chief of Staff.

- At a minimum, the OPT leader and facilitators must *think at least one step ahead* in the planning process. Thinking one step ahead allows them to allocate resources efficiently. It also encourages them to anticipate issues that may need to be socialized with the Commander and his principal staff as the OPT prepares to move forward in the planning process.
- The OPT leader should set expectations up front when the OPT first convenes (attendance, participation, product development, etc.).
- Use dry erase boards and butcher block sheets extensively for initial planning/brainstorming recording.
- Ensure the members conduct meetings as a group and do not get involved in spontaneous side discussions. Allocate time during breaks, lunch, and at the end of the day to allow for side-bar and/or working group discussions.
- If the OPT has an issue that is a showstopper, then resolve it. If the issue is not essential, raise it, record it, and continue.
- Post issues next to the map(s) to facilitate drive-by briefs to the Commander. If some of the products are ready (essential tasks, mission statement, etc.) do not wait for a formal brief to show them to him.
- Know the battle rhythm of the MSC/MSEs and their respective planning schedules and ensure their OPT representatives have time to communicate with their HQ and perform reach-back. Also, ensure that your battle rhythm nests within HHQ's.

TTP: Always use proper terminology, and keep hardcopy and electronic references (JP 1-02, MCRP 1-10.2, dictionary, thesaurus, etc.) readily available. Electronic copies allow for fast word searches that expedite the process. Hardcopies are often more easily accessible when computers are not available.

b. Time Management

- Balance time between the full OPT, the OPT core, and breakout groups. Ensure LNOs or MSC/MSE representatives have adequate time throughout the process to facilitate concurrent planning or information sharing with their respective staffs.

- Establish a daily OPT battle rhythm and display it in the OPT work space. Lead off with roll call and raise situational awareness with update briefs (RFI, G-2, COPS, OPT issues) before the OPT formally convenes.
- Show the draft brief to the Chief of Staff and/or principal staff before briefing the Commander. This provides an opportunity for key decision makers to review the OPT's progress and to offer recommendations about how to present information to the Commander.
- Following briefs to the Commander, set aside time for the OPT to review Commander's guidance, to clean up products, to complete any additional work that may have been directed by the Commander, and to ensure you are prepared to begin the next step. Moving on to the next step in the process without a game-plan wastes the time of the larger group.
- Remember to set aside time to produce briefing products during each step and for crafting the OPORD during the orders development step.

c. Briefing Guidance

- Present information in a format that is suitable for and amenable to the Commander.
- Develop a solid plan, and then brief the plan. Allow time to rehearse and adjust the brief to cover all issues. Build the rough brief before convening the OPT. The OPT leader must be thinking ahead as to how he plans to condense and distill information in order to build a coherent brief. If time permits, run through the brief with the OPT to identify seams and gaps, unanswered questions, issues, and to improve the situational awareness of the entire group. Use hide slides and hyperlinks to help reduce the size of the brief.
- Apply the "KISS" principle when developing planning products. The more complicated the product, the longer it takes to explain to those who were not involved in developing the product. Also be cautious of using techniques (e.g. slide animation) that do not translate to hardcopy orders.
- Always provide a read ahead to the Commander, Deputy Commander, Chief of Staff, and staff principals.

- Avoid too much detail. Present issues at the "wave top" level, while having all details in reserve. Show the Commander the issues which will impact the mission and for which he should consider personally engaging higher and adjacent commands (i.e. resource and SME shortfalls, issue, etc.). Again, the role of a PowerPoint expert cannot be overstated during this process.
- Minimize the number of OPT members that have "speaking roles" during the briefs to the Commander. Others speak only when specifically addressed by the Commander.
- Consider appointing backup recorders whenever briefing the Commander. This can serve as an effective cross check for accuracy. Tape or digital recorders are helpful as well. (Follow all classification and security measures.)
- Always review Commander's guidance with the Commander before concluding a brief to ensure the recorder accurately collects all pertinent information and to encourage shared understanding between the Commander and his OPT.
- OPT Dynamics. Beyond the core members, the OPT leader may not know the other members very well. Regardless of their official capacity that warranted their inclusion, each OPT member brings certain talents and limitations to the group. Some people are very detailed oriented while others excel at conceptual and/or creative thinking or building spreadsheets and presentation slides. OPT leaders should be mindful of these various talents, skills, knowledge, and limitations in order to match strengths to the right requirement. Successful casting makes for motivated, hard-working OPT members who will, in return, develop a better product.
- Avoid fact free discussions and interlopers manipulating time at the expense of conducting productive dialogue.

TTP: Designate a scribe to document the CG's comments and guidance during formal briefs. Display the notes to the CG at the conclusion of the brief, and verify that they are accurate.

Part II

The Marine Corps Planning Process

2001. Introduction to Planning

Planning is the art and science of envisioning a desired future and laying out effective ways of bringing it about. In war, planning can be essential to the ability to seize the initiative. In order to seize the initiative, we must be able to anticipate events and act purposefully and effectively before the enemy can. We must be proactive. This normally requires planning. Proper planning puts us in the position to be ready to act when necessary or advantageous and not merely to react to developments.

Planning mitigates crises by dealing with crisis situations before they reach crisis proportions. In many situations, prompt action requires advance thought and preparation. Similarly, planning helps us come to grips with complexity. In general, the more complex the situation, the more important and involved becomes the planning effort. Planning can be essential in new situations in which experience is lacking. In situations in which we lack specific, first-hand experience, we may use planning to think through the problem systematically and devise a workable solution.

2002. The Planning Hierarchy

Planning activities occupy a hierarchical continuum that includes conceptual, functional, and detailed planning. At the highest level is *conceptual* planning. It establishes aims, objectives, and intentions and involves developing broad concepts for action.

At the lowest level is *detailed* planning that is concerned with translating the broad concept into a complete and executable plan. Detailed planning works out the scheduling, coordination, or technical issues involved with moving, sustaining, administering, and directing military forces.

Between the highest and lowest levels of planning is what we can call functional planning that involves elements of both conceptual and detailed planning in different degrees. Functional planning is concerned with

supporting plans for discrete functional activities like command and control, maneuver, fires, logistics, intelligence, and force protection.

In general, conceptual planning should provide the basis for all subsequent planning. Planning should generally progress from the general to the specific. For example, the overall intent and concept of operations lead to subordinate intents and concepts of operations as well as to supporting functional concepts. These in turn lead eventually to the specifics of execution. However, the dynamic does not operate in only one direction. Conceptual planning must be responsive to functional constraints. For example, the realities of deployment schedules (a functional concern) can dictate employment schemes (a conceptual concern). Functional planning in turn must be responsive to more detailed requirements of execution. In this way, the different levels of planning mutually influence one another.

Due to the importance of conceptual planning, the Commander directs the formulation of plans at this level, beginning with his design. While the Commander is also engaged in both functional and detailed planning, the specific aspects of these are often left to the staff.

2003. The Marine Corps Planning Process

For military purposes, the end state of planning should be a plan in the form of an operation plan (OPLAN) or order (OPORD). The plan must be coherent and executable by those who must carry it out. The MCPP is the means by which a Commander and his staff produce such a plan.

The MCPP is fundamentally how we make decisions every day: we assess the situation, decide what we want to accomplish, weigh the different ways we can accomplish it, choose the best option based on available resources, and execute.

In more formal terms, the MCPP accomplishes this by providing a methodology for framing the problem, developing and wargaming courses of action (COA) against the threat, comparing friendly COA(s) against the Commander's evaluation criteria and each other, selecting a COA, and preparing an operation order for execution. See Figure 2-1.

What the MCPP cannot do, nor can any other process, is replace the human being in the form of understanding the problem, the operational environment, the enemy, and ourselves. An understanding of all of these is critical to devising a solution to the problem. However, a process like

the MCPP can help promote a common understanding of the environment and the problem as a basis for action.

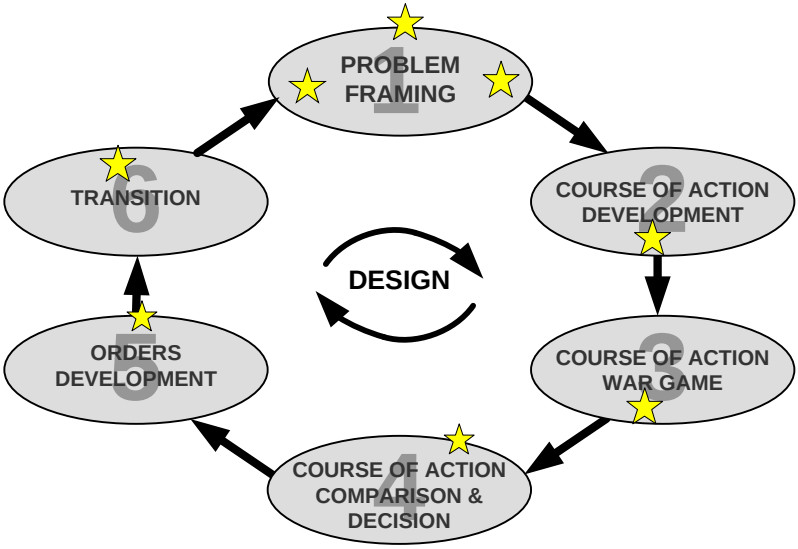


Figure 2-1: The Marine Corps Planning Process

MARINE CORPS PLANNING PROCESS	NAVY PLANNING PROCESS	MILITARY DECISION MAKING PROCESS (ARMY)	JTF PROCESS	JOPES	JOINT OPERATION PLANNING PROCESS
Problem Framing	Mission Analysis	Receipt of Mission	Mission Analysis	Situation Development	Initiation
		Mission Analysis	Planning Guidance	Crisis Assessment	Mission Analysis
COA Development	COA Development	COA Development	COA Development	COA Development	COA Development
COA War gaming	COA Analysis	COA Analysis	COA Analysis		COA Analysis & War gaming
COA Comparison & Decision	COA Comparison & Decision	COA Comparison	COA Comparison		COA Comparison
		COA Approval	COA Selection	COA Selection	COA Approval
Orders Development	Plans & Orders Development	Orders Production	Orders Production	Execution Planning	Plan or Order Development
Transition	Transition			Execution	

Table 2-1: Planning Processes within DoD

The MCPP applies to command and staff actions at all echelons. From the Marine Corps component to the battalion/squadron level, Commanders

and staff members should master the MCPP so they can make timely and relevant decisions. The MCPP provides the Commander and his staff a means to organize and integrate their planning activities with higher, adjacent, supporting, and subordinate commands.

The MCPP is an internal planning process used by Marine Corps operating forces. It complements deliberate or crisis action planning outlined in the JOPES and in the planning processes of the other Services (Table 2-1).

If time is constrained, the MCPP can be abbreviated. As the planning time decreases, the personal involvement of the Commander and the principal staff officers must increase. The Commander must decide how to compress the planning process. (See Figure 2-2.)

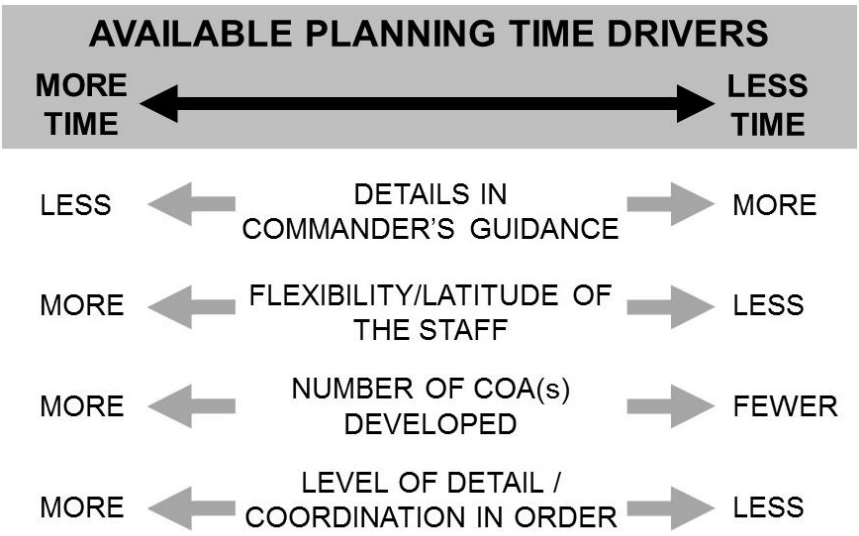


Figure 2-2: Time Constrained Planning Considerations

Successful time constrained planning depends on the unit's experience in planning and the type of operation (counterinsurgency [COIN], maritime pre-positioned force [MPF], Stability Operations, etc.) and its ability to make significant preparations in organizing, training, and equipping. Unit SOPs must be highly refined and well-rehearsed, Commanders and planners must be intimately familiar with potential contingencies or missions, and every individual concerned with planning the operation must know his role in the planning process.

2004. Tenets of the Planning Process

MCWP 5-10 identifies three tenets of the MCPP: top-down planning, single battle, and integrated planning. These tenets are derived from the doctrine of maneuver warfare. They guide the Commander's use of his staff to plan and execute military operations. Top-down planning and the single-battle concept ensure unity of command - that is to say, unity of effort. Integrated planning occurs when the Commander uses the OPT to ensure integration of the warfighting functions across the staff and subordinate and supporting units.

A planning timeline is needed to manage planning efforts and the identification of key issues for consideration in the Commander's initial guidance. In particular, the planning group must assess the time available for planning, including force generation, based on the worst case, and recommend adequate time for planning and preparation at lower levels of command. As a guiding proportion, each HQ should plan to use not more than one third of the time available to reach key decisions in order to leave sufficient time for subordinates to develop their plans and prepare their forces.

2005. Top-Down Planning

Planning is a fundamental responsibility of command. Commanders—due to their military experience and judgment—must not merely participate in planning, but must drive the process. The Commander's intent and guidance are central to planning. He uses planning to gain knowledge and understanding to support his decision-making process. His plan, communicated in oral, graphic, or written format, translates his guidance into a plan of action for his subordinate Commanders.

2006. Single-Battle Concept

Single battle is a unifying perspective that recognizes the inter-relationship among dispersed actions. For example, the success of deep fires facilitates rapid ground maneuver aggravating combat service support (CSS) efforts over restricted lines of communication LOC(s). Commanders can only set the stage for a single battle in planning primarily through his intent that both guides and empowers subordinates to act freely within the framework of the larger design when the unforeseen occurs. Commanders realize a single battle in execution through the willing cooperation of subordinates

to understand their role and coordinate laterally. While the battlespace may be conceptually divided into deep, close, and rear areas to assist planning and decentralized execution, the Commander's intent ensures unity of effort by fighting a single battle. The single battle concept effectively orchestrates the efforts of all the elements of the force to accomplish its assigned mission.

2007. Integrated Planning

As discussed in Chapter 1, integrated planning provides the Commander and his staff a disciplined approach to planning that is systematic, coordinated, and thorough. Through the OPT, it incorporates expertise from all the warfighting functions—command and control, maneuver, fires, intelligence, logistics, force protection. With integrated planning, planners are able to consider all relevant factors, limit omissions, and promote the interconnectedness of subordinate actions. In this way, integrated planning contributes to unity of effort.

Integrated planning includes relationships between not only the MAGTF CE and its subordinate MSCs, but also other adjacent units and HHQ. These additional relationships are often with joint or coalition forces. The OPT Leader has the responsibility of driving an integrated planning effort in every direction. In the same way that MAGTF CEs expect subordinate units to be represented in their OPTs, HHQ will expect that from the MAGTF CE. Adjacent units will also require representation at their OPTs, and vice versa. But this is not enough by itself. The planning must actually be integrated by developing an awareness of the entire operation, relevant interests, and supporting relationships.

Part III

Problem Framing

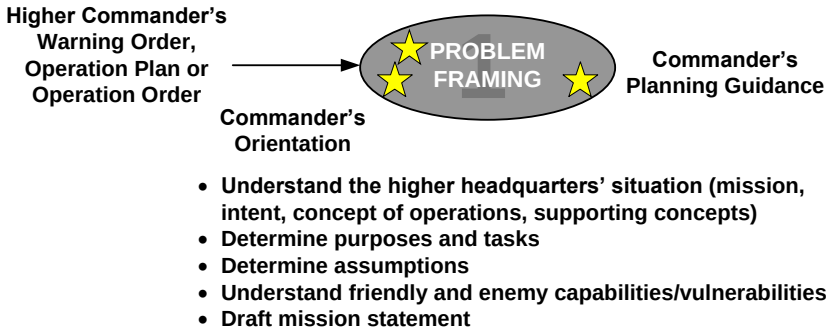


Figure 3-1: Operational Planning Team in Problem Framing

3001. Introduction

Successful problem framing requires prior preparation, subject matter experts, and the identification of the operations' purpose and essential tasks. All documents related to the mission and area of operation (AO) plus standing operating procedures [SOP], operation plans, doctrinal publications, technical manuals, and reference materials should be made available before problem framing begins.

The ultimate goal of problem framing is to gain an enhanced understanding of the problem and the environment in which it must be solved. Since no amount of planning can solve a problem insufficiently understood, framing the problem is critical. It is not enough to simply identify a problem. The Commander and his staff must understand why it is their problem. To achieve this understanding, problem framing requires both good judgment and systemic analysis. Accordingly, problem framing must consist of a Commander-driven design effort carried out by the staff.

The ultimate goal of problem framing is to produce an operational approach that feeds COA Development. However, if the Commander and OPT perceive that their initial concept of the problem is wrong or if the problem significantly changes during the planning process, then they must re-frame the problem. A detailed assessment process is necessary in order

to identify problem changes. This assessment must tie the metrics (measures of performance and measures of effectiveness) to the OPT's understanding of the problem and its environment. These metrics provide the Commander and OPT with the information they need to determine when the plan is on or off course and when reframing is necessary.

3002. Injects to Problem Framing

The typical injects to problem framing are the Commander's Orientation, HHQ's Warning Order, Operations Order, and IPB. However, the conceptual part of this step includes all conversations with the Commander, as well as all information that applies to the situation at hand. This can include news stories on the subject as well as comments from national leaders. The key to understanding Design's impact on the planning process is to understand the fact the environment and the problem (the main Design venue) are inextricably linked to the staff actions associated to the traditional view of the Marine Corps Planning Process.

Commander's Orientation: The Commander's orientation is his concept of what he must do to resolve the problem at hand. He uses a variety of information injects to inform and refine this concept. These injects may include news stories, briefings, the HHQ Warning Order, and discussions with key staff members. As the Commander's appreciation for both the environment in which he will operate and the problem he must solve, he can better describe how he sees the situation unfolding and then give specific guidance to his staff.

3003. Marine Corps Design Methodology

The Marine Corps Design Methodology helps Commanders and staff officers better understand problems and ways to solve them. This section describes the design methodology in sufficient detail to enable its use within the Marine Corps Planning Process (MCPP). A more thorough explanation can be found in the MSTP Pamphlet titled "Marine Corps Design Methodology."

a. Fundamentals

Existing literature on Design describes a certain level of complexity that is required before Design should be considered. Many publications emphasize that Design applies only at the operating and strategic levels of war and rarely plays a role at the tactical level. However, even tactical

situations require an understanding of the set of problems that hinder transformation from the current state to the desired state of an operating environment. From a MEF Commanding General conducting a campaign in North Korea to a Platoon Commander running Range 410A in ITX, the logic of Design remains the same: *Where am I know? Where do I want to be? What should the conditions look like at the end of the operation? And what are the hurdles I need to overcome to get there?* Lower-level tactical problems may be simpler to identify than a more complicated joint operation, but the requirement still exists. The Marine Corps Design Methodology is flexible enough to add value in all of these instances. Figure 3-2 summarizes this methodology.

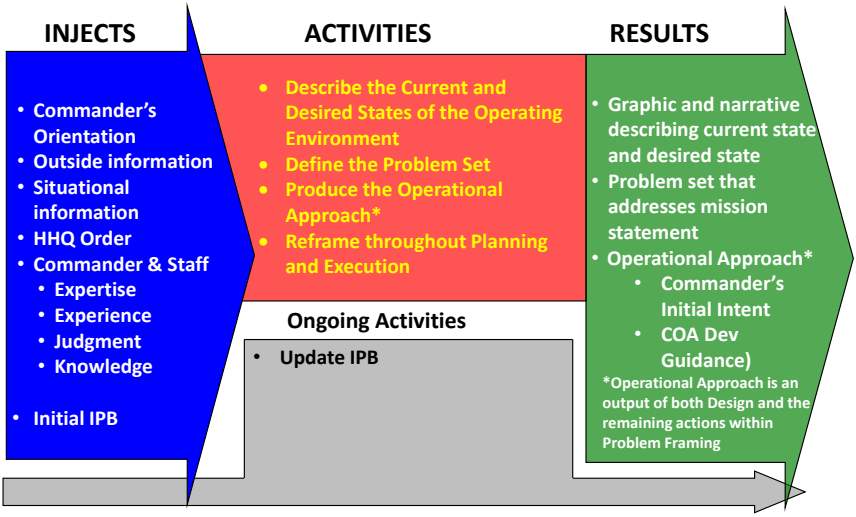


Figure 3-2: Marine Corps Design Methodology Process Flow

The objective of the Marine Corps Design Methodology is simple: it's a process for determining the correct set of problems, as well as conceiving and articulating a framework for solving them. The Design Methodology, advanced by MSTP, consists of four distinct actions that are applied to the planning process: 1) Describing the Current and Desired States of the Operating Environment, 2) Defining the Problem Set, 3) Producing an Operational Approach, and 4) Reframing, as required, throughout Planning and Execution. It is included within the first step of the Marine Corps Planning Process (Problem Framing) to emphasize the need to execute Design in every instance planning is conducted, even if the scope of effort placed on Design is different for each situation.

Current and Desired States of the Operating Environment: The first action within Design is to describe the current and desired states[1] of the operating environment (see Figure 3-3). The current state is the status of the operating environment as it presently exists. The desired state is a hypothesis of more favorable conditions in the future. Some desired states might be a simple transition from one part of an operation to another. Other desired states at higher-level commands can include transition criteria that ceases hostilities altogether. Desired states within battalion and company level operations could be as simple as the occupation or control of terrain or the seizure of a building. However, in all cases, a variety of factors related to friendly forces, enemy forces, civil society, and infrastructure will certainly constrain the feasibility of desired states.

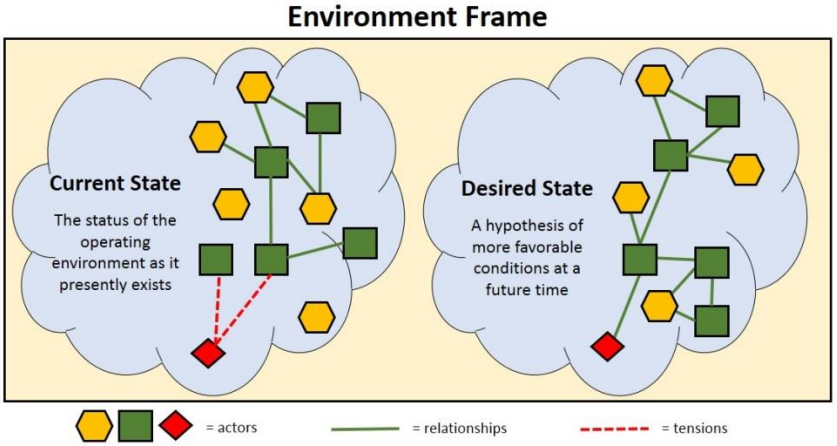
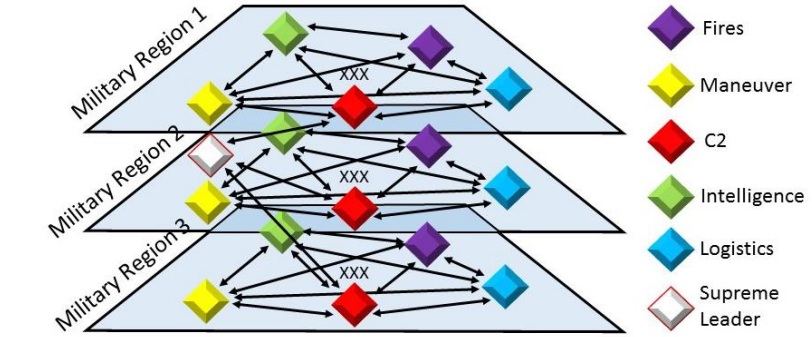


Figure 3-3: Current State to Desired State

Current and desired states are best described using a graphic and narrative. This technique enhances the understanding of the operating environment for practitioners and provides a clear, concise, and familiar way of portraying this information to a decision-maker.

1 Desired state does not equate to an end state, although closely related. An end date is the set of required conditions that defines the achievement of a commander's objectives, and provided by a higher authority. A desired state is a product of Design that represents a feasible set of conditions at a future time, within a zone of tolerance, that are more favorable than the current state.



Military Region 2 contains the Supreme Leader, who directs all military actions within each military region via its Corps Commander. Each Corps Commander directs all warfighting functions within its assigned military region.

Figure 3-4: Example System Diagram

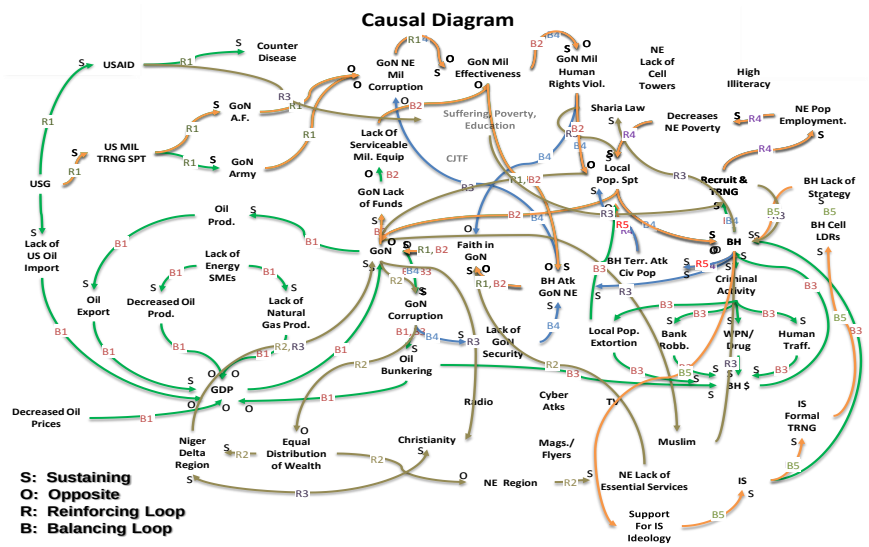


Figure 3-5: Causal Loop Example

The types of graphics and narratives used depend on the complexity of the operation. For instance, a MEF- or MEB-level operation may describe the current and desired states across the eight common operational variables – Political, Military, Economic, Social, Information, Infrastructure, Physical, and Time (PMESII-PT). Other options may be a systems

diagram (Figure 3-4) or a causal diagram (Figure 3-5) to describe relationships between and among a variety of factors. Major Subordinate Commands (MSC) within a MAGTF, as well as regiment and battalion level commands, may find the use of the familiar mission variables – Mission, Enemy, Terrain and Weather, Troops, Time, and Civil Considerations (METT-TC) – to be a more suitable method of describing current and desired states.

Crafting a desired state leverages forward planning vice reverse planning. Forward planning begins with the current state and considers the feasibility of a desired state. The end state provided by higher is only used as a general aim point. On the contrary, reverse planning begins with an often arbitrary end state and moves backwards to develop the steps to get there. Forward planning provides a projection of the future that is bounded by the constraints of the situation.

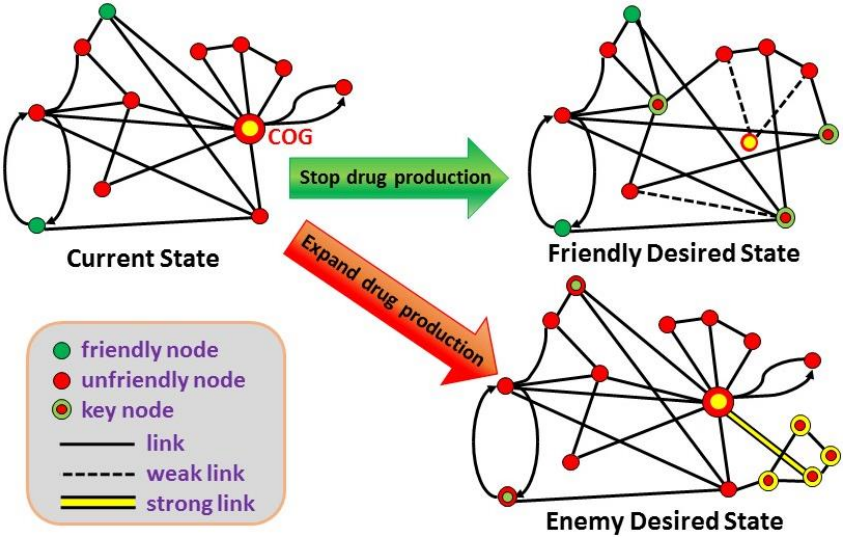


Figure 3-6: Enemy vs Friendly Desired State

Other actors, besides the friendly force, affect an operating environment and have different desired states. They also impact forward planning efforts. For example, the enemy has a desired state that likely conflicts with the friendly force's desired state (Figure 3-6). Friendly or neutral actors may not be in opposition, but some of their desired states may be different from the friendly force's desired states. Additionally, some desired states of other actors converge with the command's desired states,

with a possibility of exploiting this convergence. An understanding of the difference between an alternative desired state and the friendly force's desired state may help determine the range of possible futures and system potential (Figure 3-7).

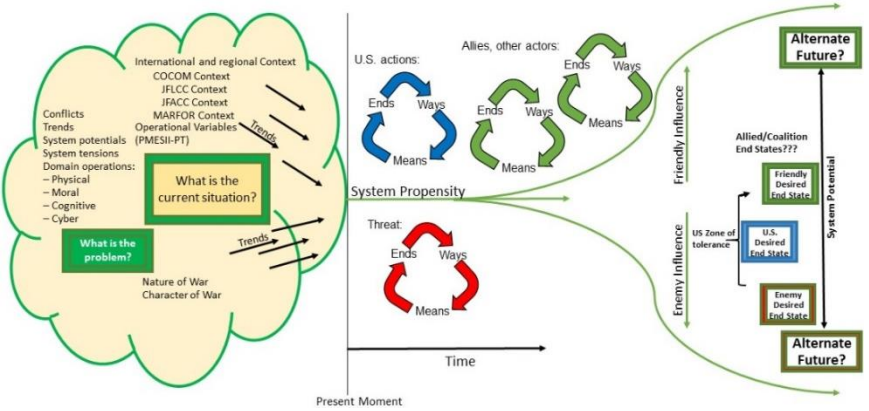


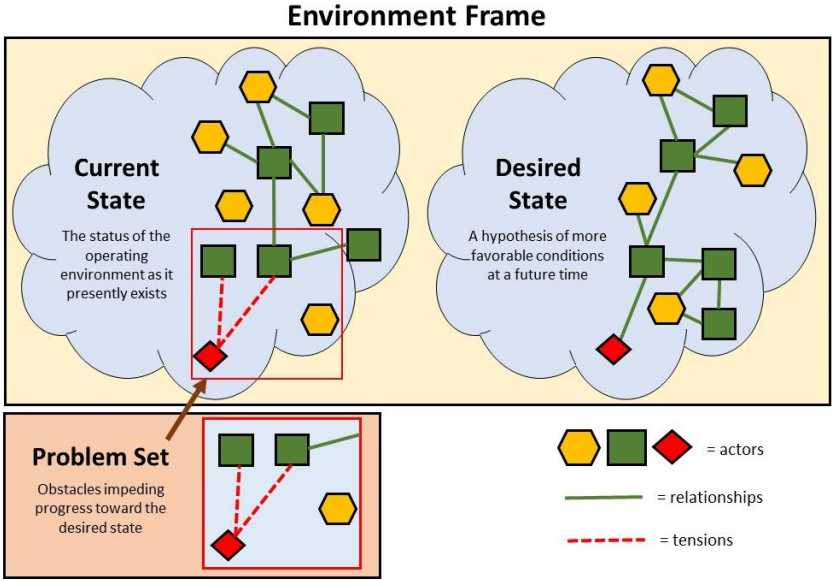
Figure 3-7: How an Operating Environment may Trend into the Future

A desired state does not equate to an end state, although closely related. An end state is the set of required conditions that defines the achievement of a commander's objectives, and is provided by a higher authority. A desired state is a product of Design that represents a feasible set of conditions at a future time, within a zone of tolerance, that are more favorable than the current state. If the desired state determined at the conclusion of Design does not match the end state provided by higher, a conversation with the higher command should occur to rectify this difference.

b. Define the Problem Set

Once the current and desired states are described, planners need to define the problem set. The problem set is a list of reasons that prevent the shift of the current state to the desired state (Figure 3-8). Historical doctrine within the Marine Corps referred to the development of a "problem statement" within the first step of the MCPP. Problem statements are usually constrained to one sentence and can oversimplify the challenges within the operating environment. A MEF or a squad never has a single problem to solve. In reality, many problems will be exposed. The key is to identify relevant problems associated with myriad operational variables, examine relationships among the problems, and then package the

understanding into a problem set that aids the commander's thinking and informs the overall planning process.



Enemy has an advantage in military capabilities and is more familiar with the operating environment

Fires	– *Enemy artillery can range targets from outside the range of friendly counterbattery fire.*
Maneuver	– *Enemy mechanized units can rapidly negotiate semi-restrictive terrain.* – *Enemy's advanced anti-aircraft capabilities will not allow friendly air superiority.*
Logistics	– *Enemy supply dumps staged/concealed throughout the operating area.* – *Enemy has the capability to disguise convoys through the use of host nation support*
Command & Control	– *Enemy leadership has both HF and fiber-optic communication with corps commanders.* – *Enemy has robust cyber network defenses and advanced offensive cyber capabilities.*
Intel	– *Enemy is effectively using the local population to gain information on US forces*
Force Protection	– *Enemy has chemical weapons*

Figure 3-8: Problem Set

There are two types of problems within a problem set. The first is a category of problems as they exist within the current state, or the reasons

why military forces are being deployed. The second are the problems that need to be solved as the environment progresses toward the desired state. This process is iterative in nature and requires periodic review to ensure that problem set is relevant. On higher-level staffs, the problem set should be closely tied with the assessment process.

Similar to the descriptions of the current and desired states in the previous step, the problem set can be categorized and described in a multitude of ways. MAGTF CEs may wish to use PMESII-PT to categorize the problem set. Other elements of the MAGTF may find a categorization of problems across warfighting functions to be more convenient. Staffs within regiments, groups, battalions, and squadrons may prefer a simple brainstorming activity to itemize a list of problems that the staff instinctively knows are most relevant.

Once the problem set is defined, a brief or in-progress review (IPR) should be provided to the commander on the results of Design. This event will ensure the commander's involvement and also help guide the remaining planning efforts. It will also allow for an early opportunity to review Design if the commander does not agree with the problem set.

c. Produce the Operational Approach

The next step is to apply the problem set to the overall Problem Framing effort and produce the operational approach. The operational approach is broad, overarching guidance that is commonly articulated as part of the commander's intent and course of action (COA) development guidance. It is the final deliverable of Problem Framing and requires the input and synthesis of both Design and the remaining staff actions within Problem Framing (Figure 3-9).

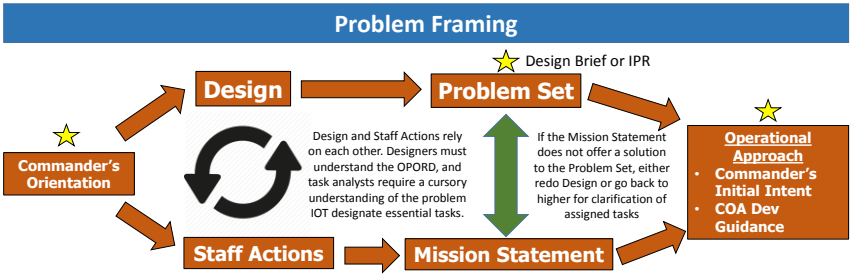


Figure 3-9: Problem Set, Mission Statement and Operational Approach

The problem set and the mission statement directly feed the operational approach. Once the problem set is defined, it is compared to the mission statement developed through the remaining staff actions within problem framing. It is also evaluated against the end state provided by higher headquarters. The mission statement should provide a way to address the problem set and reach the end state. If it does not, Design should be reviewed and the task analysis that fed the mission statement should also be reviewed. If the results remain the same, the staff should consult higher headquarters for clarification of its assigned tasks. The rigor that a staff puts into the Design effort will help provide evidence for why a given mission statement may not address the problem set or achieve the end state.

Center of gravity (CoG) analysis can also be aided by Design. The relationships identified between various actors during the analysis of the current and desired states can naturally illuminate the enemy's CoG and paths to attacking enemy critical vulnerabilities – providing a foundation for the operational approach (Figure 3-10).

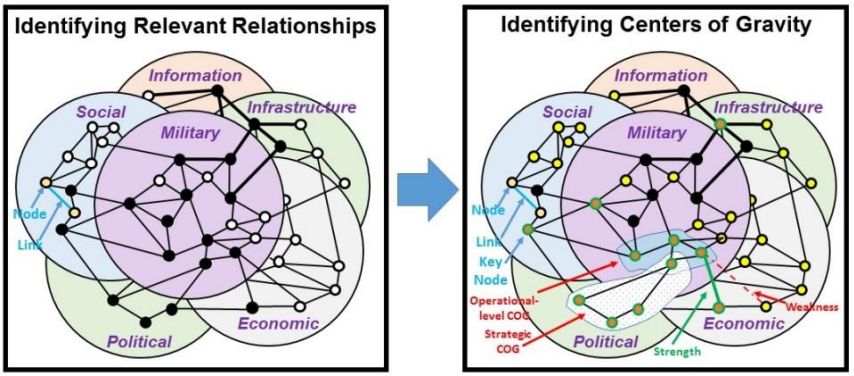


Figure 3-10: Design Feeds CoG Analysis

d. Reframe throughout Planning and Execution

Reframing occurs when Design requires review. It includes reevaluating early hypotheses, conclusions, and the approach that underpins the current plan. In reframing, the commander and the staff revise their understanding of the environment and problem. If required, they develop a new operational approach to overcome the challenges or opportunities that precipitated the need to reframe. Reasons for reframing can include:

- Changes in the original problem set

- Significant changes in the enemy composition
- Significant changes in the expected enemy approach
- Significant changes in friendly capability
- Higher headquarters policy changes or directives that change the desired state
- Unexpected lack of friendly progress toward objectives
- Shifts in international support and/or domestic will
- Key assumptions prove to be invalid

Note that the actions within Design exist within the first step of the MCPP – Problem Framing. This means that if there is a requirement to reframe, one must return to Problem Framing and execute the four discrete actions of Design that precede the remainder the MCPP. However, this does not mean Design is a singular effort that is finalized after the first step of planning. In reality, Design is reexamined routinely during planning and throughout mission execution when significant changes to the operating environment occur. The problem set that is derived from Design is affected when current states change or when desired states are adjusted. When this happens, Design must be reframed. Therefore, the need for reframing must be analyzed iteratively throughout planning and its omission should be a conscience decision. Notification of these changes is provided either through updates to the Intelligence Preparation of the Battlespace (IPB) during the MCPP, or through the Assessment process after execution begins (Figure 3-11). Once reframing begins, the MCPP must be conducted again to account for the changes in the plan. A final product may simply be a Fragmentary Order that is effectively transitioned to execution.

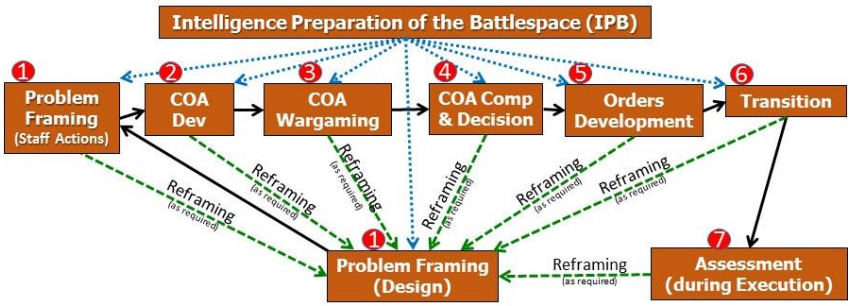


Figure 3-11: Reframing

3004. Staff Actions

a. Analyze Tasks

Commands normally receive tasks that planners analyze as a basis for determining the unit's mission. The principal source for tasks is the HHQ plan or order, but there may be other sources, such as verbal guidance. Additionally, as the Design effort increases understanding of the problem and purpose, the staff develops implied tasks based on this understanding. Using the Commander's initial intent and guidance and HHQ orders, the staff identifies specified and implied tasks. Those tasks that define mission success and may apply to the force as a whole become essential tasks:

- Specified tasks derive primarily from the execution paragraphs of the HHQ OPORD, but they may be found elsewhere, such as in the mission statement, coordinating instructions, or annexes. Any specified task that pertains to any element of the unit should be identified and recorded.
- Implied tasks are not specifically stated in the HHQ order, but they are necessary to accomplish specified tasks. Implied tasks emerge from analysis of the HHQ order, the impending threat, and the understanding of the problem. Routine, inherent, enduring, or SOP activities are not implied tasks.
- Essential tasks are specified or implied tasks that define mission success and apply to the force as a whole. If a task must be successfully completed for the Commander to accomplish his purpose, it is an essential task. Planners develop the mission statement from the essential tasks.

Task Analysis steps are—

- **Identify All Specified Tasks**
    - In stability operations, it may be helpful to group tasks according to applicable logical lines of operations.
    - Delete redundant tasks. Choose one task that is broad in scope and best captures the others.
    - Ensure the wording accurately encompasses the "merged" tasks.
    - Keep track of deleted tasks.

- **Determine Implied Tasks**
  - Implied tasks should be linked to a specified task.
  - Review each specified task to determine any necessary non-routine tasks.
  - Implied tasks represent the earliest stages of COA development, since they represent at least a partial solution to a specified task. For example, the HHQ tasks the MAGTF to defeat an enemy corps. A map study reveals the need for a river crossing.
  - Implied tasks offer a powerful technique for shaping the MAGTF's mission. This is particularly true when the MAGTF's HHQ is from another service or coalition force. In such a case that HHQ may not understand us well enough to task us properly, despite the best efforts of our liaison officers.
  - Omit SOP or routine tasks like submit daily situation reports.
- **Identify Essential Tasks**
  - Essential tasks apply to the force as a whole, define MAGTF success, and can be either specified or implied.
  - If accomplishing the MAGTF's purpose requires successfully completing a task, then the task is ESSENTIAL.
  - Include all essential tasks in the "what" portion of the mission statement.

b. Task Analysis Considerations

- Planners can find tasks in many places besides paragraph three of the HHQ directive. For example, anything and everything the Commander says or does could be a specified or implied task. Adjacent units may also be task sources. For example, when the Joint Force Air Component Commander (JFACC) publishes Air Tasking Orders (ATO) and Airspace Control Plans these directly impact how the ACE operates.
- Note the document, page number, and paragraph for each task for OPT reference and in the event the source becomes an issue later.
- Identify key language in each specified task for incorporation into the mission statement.

- When finished, the OPT should be able to show the linkages between the specified, implied, and essential tasks and their relationship to the mission and purpose of the operation.

> ***TTP:*** Generally, it is a bad idea to place tasks below the appendix level in a plan or order. Planners will likely overlook tasks buried in tabs or exhibits.

- Task analysis is conducted separately by each functional area, and the details are usually saved in backup slides and only presented if necessary.

c. Analyze Centers of Gravity

The staff conducts a COG analysis based on the understanding gained through design and task analysis to identify or refine adversary and friendly COGs and to determine which friendly and adversary weaknesses may become critical vulnerabilities. A critical vulnerability is some aspect of the COG that is, or can be made, vulnerable to attack. Critical vulnerabilities provide aiming points for the application of friendly strengths against adversary weaknesses. Conversely, planners identify friendly critical vulnerabilities to protect against the application of adversary strengths against friendly weaknesses.

The staff identifies and directs the force's strengths against the enemy's critical vulnerabilities in order to hamper his ability to defend, attack, sustain, or command his forces. Critical vulnerabilities, once identified, assist the Commander in choosing where, when, and what will constitute decisive action. The staff also identifies friendly COGs and critical vulnerabilities in order to leverage strengths while protecting weaknesses.

This COG analysis is a means to focus the Commander and staff on what is most important among all the variables and factors that can influence the conduct of operations. Determining COGs is an art. At a minimum, commands should think in terms of strengths and weaknesses.

Direct versus indirect approach. An important point in planning an operation is to determine the best approach for dealing with the adversary's COGs. Two alternative approaches to consider are the direct and indirect approaches. Both seek to exploit inherent weaknesses in adversarial COGs (i.e., critical vulnerabilities) to enable friendly forces to achieve their objectives.

COG	Critical Capabilities	Critical Requirements	Critical Vulnerabilities	Force Fires Mitigation		Enemy Actions	Enemy Assets
Div. C2	Maintain comms to fight the single battle concept	– Ant farms – SATCOM – Hardware networks	– EW – Mobility – Site Selection	Standoff Site Security Counter EW COOP		Attack retrains & C2 nodes EW jamming	SOF Bn. EW/Comm. IDF Brigade / Bn.
	Maneuver the Division	– Friendly battle tracking (COP) – Coordinate MSE efforts	– Cyber attack – Physical attack against Div. Main	Counter Cyber Backup Comm COOP HQ Security		CI OPSEC	Cyber EW SOF 35th Airborne
	Shape the Div. Deep Fight	– Deep recon assets – HIMARS – AFATDS	– Cyber attack – EW – Resupply to HIMARS	CPTs Redundancy		Cyber attack GPS jamming SA20 SKYGUARD	Cyber EW ADA Bde/Bns
	Sustain the fight	– Coordination with MLG – Facilitate distribution for 2 CMBG	– CSSAs – GLOCs	Secure CSSAs Convoy self defense Counter MANPAD TTP		Sever GLOCs Attack CSSAs	SOF
	Protect the Force	– Counter battery radars – Counter G-RAMM – CASEVAC	– Limited CBRs – MANPAD threat to RW – Location Role II facilities	Leverage 2 CMBG Radars Patriot Btry RFF for MLRS SEAD		Employ SCUDs Mask artillery positions Target CASEVAC	SMB CAG / DAG / SAG ADA Bde/Bns

Table 3-1: Center of Gravity Analysis

Center of Gravity Analysis Matrix

Assessed aim and desired outcome

What are the actors' main goals and what conditions do they seek to achieve?

1: Center of Gravity

… is the primary source of power (finally for achieving the aim).

What is the primary element of power upon which an actor depends to achieve its objectives?

To target an adversary; to protect the own

For each center of gravity there will be a number of critical capabilities and critical requirements.

A noun: an entity; a system; a thing

2. Critical Capabilities

… Is the primary ability (or abilities) that gives the center of gravity its strength.

What can the center of gravity do or cause to be done? What are the primary means that enable the center of gravity to gain and maintain dominance over an adversary or situation?

To deny an adversary; to exploit our own

The key word is the verb; the ability to …

4. Critical Vulnerabilities

… exist when a critical requirement is deficient, degraded or missing and exposes a critical capability to damage or loss

What are the weaknesses, gaps or deficiencies in the key system elements and the essential conditions, characteristics, capabilities, relationships and influences through which the center of gravity may be influenced or neutralized?

We use critical vulnerabilities to help achieve objectives or create decisive conditions or effects.

To attack an adversary; to protect our own

Critical vulnerabilities can relate either to capabilities or to requirements

A noun with (qualifying) modifiers

3. Critical Requirements

…are the specific conditions, components or resources that are essential to sustaining the critical capabilities

What does the center of gravity need to be effective?

What are those key systems, elements and essential conditions, characteristics, capabilities, relationships and influences required to generate and sustain the centers of gravity critical capabilities, such as specific assets, physical resources and relationships with other actors?

To deny to an adversary, to provide / supply / resource our own

Nouns, things

Conclusion:

Which weaknesses, gaps or deficiencies in the key system elements and in the essential conditions, characteristics, and relationships could we exploit in an adversary and that we must protect, if owned? Which of these change the capabilities, relationships and behaviors that would lead to achieving objectives?

Figure 3-12: Center of Gravity Analysis Matrix

TTP: Ensure that COG Analysis is threaded throughout MCPP, particularly within COA Development. COG Analysis should not be discarded after Problem Framing.

In contrast, the indirect approach pits friendly strengths against adversary weaknesses. It frequently seeks to win by means other than physical destruction. An indirect approach may consist of a series of operations against multiple critical vulnerabilities or a single operation against a few selected vulnerabilities. Choosing between the two approaches involves weighing factors such as relative strength, alliance capabilities, adversarial critical vulnerabilities, risk, propensity, the required level of damage to the adversarial COG, etc. It is also possible to use the direct approach at one level of command (e.g., strategic) and the indirect at another level (e.g., operational). The type of approach affects how COG(s) at each level are dealt with.

In order to develop feasible, acceptable, and suitable friendly COAs, and to better understand the interaction between friendly and adversary forces during wargaming, the intelligence planner and the OPT leader should conduct a Relative Combat Power Assessment (RCPA). RCPA examines the strengths and weaknesses of friendly and adversary forces.

Quantitative, tangible methods of RCPA simply "rack and stack" primary friendly and adversary weapons, units, or other assets against one another. This produces a tally of similar enemy and friendly assets and allows planners to graphically depict who has more of what. While this method is fast and aids understanding of the physical assets available to each side, it ignores intangible or variable factors such as leadership, morale, training, readiness, force employment (doctrine and tactics), and differential concentration throughout the battlespace.

Alternatively, a qualitative assessment of intangible or variable factors, while more time consuming, often yields a more comprehensive and complete RCPA. Qualitative assessment also applies to tangible items such as weapons. Not all tanks or artillery pieces are created equal.

In practice, both quantitative and qualitative methods will be used. Upon completing a quantitative assessment of tangible combat power, planners must draw qualitative conclusions to provide the "so what" for commanders, and recommend TTPs to mitigate any relative combat power imbalance for consideration during the development of COAs and wargaming.

Completing step 3 of IPB, Evaluate the Adversary, will yield the necessary detail to conduct a detailed quantitative and qualitative assessment of the adversary's equipment and overall combat power. The intelligence planner works with the IOC/CIC to ensure that the OPT receives a detailed evaluation of the adversary to facilitate its RCPA.

The OPT will further refine its RCPA during the COA War Game step of MCPP. As the OPT wargames specific friendly and adversary COAs against each other, it must adjust the RCPA to reflect the expected results of shaping operations, to include deception operations. Shaping operations will likely change the quantities and dispositions friendly and adversary forces across the battlespace. This will require an adjustment of the RCPA for each turn of the war game.

Table 3-2 is an example of an RCPA Worksheet.

	Adversary	**Friendly**	**Deduction**	**Significance**	**TTP**
Maneuver					
Fires					
Force Pro					
Leadership					
Morale					
Doctrine					
Training					

Table 3-2: RCPA Worksheet

d. Develop Assumptions

Assumptions are suppositions about the current situation or about future events assumed to be true in the absence of facts **in order to continue planning.** They apply to both friendly and adversary situations as well as the environment. A valid assumption should answer all of the following questions:

- Is it logical?
- Is it realistic?

- Is it essential for planning to continue?
- Does it avoid assuming away an adversary capability?

Note! Assumptions equate to risk. Only a commander can assume risk.

As planning continues, additional assumptions may be needed and previous assumptions may be deleted. A record is kept of assumptions in order to track and validate them as they are confirmed or disproved. Assumptions are contained in OPLANs, but are not included in OPORDs. If the OPLAN contains assumptions that are not validated before execution, the assumptions become part of the inherent risks of the operation. If possible, assumptions are forwarded to HHQ for validation. This ensures the HHQ Commander understands the potential risks that a subordinate command is accepting. It may prompt the HHQ to pursue facts that support the assumption or to request additional information.

e. Propose Commander's Critical Information Requirements (CCIR)

The Commander's Critical Information Requirements are those requirements identified by the Commander as essential to his decision making process. CCIRs are a tool utilized by the Commander to focus the staff and the intelligence collections effort. CCIRs are broken down into Friendly Force Information Requirements (FFIRs) and Priority Intelligence Requirements (PIRs). FFIRs are information about friendly forces required by the Commander to support decision making. PIRs are information about the adversary and the operating environment required by the Commander to support decision making.

- CCIR Life Cycle
    - The Commander and his Staff determine what key decisions he will have to make and what pieces of information to support each one. The Commander then designates these pieces of information as CCIR(s).
    - The staff disseminates the CCIR(s) to subordinate units for collection and reporting.
    - The staff monitors and updates the CCIR(s) as the situation across the battlespace unfolds.
    - The staff periodically recommends changes to its CCIR(s).

- CCIR(s) in Planning
  - The Commander and his staff address CCIR(s) throughout the Planning Process
  - CCIR(s) adopted initially often identify information needed to assist with planning. The Commander may also require such information to shape his understanding of the environment.
  - **When answered, CCIR(s) often serve to inform the ongoing design process and to prove or disprove the assumptions upon which previous planning/design work was based.**
  - To allow planning to continue, the staff should make assumptions (based on the best information available) to fill in for as yet unanswered CCIR(s).
- CCIR(s) in Execution; CCIR(s) assist Commanders to -
  - Establish their vision of the battlespace
  - Assess desired effects
  - Determine methods of mission accomplishment
  - Identify significant deviations from his vision
  - **Not all information requirements directly support the Commander's decision making, so CCIRs must link the critical decisions the Commander anticipates making, thereby driving the command's collection efforts and focus the staff.**
- Linking CCIRs to Decisions
  - CCIRs (FFIRs and PIRs) serve to focus the staff to ensure they are supporting the Commander's decision making process.
    - FFIRs are geared toward friendly capabilities

      Example: Indications that between D+5 and D+40 fixed wing aviation assets fell below 70% readiness. The CG determines that a readiness rating below 70% requires him to decide whether to continue his COA or execute a branch plan.
    - PIRs are geared toward the threat and the environment

      Example: Indications and warnings that a battalion sized element will reinforce the MEF objective between H+24 and H+36. In this example the CG must reevaluate the feasibility of his initial COA.

- These requirements become part of the collections plan with the expectation that collection platforms will observe and report on the indicators.
  - Traditional collection platforms associated with CCIRs in a kinetic environment must be re-addressed in a COIN environment.

    Example: HUMINT collection to determine popular opinions and explain population actions takes priority over the use of drones to monitor enemy movement.
  - Appropriate collection platforms provide analyzed, fused and timely information to assist the Commander in determining how much time he has to deliver an appropriate response.

f. Determine Limitations

The OPT identifies restraints (something you cannot do) and constraints (something you must do) while reviewing the appropriate orders and planning products. Listing restraints and constraints under a single, inclusive category of limitations helps to clarify the OPTs efforts to identify the impact these limitations may have regarding mission accomplishment.

g. Develop the Mission Statement

The purpose of the operation and the essential tasks are the foundation for the mission. A properly constructed mission statement answers the following questions:

- Who (the forces that will conduct the operation)?
- What (the type of operation)?
- When (the time or event that determines when an operation will start and end)?
- Where (the location of the area of operations)?
- Why (the purpose/intent of the operation)?

The essential tasks determine who, what, when, and where. The purpose of the operation determines the why.

The Commander approves the proposed mission statement or modifies or develops a new mission statement as a prelude to COA development. The

approved mission statement becomes a key part of an OPLAN or OPORD. It also connects friendly forces with the other elements of the operational environment, such as adversaries, local population, the infrastructure, and other friendly forces and non-DoD entities.

> ***TTP:*** The OPT Leader should plan for a breakout session with the commander to refine the mission statement prior to the problem framing brief.

h. Perform Ongoing Activities

Staff actions include ongoing activities that begin during problem framing and continue through all the other steps of the planning effort. Examples include conducting staff estimates (involving functional and detailed planning), refinement of IPB products to keep pace with the changing situation and the maintenance of feedback loops that address information gaps, the validation of assumptions, or the introduction of new information that can change the understanding of the situation. Subordinate units also provide detailed planning data, such as resupply requirements or sortie generation rates. Examples of ongoing activities include—

- **IPB Product Refinement.**

  The staff reviews and refines IPB products, to include enemy COAs, to support COG analysis. The IPB products must mature as planning progresses. For example, as the OPT works through problem framing, COA development, and COA war game, it may conduct pattern analysis of enemy actions—as well as the activities of local inhabitants—to better understand the operational environment. This pattern analysis feeds the development of various templates. Eventually, these contribute to a decision support template complete with named areas of interest (NAI), target areas of interest (TAI), and decision points. Additionally, as stated in the Design portion of this pamphlet, updates to the IPB lead to reframing during planning. This means that the OPT should return to Design and reexamine the problem set.

- **Red Cell Activities.**

  Red cell activities should begin during problem framing. A red cell assists the Commander in testing the effects of his COAs against a thinking enemy. Depending on the size of the organization, a red cell can range in size from an intelligence officer to a task-

organized group of subject matter experts (SME). While a red cell's principal duties center on COA development and the COA war game, it participates in the analysis of COGs and contributes to the Commander's understanding of the problem during the initial stages of design. Additionally, the red cell should perform its own problem framing from the enemy's perspective and provide feedback to the OPT. Of particular interest to the OPT will be how the red cell views the enemy, friendly, and neutral strengths and weaknesses. The red cell must also understand the enemy's intent and be able to describe how it influences their actions.

TTP: The relationship between the OPT and Red/Green Cell is complementary, not adversarial. Avoid rejecting Red/Green Cell positions when they conflict with the OPT's views. The Red Cell should portray the enemy's Most Likely or Most Dangerous COA as directed by the G-2 and approved by the MAGTF Commander. The Green Cell should portray the civilian populace's response to the enemy and friendly COAs

- **Green Cell Activities.**

  The OPT leader also forms a green cell during problem framing. The purpose of a Green Cell is to factor in the independent will of the population. This promotes a better understanding of the environment and the problem. Green Cell activities may also inform non-DOD entities, such as intergovernmental organizations (IGO) or nongovernmental organizations (NGO). A Green Cell may consist of a single individual or a task-organized group of SMEs. It may include representatives from the local populace and participating non-DOD agencies.

TTP: Send Marines to the CMO planning course so they may serve as effective members of a Green Cell.

- **Refinement of Staff Estimates and Estimates of Supportability.**

  The staff and subordinate units gather and refine information in support of staff estimates or estimates of supportability. The staff will begin to formulate their estimates (often referred to as "Initial Staff Estimates") during problem framing. These estimates provide a timely examination of factors that support decision-making and can affect mission accomplishment. Depending on the level of

command and the time available, the estimates could be a formal, detailed written document or an informal verbal briefing. The staff refines and updates its estimates throughout planning.

TTP: Staff estimates come from the staff sections. Estimates of supportability come from the subordinate units. Both should be briefed during Problem Framing.

These estimates typically fall within a warfighting functions model. Planners should ensure the estimates include the following (See Appendix E *Estimates*, for a more detailed discussion):

- Requirements
- Capabilities
- Comparison / Shortfalls
- Analysis
- Solutions / Recommendations

TTP: Evaluate resource and personnel shortfalls from the Commander's perspective. Ask yourself, *"What are we unable to do as a force if we do not have these resources?"* Keep in mind that the MAGTF Commander will need to have a meeting with his boss to justify the need for additional resources. Also remember that as you develop COA(s), other resource shortfalls will likely emerge.

- **Battlespace Refinement.**

  Battlespace includes the area of interest, area of influence, and area of operation. The staff may recommend battlespace refinements based on analysis of the terrain and tasks, as well as friendly and adversary COGs, capabilities, and limitations. The size of the area of interest may change based on the Commander's understanding of the situation. The extent of the area of influence may change if forces are added or deleted, equipment capability and availability change, or rules of engagement change.

TTP: The Commander's area of operations may change due to the scope of the mission, the results of operations, operational reach, or to ensure sufficient battlespace to maneuver and protect his force.

- **Resource Shortfall Identification.**

  Based on the tasks and available resources, the Commander and staff identify critical resource shortfalls (to include SMEs) in order to determine additional support requirements. Resource shortfalls may emerge while developing estimates.

TTP: The earlier these shortfalls are identified, the more time the Commander and his staff have to work these issues with HHQ.

- **Commander's Critical Information Requirement Review / Update.**

  Only the Commander can decide what information is critical, but the staff may propose Commander's critical information requirements (CCIR) to the Commander. The CCIRs are continually reviewed and updated or deleted as required and are divided into friendly force information requirements and priority intelligence requirements. These are predicated on risk tolerance and risk mitigation plans. Initially, CCIRs may identify intelligence or information requirements that assist with the planning and decision-making process. When answered, CCIRs often inform the ongoing design process and may prove or disprove OPT hypotheses. As planning moves forward and execution is imminent, the CCIRs will reflect key information/intelligence requirements tied to decision points that will occur during execution.

TTP: A way to view CCIR(s) is to categorize them by Enemy (PIR), Friendly (FFIR) and the Environment. In Stability Operations, the majority of the CCIR(s) will likely be in the "Environment" category.

- **Requests for Information.**

  Planners identify requirements for information necessary to remove assumptions, support future plans, or conduct current operations. Based on the initial IPB and information requirements (including CCIRs), the Commander and staff identify gaps in information and intelligence. Planners forward RFIs to the appropriate staff section or to HHQ for answers. Over time, the number of RFIs can make the tracking effort very difficult. A software-based RFI management tool and an individual tasked to track RFI submission and response can help accomplish this task.

Furthermore, RFIs should be as clear and concise as possible to ensure a quick and accurate response.

i. Present a Problem Framing Brief

The staff presents a problem framing brief to the Commander to review the completed products and to ensure a shared understanding within the staff. When approved by the Commander, these products inform COA development. The brief may include the following:

- Situation update (battlespace organization, status of friendly forces, stakeholders and existing command relations, area of operations, area of interest, area of influence).
- Intelligence estimate and IPB products (terrain analysis, weather analysis, human environment estimate/cultural analysis, adversary integration [possible COAs]).
- HHQ missions.
- HHQ Commanders' intents (two levels up).
- A review of the Commander's orientation.
- Problem Set (from Design)
- Task analysis (specified, implied, and essential tasks).
- Assumptions.
- Limitations—restraints/constraints.
- Resource shortfalls.

TTP: Make no mistake about it; the Problem Framing Brief is a DECISION BRIEF. The Commander must approve the mission statement as well as the analysis that supports all the PF products. State up front that the goal of this brief is to obtain a **decision** from the Commander. One technique is to place a slide at the end of the brief that "**tees up the decision**" for the Commander. The Commander has three basic choices: approve, modify, or reconvene the OPT for another round of PF. Neither the OPT nor MSC(s) can proceed with a CLEAR direction until the CG approves the mission and intent.

- COG analyses (friendly, enemy).
- RFIs.
- Recommended CCIRs.

- Staff Estimates
- Proposed mission statement (approved by the Commander).
- Other updated products from ongoing activities.

Both the brief and the work generating the products can influence the Commander's understanding of the environment and the problem itself. Accordingly, the Commander may use this opportunity to refine his initial intent and guidance or modify the mission statement.

TTP: The Commander may conclude the brief by approving the mission statement and providing his COA development guidance. The Commander may also want to further consider the problem framing products, as well as any additional information that emerged during the brief, before approving the products or providing additional guidance.

j. Operational Approach

The Commander should articulate his operational approach, a clear and concise expression of what he intends to accomplish and how he intends to accomplish it with available resources. This includes both his intent as well as his course of action development guidance. The operational approach enables his planners to develop and refine COAs. It also reflects his understanding of the situation and his vision for achieving his overall purpose. Based on a variety of considerations, such as available time or understanding of the problem and its complexity, the Commander's guidance may be narrow and directive or it may be broad and inquisitive. The former may include development of a single COA, while the latter may direct exploration of several COAs.

TTP: The OPT Leader should assist the commander in developing the Operational Approach.

- **Commander's Intent and Guidance**
  - Having engaged in a design dialogue with his staff, the Commander provides his initial intent and guidance in order to direct the remainder of the planning process. Under current doctrine, the Commander expresses his intent by giving the Purpose of the operation and the Endstate he is seeking. A key section that is no longer part of the doctrinal approach to Commander's Intent, is "Method". However, nothing prevents

the Commander form using "Method" if it better describes his visualization of the problem and assists in how he describes and directs his forces.

- The Commander uses both his orientation and intent to inform his initial guidance. His initial guidance should include not only his initial thoughts on the environment and problem also on the friendly and enemy CoGs (or adversary CoG depending on the nature of the operation). The Commander's initial guidance has no prescribed format. Sometimes he may quickly grasp the situation and get a solid idea of the "way ahead." At other times, he may require more time with his staff and OPT to go over the details of a more complex situation.
- It is critical for planners to assist the Commander as he formulates his initial planning guidance by summarizing the following:
  - Principal characteristics of the operation with key military actions
  - Command activities that could impact planning
  - Time critical requirements
  - Deployment of an operational liaison and reconnaissance teams
  - Planning milestones, including specifically the Commander's personal involvement

- **Commander's Course of Action Guidance**
  Though not meant to be prescriptive specific guidance can be in terms of warfighting functions, lines of operation, or forms of maneuver, but should include the Commander's vision of decisive, shaping, and sustaining actions (which assists the staff in determining the main effort); parts of the operation; location of critical events; and other aspects the Commander deems pertinent to COA development:

- **Decisive Actions.**

  The purpose of any military operation is mission success. Decisive actions are those the Commander deems fundamental to achieving mission success. They cause a favorable change in the situation or cause the adversary to change or cease planned/current activities.

For an action to be decisive, it must lead directly to a larger success. Decisive actions create an environment in which the adversary has lost either the means or the will to resist. In COIN operations, this situation usually occurs when the majority of the population supports the legitimate government. The unit envisioned to be conducting the decisive action is normally identified as the main effort.

- **Shaping Actions.**

  Shaping sets conditions for decisive actions. Shaping actions are interactions with selected elements within the battlespace to influence an enemy's capabilities or force, or the enemy Commander's decision-making process. The Commander shapes the battlespace by protecting friendly critical vulnerabilities and attacking enemy critical vulnerabilities. Shaping can incorporate a wide array of functions and capabilities and is more than just fires and targeting. It may include direct attack, information operations, engineer activities, and civil-military operations. Shaping makes the enemy vulnerable to attack, impedes or diverts his attempts to maneuver, aids friendly maneuver, and influences the decision-making of key actors to achieve information superiority. It forces the enemy to adopt COAs favorable to the Commander's plans. The Commander attempts to shape events in a way that allows him several options for achieving the decisive action.

- **Sustaining Actions.**

  Sustaining actions are shaping actions directed at friendly forces. Planning is a sustaining action. It prepares friendly forces for military operations by improving their understanding, which minimizes shock or surprise and promotes intuitive decision-making to enhance tempo. Other examples of sustaining actions include preventive medical services and logistic operations, such as stockpiling critical ammunition, fuel, and supplies to facilitate future operations. Additionally, COA development guidance may include—

  - Adversary vulnerabilities
  - Risk
  - Any further restraints/constraints
  - Selection and employment of the main effort

- Types of operations
- Forms of maneuver
- Communication strategy
- Command relationships
- Task organization
- Arrangement of the operation (phasing)
- Timing of the operation
- Reserve
- Evaluation of the battlespace
- Mobility and counter mobility
- Minimum number of COAs to be developed

k. Issue the Warning Order

Upon completion of problem framing, the Commander should direct the release of a warning order (WARNORD), which allows subordinate commands to begin concurrent planning as the higher command begins COA development. The WARNORD should contain all available information to facilitate concurrent planning. Consistency with formats used for subsequent orders products will help speed the information flow because subordinates will know where to look for critical information. When operating with coalition and partner nation forces, WARNORDs should reflect language and cultural considerations.

TTP: Prepare a warning order for release prior to the Problem Framing Brief. Release the warning order (WARNORD) to the MSC(s), to facilitate their planning, immediately following the brief pending approval of the mission statement.

l. Considerations

The MAGTF OPT should begin Problem Framing concurrent with or near concurrent with their HHQ. The same premise holds true for the MAGTF's subordinate commands. Although there may not be an assigned mission statement from the HHQ, the focus of problem framing is more than just identifying tasks and developing a mission statement. Concurrent planning with HHQ and with MSC/MSE(s) presents an opportunity for all

organizations to "**develop a shared situational awareness and shape the thinking of planners**." By beginning problem framing at or near the same time as the HHQ, the MAGTF OPT, and its MSC/MSE(s), are building situational awareness and understanding. The result is the ability to influence and shape HHQ's planning effort to ensure proper employment of the MAGTF.

TTP: HHQs and MSCs conduct Problem Framing concurrently to develop a comprehensive understanding of the operating environment. Subsequent MCPP steps may be slightly staggered so that HHQ guidance can be received to inform subordinate COA Development.

The human element tends to complicate any problem. No amount of critical thinking will ensure 100 percent understanding or accuracy. Accordingly, design does not end with problem framing. The Commander must continually return to his understanding of the problem; refine his guidance; and provide an update or even a new vision/description of who, what, when, where, and why as his planners and staff work through the planning process. The lists of considerations on the preceding pages provide a broad framework for an open-ended dialogue with no predetermined conclusion during the command's efforts to gain an understanding of the environment and the problem. The problem framing brief or any other planning related brief has an intrinsic value far beyond the information presented. Whenever the Commander and his staff and, when possible, subordinate Commanders and their staffs share a common venue where dialogue takes place, the amount of learning is enhanced. Group dialogue, when conducted within the proper command climate, can foster a collective level of understanding not attainable by any individual within the group regardless of experience or seniority. Short of direct interaction with object systems, such as the adversary or populations, group interactions involving frank and candid input are the best way to replicate the nonlinear nature of conflicts and the parties involved.

TTP: OPT Leaders must be prepared to accommodate the development of a multitude of COAs, which means careful analysis of OPT resources must be examined IOT develop realistic timelines for COA development.

Part IV

Course of Action Development

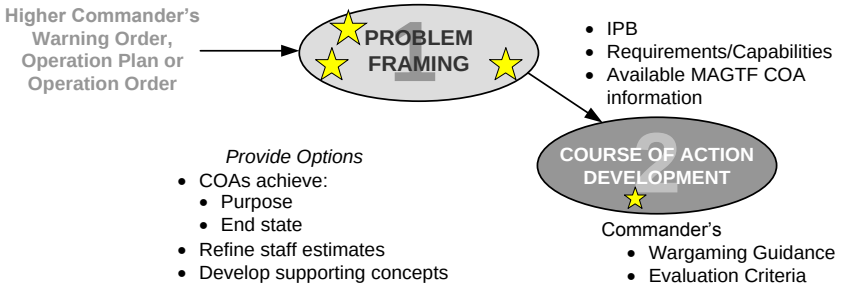


Figure 4-1: Operational Planning Team in COA Development

4001. Introduction

A COA is a broadly stated potential solution to an assigned mission. The COA development step of the MCPP is designed to generate options for follow-on wargaming and comparison that satisfy the mission, intent, and guidance of the Commander. During COA development, planners use the Commander's intent and guidance, as well as the results from the preceding Problem Framing, to develop courses of action.

The OPT concentrates on the following questions during COA development:

- What do we want to do?
- How do we want to do it?

During COA development, the OPT uses the battlefield framework (see Paragraph 4004b) to translate the Commander's intent and guidance into an initial COA. After the Commander reviews these products, the OPT conducts COA refinement, reviewing each COA based on the Commander's criteria. He then prepares the COA development brief.

COA development can be a challenging step in the planning process. The OPT must use its collective experience and judgment to creatively develop different ways to accomplish the mission and to achieve the desired end state.

4002. Issues for Consideration

These issues are considered prime the pump actions for the OPT leader:

- COA Dev template prepared
- Think through the battlefield framework
- Conceptualize the "methodology" the OPT will employ
- Understand the individual strengths and weaknesses of OPT members. Leverage recognized expertise to assign members to various break out groups as well as assign a trusted agent to lead a break out group.

TTP: Schedule administrative time between discrete steps in the planning process. Build into the planning schedule sufficient time for the Core OPT to revise Problem Framing products based on developments during the PF Brief, as well as prepare shell products for COA Development.

TTP: Additionally, post key PF products on website, shared folders, and OPT walls. Scheduling administrative time following the PF brief will also allow staff and MSC/MSE representatives to communicate with their Commanders and to prepare their own actions in anticipation of COA Development.

4003. Injects to COA Development

At a minimum COA development requires a *mission statement*, *Commander's intent*, and *Commander's planning guidance*. Other injects include*:*

- Updated IPB products (enemy COA(s), modified combined obstacle overlay, doctrinal, situational, and event templates, physical network analysis (PNA), and high-value targets)
- Specified tasks
- Implied tasks
- Essential tasks
- Warning order
- Limitations (restraints/constraints)
- Assumptions

- Resource shortfalls
- Subject matter expert shortfalls
- Initial COG analysis (friendly and enemy)
- Approved CCIR(s)
- RCPA
- RFI(s)
- Initial staff estimates

TTP: The "injects" to COA development are primarily the results from the problem framing. However, the OPT must continue to review and update these results, particularly in a dynamic environment.

4004. COA Development Process

COA development is broken down into four primary steps: COA development preparation, initial COA development, COA refinement, and the COA development brief.

a. COA Development Preparation

The two main elements of COA development preparation are an internal review and an external review. During the internal review, the OPT reviews and refines its injects from problem framing. During the external review, the OPT examines and incorporates the problem framing and COA development products (as available) from higher and adjacent.

1. Internal Review

    - Update IPB – Planners must look at two types of IPB – ***traditional*** and ***cultural***. The combination of both traditional and cultural IPB products provides insight into how enemy, weather, terrain, infrastructure, and cultural factors will affect operations. IPB focused on cultural factors helps to determine the often unintended consequences of the cultural environment on operations and must not be overlooked. If the IBP indicates a change in the operating environment, reframing should occur and Design must be revisited.

        - *Traditional* – IPB developed by the G-2/S-2 and includes analysis of enemy weapon systems, capabilities, doctrine,

and indications of intent: all of which serve to identify significant threats to MAGTF and possible enemy COA(s).

- *Cultural* – IPB focused on cultural factors, particularly useful during operations which will involve significant host nation and non-combat population interaction.

TTP: Leverage Information Operations, Civil Affairs, FAOs, etc. to develop cultural IPB products.

- Update Staff Estimates – Staff estimates assist the OPT during COA development by providing essential information on areas of concern, identifying requirements, and capabilities, determining shortfalls, and identifying potential solutions to those shortfalls.

2. External Review

- Display Friendly Forces – The OPT should review current and projected locations of MAGTF units (generally obtained via C2PC overlay). An understanding of the forces arrayed across the battlefield in relation to terrain can reveal potential options the OPT may consider when developing COA(s).
- Assess Relative Combat Power – The OPT examines relative combat power and assesses the strengths, weaknesses, and capabilities of friendly forces compared to enemy forces. The OPT should consider intangible as well as tangible factors when making its assessments. In developing COA(s) the goal is to focus friendly strengths against critical enemy vulnerabilities. Table 3-2 previously portrayed an RCPA worksheet.
- Refine COG analysis – The MAGTF friendly and enemy COG are significant considerations in guiding COA development. Similar to Relative Combat Power Assessment (RCPA), a refinement of the initial COG provides greater understanding of MAGTF capabilities, potential MAGTF main efforts, and critical vulnerabilities. Therefore, a thorough understanding of both friendly and enemy COG (to include critical vulnerabilities) is crucial to adequate COA development. Lastly, as the OPT builds situational awareness and understanding through the planning process, planners should refine or adjust any aspects of the COG, as required.

b. Develop Initial COA(s)

This step is often the most difficult aspect of COA development. Once the OPT has completed its review of the friendly and enemy forces and essential tasks, it is ready to develop the initial COA(s). The OPT does this using the Commander's planning guidance and his vision of shaping and decisive actions. When formulating COA(s), the OPT can address decisive, shaping, and sustaining actions by conceptually dividing the battlespace into deep, close, rear, in addition to identifying a main effort, supporting effort, reserve, and security. The OPT must ensure all elements of the MAGTF are assigned appropriate missions, battlespace, command relationships, and resources. A technique is to break the step down into eight elements:

- Establish Battlefield Framework – The battlefield framework is a technique of breaking the battlespace down into manageable parts. There are two main considerations when establishing the battlefield frame: (1) organization of the battlespace and (2) organization of the force. The first way to examine the battlespace is along spatial lines by conceptually dividing the AO into deep, close, and rear areas, then calculating the spatial requirements needed for sustaining, shaping, and decisive actions. This technique applies equally to contiguous or non-contiguous battlespace. The second aspect is to consider the organization of the force. Organization of the force assigns tasks according to capabilities and identifies forces for the main effort, supporting efforts, reserve, and security. This technique allows the OPT to operate within the single-battle by translating the Commander's vision of decisive, shaping, and sustaining actions into a framework with which to develop initial COA(s).

TTP: Think of battlespace in multiple dimensions – air, space, cyber, sea, land, etc.

- Array initial forces - This element of the process enables an accurate determination of the forces needed to accomplish essential tasks, identifies enemy-friendly combat ratios, conceptualizes control measures, and aids in the consideration of a deception plan.
- Assign purpose and then tasks – Once forces have been arrayed, determine what is necessary to accomplish the mission and

assign the purpose and then the tasks needed to be decisive. Begin with the main effort by stating the purpose and task(s) already identified and follow with the supporting effort and reserve (if assigned) until all tasks have been assigned.

- Convert generic units to specific units – The initial array of forces identifies units that possess required capabilities without regard to a specific unit, type, task organization, or other intangible aspects. During this step, however, unit types are converted from generic to specific to clarify the task organization.
- Task organize – The task organization captures how the OPT intends to structure and resource the force to conduct operations. It also establishes command and support relationships. Task organizations should extend two levels down in order to properly determine tactical mission assignments. Proper task organization ensures each unit is properly constructed, sized, and resourced in order to accomplish its assigned mission.
- Synchronize – Once the OPT has developed a COA, it should see how it can best synchronize (arrange in terms of time, space, and purpose) the actions of all the elements of the force. Use realistic movement rates and ensure they are based on actual capabilities with regards to the effects of weather and terrain. See MSTP Pamphlet 5-0.3, *MAGTF Planner's Reference Manual*. Additionally, the OPT should determine the anticipated duration of engagements, when and under what conditions the main effort may change, when the main effort is to be committed, and when success may be exploited with the reserves. The OPT depicts the synchronization of actions across time and space in the COA graphic and in the narrative. This effort is recorded on the synchronization matrix. The synchronization matrix is started during COA development and refined during the war game.
- Determine control measures – The OPT now determines the control measures best suited to command and control the single-battle. Control measures assigned to the major subordinate commands should ensure they have adequate battlespace and flexibility to accomplish their assigned tasks and protect their force from enemy action.
- Commander's Input and refinement process – The OPT leader reviews the initial COA(s) with the Commander to ensure they

conform to his operational design, initial intent, and planning guidance. This is an opportunity for the Commander to make mid-course corrections before the OPT spends precious time on potential COA(s) that do not adhere to this guidance and conceptualization. This part of the step is normally referred to as a "rough cut COA brief."

c. Crafting an initial COA – An Example

- After defining the COA's operational framework, planners determine the relative combat power required to accomplish each task. They will often start with minimum historical planning ratios. For example, historically, defenders have over a 50 percent probability of defeating an attacking force approximately three times their equivalent strength. Therefore, as a starting point, Commanders may defend on each avenue of approach with roughly a 1:3 force ratio (Table 4-1).

Tactical Posture of Friendly Forces	Position	Friendly : Enemy Force Ratio
Delay		1 : 16
Defend	Prepared or Fortified	1 : 3
Defend	Hasty	1 : 2.5
Attack	Prepared or Fortified	3 : 1
Attack	Hasty	2.5 : 1
Counterattack	Flank	1 : 16

Table 4-1: Minimum Force Ratios Necessary for a 50% Success Probability in Selected Tactical Situations, based on Historical Data

TTP: In counterinsurgency operations, planners can develop force requirements by gauging troop density—the ratio of security forces (including host-nation military and police forces as well as foreign counterinsurgents) to inhabitants. Most density recommendations fall within a range of 20 to 25 counterinsurgents for every 1,000 residents in an area of operations. A ratio of twenty counterinsurgents per 1,000 residents is often considered the minimum troop density required for effective counterinsurgency operations; however, as with any fixed ratio, such calculations strongly depend on the situation(See MCWP 3-33.5 "Insurgencies and Countering Insurgencies" for more information on counterinsurgency planning).

- Planners then organize the force to accomplish its tasks. To achieve this, planners build task forces and match a task force to each task (the same task force may execute more than one task). Typically, a task force starts with a base unit. In the GCE this is usually a maneuver unit such as an infantry battalion or regiment. Planners then reinforce it with aviation, field artillery, electronic warfare, AAV, engineer and/or other elements to the point where the combat power of the task force exceeds the applicable historical planning ratio required for its task. Reinforcing elements are not necessarily attached to, or otherwise placed under the direct control of the base unit. The base unit may, for example, only have priority of fires or other forms of support from a reinforcing element.

- The base unit does not have to remain intact. It may be required to detach assets to other task forces. For example, an infantry battalion chosen as a base unit might have to detach a rifle company to another task force built around, say, a tank or LAR battalion. It might receive a tank and/or LAR company in exchange or it might be expected to accomplish its task with just its two remaining rifle companies.

- Planners must bear in mind that combat power comparisons are provisional at best. Arraying forces is tricky, inexact work, subject to factors that are difficult to gauge. These may include the impact of past engagements, quality of leaders, morale, and the likely effects of aviation, artillery, etc. Planners generally choose base units one or two levels down while reinforcing them from elements two to three levels down to ensure the base units are properly resourced.

- Planners first choose the forces that will conduct the decisive operations. They then allocate their remaining forces to shaping and/or sustaining operations. For example, an OPT might conclude that it needs an infantry regiment and two fighter-attack squadrons to conduct its decisive operations. That might leave it with two more fighter-attack squadrons available for shaping operations. The planners then refine these rough task organizations, as they consider all applicable tangible and intangible factors. At this stage they do not assign missions to specific units; they only consider what forces are required to accomplish each task.

- Planners then compare this initial array with the forces that are actually available to them. If the forces available exceed the forces required, planners allocate surplus units to a pool that they can draw upon when developing their initial concept of operations. If the number of units required exceeds the number available then planners must re-examine their COA to see whether it is truly feasible or whether they must choose another. Planners can compensate for shortfalls either by requesting additional resources or accepting higher levels of risk.

- After this, planners match specific units with specific tasks, beginning with base units. They then ensure that each base unit is adequately resourced to succeed at its assigned task. Planners determine the specific support units needed to round out each base unit and ensure it has the assets it needs. For example, an infantry battalion receives a task that will involve mechanized operations. Planners would attach specific tank and AAV units to this battalion to ensure that it can in fact perform the mechanized operations that are required of it.

- The composition of a given task force need not be permanent even over the course of the operation for which it was created. For example, a mechanized infantry battalion, once it has taken its initial objective, might have to surrender its tanks and AAVs to another task force (perhaps it has ceased to be the main effort or its next objective is in wooded terrain). Alternatively, it might get additional support such as priority of fires from an HMLA.

- Once they have created their task forces, planners assemble them into a task organization. They also consider the ability of tactical headquarters to control the elements assigned to them. The general rule for this is that in conventional combat a given headquarters should control at least two but not more than five major subordinate units (i.e., units one level down directly engaged in the base unit's primary mission; command and support elements, such as an infantry battalion's headquarters and weapons companies, don't count). Task organization also considers special mission requirements such as those of a passage of lines or an air assault.

TTP: Present a "rough cut" COA to the CG after the initial framework of the COAs are developed.

d. COA Refinement

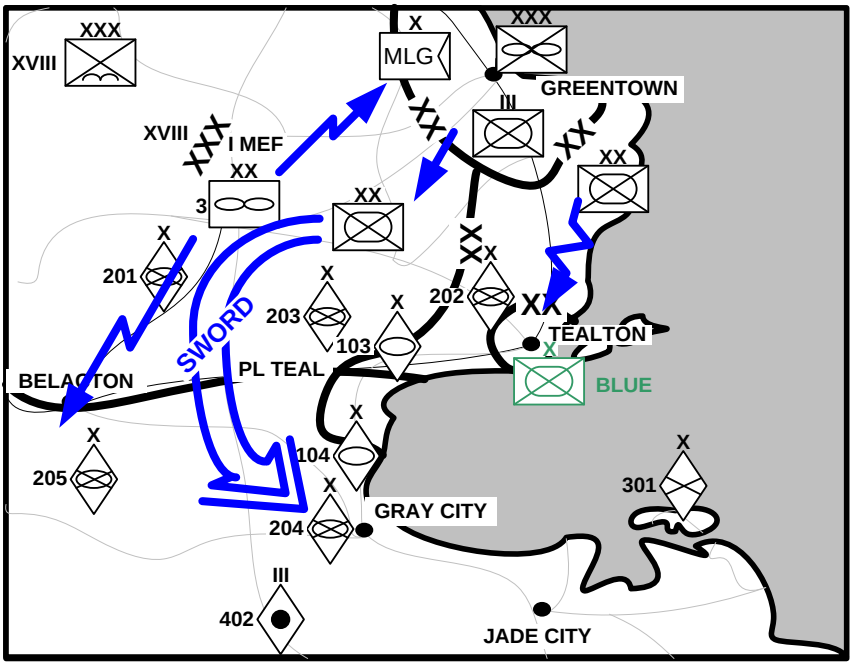
The COA refinement process consists of developing and refining information organized into four basic products: COA graphic and narrative, task organization, synchronization matrix, and supporting concepts. When combined, these four products provide a comprehensive COA package and serve as the basis for the COA development brief.

COA Graphic and Narrative: The COA graphic and narrative (Figure 4-2 and Figure 4-3) broadly encapsulate the plan into a verbal and pictorial representation. The graphic and narrative not only fosters understanding between the Commanders and his staff, but also provides a basis for the concept of operations behind a future operation order.

The COA graphic and narrative must clearly describe how the COA achieves the Commander's vision and objectives. It should include a scheme of maneuver as well as subordinate unit tasks and an end state. It should also describe the task organization (Figure 4-4), how any supporting efforts relate to the main effort, priority of fires, and control measures. It should also include the following:

- The purpose of the operation
- Known or templated enemy locations
- Identification of critical friendly events and phases of the operation (if phased)
- Designation of the main effort, along with its task and purpose
- Designation of supporting efforts, along with their tasks and purposes, linked to how they support the main effort.
- Designation of a reserve (if required), to include locations, composition, tasks, and purposes.
- Ground and air axis of advance.
- All unit boundaries that establish the AO.
- Deep, close, and rear operations.
- Reconnaissance and security operations.
- End states or transition criteria of the phases and stages.
- Location of engagement areas or attack objectives and counterattack objectives.
- Identification of maneuver branches that may develop during an operation.

- Concept of fires.
- Fire support coordination measures.
- Prescribed formations or dispositions when necessary.
- Priorities for each combat support and logistics combat element (LCE) in support of the operation.
- Integration of obstacle effects with maneuver and fires.



On order MEF conducts an envelopment to defeat enemy first operational echelon forces north of Gray City. **Close Operations:** In the east a division conducts a supporting attack in zone to fix the first tactical echelon. In the west a division, as the **MAIN EFFORT,** attacks along AXIS SWORD and defeats the second tactical echelon. **Reserve:** A regiment follows the main effort prepared to contain enemy forces capable of threatening the main efforts movement south. If not committed north of PL Teal, the reserve is prepared to block enemy reinforcements from the south. **Deep Operations:** MAW initially disrupts the 402nd Artillery Regiment's ability to mass fires on the main effort and limits the 103rd, 104th Armored Brigades, and the 204th Mechanized Brigade from reinforcing the first tactical echelon. When the main effort crosses PL Teal the MAW disrupts enemy second operational echelon forces from committing to the MEF zone. **Rear Operations:** A battalion task force acts as the MEF's TCF with the priority of responding to a Level III Threat to the MEF's class III fuel depot vicinity Greentown to ensure the uninterrupted flow of Class III. The MLG establishes CSSA in vicinity of Tealton and Gray City to provide combat service support to MEF units. **Security:** The MAW screens to the west to protect the MEF's western flank. This phase concludes with enemy first operational echelon forces defeated north of Gray City.

Figure 4-2: Course of Action Graphic and Narrative

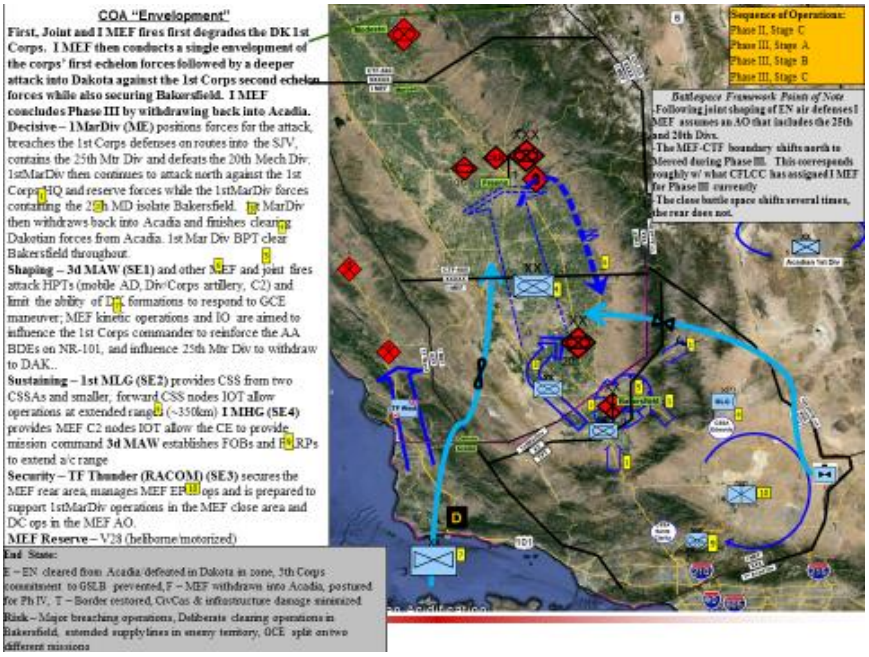


Figure 4-3: Course of Action Graphic and Narrative (2)

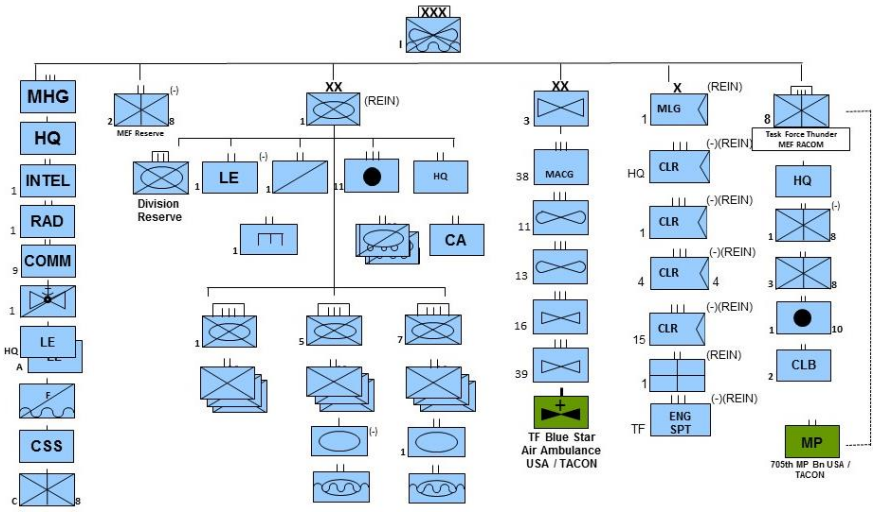


Figure 4-4: Task Organization for Figure 4-3

In addition, the COA graphic and narrative should include the array of generic forces, and control measures such as—

- Reconnaissance and security graphics.
- Assembly areas, battle positions, strong points, engagement areas, and objectives.
- Rear Area responsibilities
- Aircraft operating sites.
- Combat Service Support Areas *(CSSA is still a valid joint term but the Marine Corps may replace it in the next MCWP 4-1)*.
- Obstacle control measures and tactical mission graphics.
- Location of command posts.

The OPT ensures each COA meet COA criteria (Table 4-2) both generic (MCWP 5-10) and specific (Commander's guidance).

Feasibility	Does the COA accomplish the mission within the available time, space, and resource constraints?
Acceptability	Does the COA justify its cost in resources?
Suitability	Does the COA accomplish the purpose and tasks? Does it comply with the Commander's planning guidance?
Distinguishability	Does the COA differ significantly from other COA(s)?
Completeness	Does the COA include all tasks (specified, implied, and essential)? Does it support the entire MAGTF mission (main and supporting efforts, reserve)? Does it answer the five Ws from the mission statement?

Table 4-2: COA Criteria

Synchronization Matrix: The synchronization matrix depicts the activities of the MAGTF and subordinate elements over time, and provides the Commander with a snapshot of how units and tasks interrelate within the all elements of the MAGTF. It also displays the plan's cohesion and provides detail that complements and amplifies the COA graphic and narrative (Table 4-3).

The synchronization matrix is an extremely important product because it serves as both a working document and a source document. It is a working document in the sense that the OPT continues to populate and refine it throughout the planning process, and serves as the primary document from which to conduct the war game. Similarly, the synchronization matrix is a source document because the OPT needs to continually refer back to it as the complexity of the COA expands. The OPT uses the matrix as the basis for orders development, particularly Annex X (execution checklist).

MEF Timeline/Event	Category	Stage A: D-3 to pre- H-Hour	Stage B; H-Hour to D+4
Threat/WX effects		Minimal Impact (see WX brief)	Slight impact on Aviation D+2
LCE Decision Points		DO-1 Deception Plan	DP 2-6
LCE CCIR(s)		Unavailability of HN rail system	Confirmed enemy targeting of CSS nodes
Maneuver	Deep	N/A	1st AD attacks to envelop; MAW air strikes
	Close	N/A	2nd MARDIV attacks in zone
	Reserve	IAW Deception plan	3 x Bns. prepare for HELO assault
	Rear	IAW Deception plan	Sustainment
	Mobility	N/A	MSR(s) open
	C-Mobility	N/A	1st AD on West flank & MAW
Intelligence	NAI	I&W: NAI 1-4, 6 & 8C	NAI 12: 205th reacts to 1st AD
Fires	Lethal	JTF shaping	MAW: Destroy 102nd & neutralize 204th
	Non-Lethal	Leaflet drop: NAI 5, 9	Press releases: CA with maneuver units
Logistics	Transport	Bulk water, fuel, chow	MSR feasibility, rail, amphib
	Supply	STON capability	HN fuel capacity
	Gen. Engr.	Bridging capability	MSR choice
	Maintenance	Repair turn-around	Parts flow & distribution
	HSS	Coordinate w/16th CSG	Internal casualty capability
	Services	Coordinate w/US Army	Postal only
Command & Control	C2 IW	Boundary shift with III Corps; electronic surveillance at border	Counter-Recon in zone Counter-terrorism
Force Protection	NBC/Air Def.	MOPP 1 at Bn. Level	TMD assets deployed & ready

Table 4-3: Sample Synchronization Matrix by Warfighting Function

Supporting Concepts – The COA graphic, narrative, and synchronization matrix provide a solid baseline, but do not contain all the functional levels of detail for a complete COA. At a minimum, the MAGTF staff in coordination with the OPT must prepare appropriate supporting concepts (intelligence, fires, logistics) for each COA to ensure actions are integrated and synchronized. Once the Commander selects a COA, the supporting concepts developed in this step become the basis for the concepts of intelligence, fires, logistics, etc., in the OPORD. See Figure 4-5 (below) for an example of supporting concepts.

COA 1

Concept of Fires: MEF fires will degrade the enemy's ability to conduct a cohesive defense by attacking maneuver, fire support, and C2 elements. Fires will be executed by stage in phase.

(a) Phase I

1. Purpose: Prepare to disrupt enemy attempts to attack Tealton and neutralize enemy fire support assets supporting any attack.
2. Method: MAW prepares to disrupt 201st and 202d Mechanized Brigade, 102d Armor Brigade. On order MAW neutralizes the 401st Artillery Regiment and 103d Armor Brigade.
3. End State: 401st Artillery Regiment incapable of massing fires above battalion-level is support of the enemy attack on Tealton; 103rd Armor Brigade unable to deploy forces above battalion strength north of PL Black for a coordinated attack on Tealton; Tealton secure, enemy attempts at spoiling attack unsuccessful.

(b) Phase II Stage A

1. Purpose: Disrupt and neutralize Orangeland forces to allow MarDiv to attack first echelon forces and 1st Armored Division to envelop second echelon forces. Interdict enemy forces movement to landing beaches.
2. Method: MAW interdicts the 205th Mechanized Brigade from H to H+10; neutralizes the 401st Artillery Regiment from H+8 to H+40; and disrupts Orangeland HQ C2 from H+6 to H+15, 102d Armored Brigade from H+8 to H+40, and 104th, 103rd Armored Brigades from H+8 to H+40.
3. End State: 205th Mechanized Brigade defeated by 1st Armored Division; 1st Armored Division at PL White; 401st Artillery Regiment neutralized; the 101st, 102d, 104th, and 105th Armored Brigades, 201st, 301st, and 302d Mechanized Brigades attacked and disrupted. FSCL#1 (PL White) shifts to FSCL#2 (PL Black)

(c) Phase II Stage B

1. Purpose: Disrupt and neutralize Orangeland forces to allow 1st Armored Division to destroy Orangeland HQ and defeat the 101st, 104th Armored Brigades and 201st Mechanized Brigade.
2. Method: MAW disrupts Orangeland HQ C2 from H+18 to H+96. Neutralize 402nd Artillery Regiment from H+48 to H+96. Destroy known SA-2, SA-5 positions.
3. End State: 1st Armored Division destroys Orangeland HQ, defeats enemy forces in zone and establishes a defense along the Blueland border. MarDiv clears first echelon forces in zone. MAW prepares to establish air point vicinity of Emerald Isle.

(d) Phase II Stage C

1. Purpose: Prepared to disrupt enemy counterattack attempts across the Blueland border and support the defense.
2. Method: MAW be prepared to disrupt 105th and 106th Armored Brigades and 206th and 302d Mechanized Brigades.
3. End State: MAW establishes an air point on Emerald Isle and MEF forces prepared for continued offensive operations.

COA 1 (continued)

Concept of Intelligence: MEF intelligence operations will emphasize developing the current situation to support the advantageous application of our maneuver and fires capabilities.

(a) Phase I

1. Purpose: Provide early notification of enemy attempts to attack Tealton, and accurate location of associated fire support assets.

2 Method: MEF aerial imagery and SIGINT collections assets conduct surveillance of the 201st and 202nd Mechanized Brigades, and the 102nd and 103rd Armored Brigades. MEF ground reconnaissance assets will conduct active counter-reconnaissance against enemy forward-deployed fire observation assets and ground reconnaissance assets to identify their location, destroy them where able, and further define the enemy's security area. MEF HUMINT assets will deploy to Tealton to support RSO&I operations.

3 End State: Early notification of enemy attempts to attack Tealton. 401st Artillery Regiment located.

(b) Phase II Stage A

1. Purpose: Identify enemy preparations for movement towards landing beaches.

2. Method: MEF aerial imagery assets will focus surveillance operations against the 102nd, 103rd, and 104th Armored Brigades, and 401st Artillery regiment from H+8 to H+40. Additionally, a thorough visual reconnaissance will be conducted from the 1st Armored Division line of departure, through Bealton and conclude in Gray City NLT H+40. MEF SIGINT collections assets will focus surveillance operations against Orangeland HQ C2 to support answering the MEF PIRs.

3. End State: 401st Artillery Regiment attempts to reposition identified. Orangeland attempts to reinforce landing beaches identified.

(c) Phase II Stage B

1. Purpose: Support the 1st Armored Division attack by identifying location and activities of Orangeland HQ, 101st and 104th Armor Brigades, and 201st Mechanized Brigade.

2. Method: MEF SIGINT collections assets will continue surveillance operations against Orangeland HQ C2 to support answering the MEF PIRs. MEF aerial imagery assets will focus surveillance operations against the 402nd Artillery Regiment and known SA-2, SA-5 positions.

3. End State: Orangeland HQ, 101st and 104th Armor Brigades, and 201st Mechanized Brigade identified.

(d) Phase II Stage C

1. Purpose: Identify Orangeland preparations for counterattack across Blueland border.

2. Method: MEF aerial imagery and SIGINT assets focus surveillance operations against the 105th and 106th Armored Brigades, and the 206th and 302nd Mechanized Brigades. MEF HUMINT assets will continue collections in support of force protection requirements vicinity of MEF rear area, sustainment nodes, and aviation assets.

3. End State: Identify assembly areas for Orangeland counterattack forces.

COA 1 (continued)

Concept of Logistics

(a) Phase I

1. Purpose: Provide logistics support of MARFOR RSO&I.
2. Method: Buildup of 30 days of supplies by C+95 in Greentown with a goal of 60 days of supplies by C+105. COSCOM is directed to provide CSS to all ARFOR forces attached OPCON to MARFOR. Coordinate with NAVFOR for additional log support as needed. MARFOR will coordinate host nation support as required. After offloading of equipment and sustainment from the MPSRONS.
3. End State: All CSSE attached to maneuver units formed in assembly area ready to cross the LD.

(b) Phase II Stage A

1. Purpose: Provide general support and direct support logistics support to all MEF and attached units in the MEF AO.
2. Method: Provide direct support logistics support to MEF with MCSSDs originating out of Greentown. Provide logistics support to 1st AD with COSCOM out of Blueland. Establish forward MLG headquarters element in Tealton in order to plan for echeloning of CSS forces to Tealton. Coordinate with NAVFOR in order to support all amphibious operations within the MEF AO.
3. End State: CSSA established at Tealton.

(c) Phase II Stage B

1. Purpose: Provide logistics support to MEF forces by establishing a FCSSA in the vicinity of Tealton.
2. Method: Buildup CSS sustainment in Tealton in order to establish a FCSSA. MCSSDs will continue to operate out of Greentown until the FCSSA has been established at Tealton. COSCOM will continue to provide direct support CSS to the 1st AD throughout operation. MEF will maximize the movement of CSS forward by utilizing the air and sea lines of communications. After establishing an FCSSA in vicinity of Tealton, MEF will send a forward MLG headquarters element to Gray City after it has been secured in order to echelon CSS elements to that location. Identify host nation support POL assets and locations. Coordinate with NAVFOR for port support at Tealton and Gray City.
3. End State: 30 days of supplies built-up in Tealton.

(d) Phase II Stage C

1. Purpose: Establish CSSA in vicinity of Gray City in order to provide CSS support to MEF units.
2. Method: Echelon sustainment forward to Gray City utilizing line-haul and sea lines of communication. Utilize MCSSDs in vicinity of Gray City and Tealton in order to support maneuver units in the MEF AO.
3. End State: Operational pause conducted at the Blueland border in order to conduct repair, refuel and rearming operations prior to commencement of phase III as needed.

Figure 4-5: Sample Supporting Concepts

e. Sequencing and Phasing

The primary aim in sequencing and phasing an operation is to maintain continuity and tempo and to avoid unnecessary operational pauses, finally by maximizing the means to get successfully to the ends through coordinated and balanced ways. Planners should determine the best arrangement of actions and effects to achieve objectives. This arrangement will often be a combination of simultaneous and sequential actions. However, it may not be possible to attain the objectives in a single engagement or even a major operation. As such, the operational approach normally provides for the sequencing of actions or the phasing of operations.

Sequencing is the arrangement of actions in an order producing the effects for the generation of decisive conditions. Although simultaneous actions may be ideal, resource availability usually forces the Commander to prioritize and sequence the actions; alternatively, a Commander may choose to sequence the actions in order to reduce risks to an acceptable level. This process assists in thinking through the entire operation logically in terms of available forces, resources and time, and helps to determine different operational phases.

Phasing creates distinct stages within the progress of the overall operation. Phases are sequential but their effects and actions may overlap. The actions required to create certain effects in a certain phase may well start prior to the phase in question. In some cases the beginning of a phase may be contingent on the successful completion of a preceding phase. This should be clearly recognized during COA development. The Commander will designate a main, supporting efforts, and address all his forces throughout all phases and the battlespace in accordance with the Marine Corps single battle concept. This subordinate Commander may in turn decide to sequence his operations into Stages, Parts, or Steps—in that order—based on the sequencing of higher headquarters in order to separate his unit's actions from higher, enhance internal coordination and avoid confusion.

f. COA Brief

The finalized four products, along with updated facts, assumptions, risks, etc. are briefed to the Commander. COA briefs should be tailored to the

needs of the Commander and the time available. In the event of multiple COA(s), the OPT briefs each COA independently and objectively.

4005. Results of COA Development

COA development produces results that drive subsequent steps of the planning process. Required results from COA development are:

- Designated COA(s) for war game
- Commander's war game guidance
- Commander's evaluation criteria
- Updated IPB products.
- Refined staff estimates
- Initial estimates of supportability and additional requirements from subordinate Commanders

TTP: The OPT Leader needs to collaborate with the commander on developing war gaming guidance.

4006. Considerations

OPT leaders can tailor or add more detail to their COA(s) based on the situation and time available. This information helps the war game effort and serves to promote a deeper understanding of each option for all stakeholders. Additional information relating to each COA may include the following:

- Military deception options
- Risk assessment
- Timelines and rates of movement
- Assumptions and facts unique to each COA
- Estimate for each COA start and finish time

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Part V

Course of Action War Game

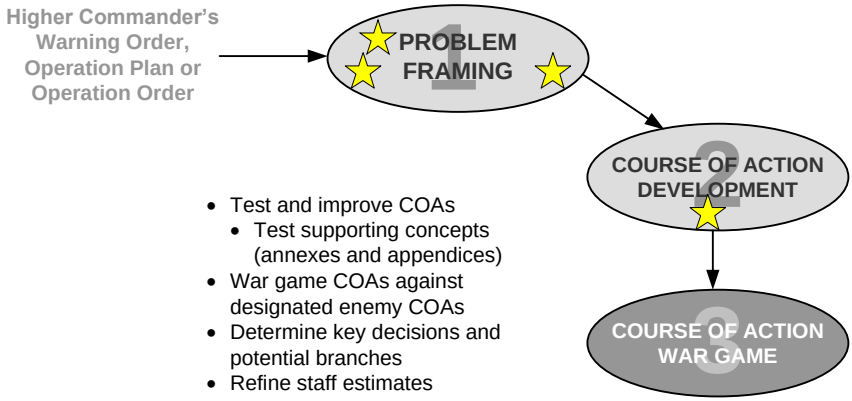

Figure 5-1: Operational Planning Team in COA War Gaming

5001. Introduction

The COA war game is a useful, methodical process that allows the Commander, his staff, and the OPT to evaluate the strengths and weaknesses of each COA, to validate each COA against a thinking adversary, and to gain a common understanding of each COA prior to execution. The war game helps determine the advantages and disadvantages of each COA and synchronizes the Warfighting functions across the battlespace (close, deep, rear).

The OPT concentrates on the following questions during the COA war game-

- Does the friendly force COA achieve the intended purpose of the operation?
- What additional forces (resources) are necessary to achieve the purpose if the original actions fall short?
- What if …?

The OPT independently evaluates each friendly COA against selected enemy COA(s), normally the most likely and/or most dangerous based on

the Commander's wargaming guidance. It uses (1) the latest IPB products, (2) COA graphics and narratives, (3) the latest staff estimates and estimates of supportability, and (4) any additional requirements, including those from subordinate Commanders. Also, the OPT considers the Commander's evaluation criteria to determine how best to attack enemy critical vulnerabilities while protecting friendly critical vulnerabilities. The red cell plays the thinking enemy during the war game.

5002. Issues for Consideration

a. OPT Organization

In order to execute an efficient and effective war game it is essential the OPT be properly staffed and organized with representatives that have a wealth of knowledge and operational experience. Figure 5-2 is an example of an OPT organized for wargaming.

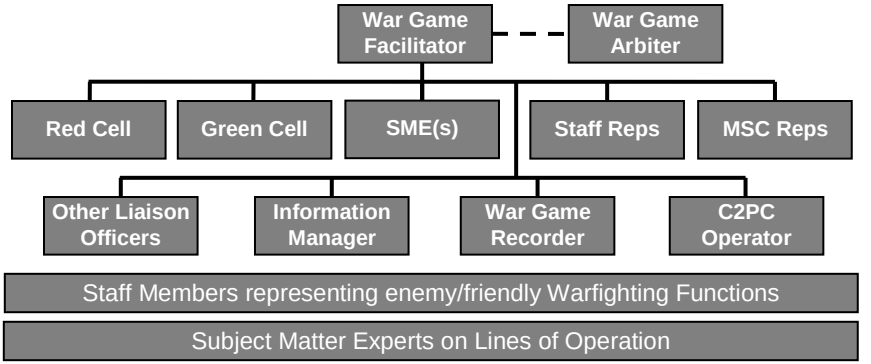

Figure 5-2: OPT War Game Organization

The war game facilitator should be the OPT Leader or someone chosen from within the OPT to perform this function. The facilitator ensures the OPT stays focused and adheres to the war game timeline.

The Arbiter can come from within the OPT, or chosen from someone on the MEF staff to arbitrate should a dispute arise during the play of the game. Sometimes the COS can fill the role of Arbiter. Whomever is chosen, that person should be available to the OPT when needed, in order not to hold up the planning process.

The Recorder should keep track of all moves and results from game play and record the strengths and weakness of each COA. It is highly recommend that each OPT member take copious notes as well. The

records kept will give the OPT a record from which to produce the templates and matrices necessary to analyze COA(s) and achieve a decision.

The Information Manager provides quick access to stored information, especially in a time crunch. Arrange for continuous communication between the MEF and subordinate OPT(s) using video teleconferencing, chat and other electronic means. The OPT will need someone who can post information to the web site either present or on call for the OPT.

> ***TTP***: The C2PC Operator should be someone from the staff who is very proficient at C2PC to build and modify templates during the war game. Failure to have a competent C2PC operator will cost the OPT time by trying to revise things on the fly. C2PC graphics copied into PowerPoint are also useful for briefings.

The OPT Leader needs to ensure the staff representatives are present for the war game and are developing their estimates as the game progresses. Similarly, all liaison officers from the MSC/MSE(s) and other organizations need to participate in the war game.

> ***TTP***: Do not short change the planning process by omitting SME(s). If you do not have a core competency on the staff, request one from another command. SME(s) can be full or part-time in the OPT. Examples include NBC, PSYOPS, SJA, CMO, and FAO(s).

The Red Cell leader role-plays the enemy Commander. He orchestrates enemy reaction to friendly moves using doctrine and TTPs of the threat. The red cell will act in accordance with the enemy COA(s) and implements the enemy COA as directed by the Commander.

The Green Cell leader role-plays the independent will of the population and also provides considerations for non-DOD entities, such as intergovernmental organizations (IGOs) or nongovernmental organizations (NGOs). He derives the populations' reaction to friendly actions, assesses opportunities and risks, and evaluates 2nd and 3rd order effects of friendly actions.

There could be multiple adversaries to consider, as well as varying civilian groups, such as tribes, families, ethnicities, and agencies. Red and green cells should be prepared to "play" them all.

All of the warfighting functions must be represented by the participants in the OPT. Ensure all six are covered by competent people. Additionally, if the OPT is organized along lines of operation (LOO), the OPT should consider having SME(s) that represent each of the LOO(s).

b. Role of the Red Cell

Another important consideration for the OPT is the use of the red cell. The red cell is a task organized element under the staff cognizance of the G-2/S-2 that plays the role of a thinking enemy during wargaming. It uses threat doctrine and operational experience to react to friendly threats and dispositions in order to test friendly COA(s) during wargaming.

The red cell ensures assessed threat capabilities and vulnerabilities are realistically evaluated against each friendly COA. At the MEF or MSC/MSE level, the red cell may include four to six personnel; while at the battalion or squadron level, the red cell may be the S-2 or a representative designated by the Commander.

A red cell member should be present throughout the wargame, but there should be a distinction between the red cell representative and the G-2 OPT representative. The former provides insight into enemy capabilities and actions per the COA(s) while the latter is the conduit to intelligence resources, products, and refined assessments. The red cell should also be able to evaluate and provide feedback on the friendly military deception actions.

c. Role of the Green Cell

The green cell considers the population and other non-military actors (i.e., NGOs, IGOs) and their impact on the operation during wargaming. As an ad hoc working group, the green cell functions within the OPT rather than a specific staff section. It is essential the green cell works with the G-2 plans, G-9 plans, and the red cell. The green cell integrates diverse perspectives relating to civil considerations into the planning process to strengthen the overall planning effort. It uses social, behavioral, and cultural systems along with operational experience to react to friendly actions and dispositions in order to test friendly COA(s) during wargaming.

The green cell ensures assessed civilian actions and behaviors are realistically evaluated against each friendly COA. Additionally, the green cell may also assess how enemy actions affect the civilian populace. At

the MEF or MSC level, the green cell may include four to six personnel; while at the battalion or squadron level, the green cell may be the S-9 or a representative designated by the Commander.

> ***TTP***: There is a distinction between the green cell representative and the G-9/CMO OPT representative. The former provides insight into enemy capabilities and actions per the COA(s) while the latter is the conduit to civil affairs resources, products, and refined civil information assessments.

5003. Injects to COA Wargaming

COA wargaming requires the Commander's designated COA(s) for wargaming, wargaming guidance and evaluation criteria.

> ***TTP***: Depending on the time available for planning and the nature of the COA(s) developed, the Commander may elect to focus on one or two of the most promising COA(s) for detailed wargaming. If there are elements of a third COA that the Commander likes, he may direct the OPT to incorporate those into the remaining COA(s).

The Commander's wargaming guidance may include but is not limited to the following items:

- Friendly COA(s) that will be wargamed against specific threat COA(s). For example, the Commander may tell the OPT to wargame the COA(s) against either the enemy's most likely COA or the enemy's most dangerous COA. Normally, if the COA was built based on the enemy's most likely COA, it should also be war gamed against the most dangerous COA as well.
- A requirement to execute the war game assuming the threat does not react to a deception being conducted by higher headquarters.
- Critical events that must be wargamed in specific detail, such as decision points (DP) identified during COA development
- The level of war game detail
- Validation that the command can achieve the Commander's intent (i.e. subordinate commands in prescribed positions, each at a prescribed level of readiness and the enemy force also in the posture specified)

- A requirement to determine whether specific timelines are attainable
- Reinforcement of the importance and the role of the main effort so that priority of support can be delineated
- Specifications of the weather conditions to be assumed by the war gamers (e.g. rainy conditions although the norm for the time of year is dry weather)
- Timeline for the phase or stage of the operation

To be adopted as the plan, a COA has to survive two sets of evaluation criteria. The first broad set of evaluation criteria requires that a COA must be suitable, feasible, acceptable, distinguishable, and complete. The second set of evaluation criteria, provided by the Commander, is intended to identify which COA is the best COA.

The Commander's evaluation criteria may include, but is not limited to the following items:

- Principles of War
- Commander's intent and guidance
- Limitation on casualties
- Exploitation of enemy weaknesses and/or friendly strengths
- Defeat of the threat centers of gravity
- Degree of asymmetrical operations
- Opportunity for maneuver
- Concentration of combat power
- Speed
- Balance between mass and dispersion
- Success despite the terrain or weather restrictions
- Risk
- Phasing
- Weighting the main effort

- Logistical supportability
- Political considerations (rules of engagement)
- Time available and timing of the operation.

Other injects include-

- Updated IPB products (enemy COA's, event templates and matrices, named areas of interest, targeted areas of interest, and high value targets)
- Planning support tools including the COA narrative and graphic and synchronization matrix
- Estimates of supportability and additional requirement from major subordinate Commanders
- Staff estimates and additional requirements from staff and warfighting representatives, including an updated intelligence estimate with an event template and threat COA(s)
- Updated facts and assumptions

5004. Process for Conducting a COA War Game

a. Steps to Conduct a War Game

During the COA war game the OPT ensures each COA is evaluated independently against the Commander's evaluation criteria and against the enemy's expected action. To facilitate this, the following seven steps are recommended for the conduct of the COA war game as outlined in MCWP 5-10.

1. Gather the tools.
2. List and review friendly forces and relationships
3. List and review all planning assumptions
4. List and display known critical events and decision points (See MCWP 5-10, Appendix F for more detail on these terms)
5. Select a War Game method
6. Record and display war game results
7. Assess the war game and its results

b. War Game Methods

There are four war gaming methods available to the OPT. They include:

1. Sequence of Essential/Critical Tasks
2. Avenue in Depth
3. Belts
4. Box

1. Key Event or Sequence of Critical Tasks. The sequence of essential tasks (Figure 5-3) highlights the initial shaping actions necessary to establish a sustainment capability and to engage enemy units in the deep battle area. At the same time, it enables the planners to adapt if the red cell leader executes a reaction that necessitates the reordering of the essential tasks.

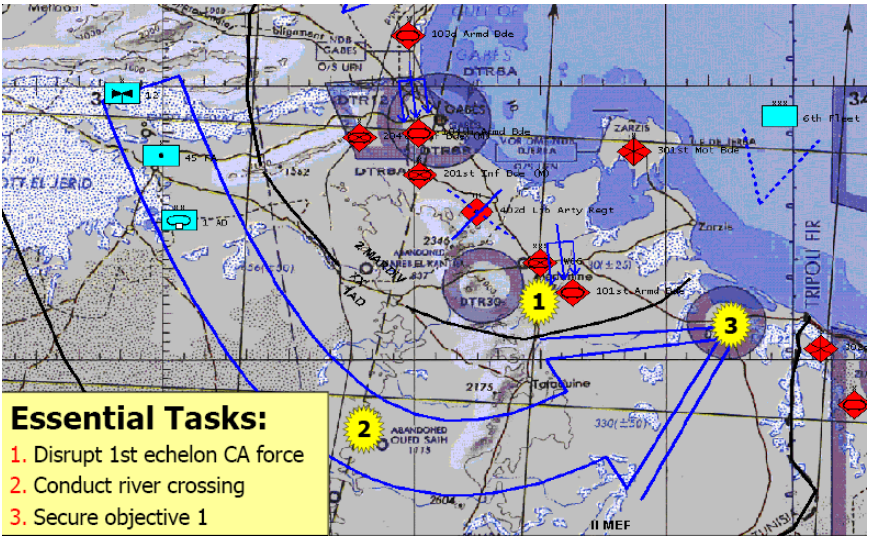

Figure 5-3: Sequence of Essential Tasks Gaming Method

2. Avenue in Depth. Avenue in depth (Figure 5-4) focuses on one avenue of approach at a time, beginning with the main effort. This technique is good for offensive COA(s) or for defensive situations when canalizing terrain inhibits mutual support.

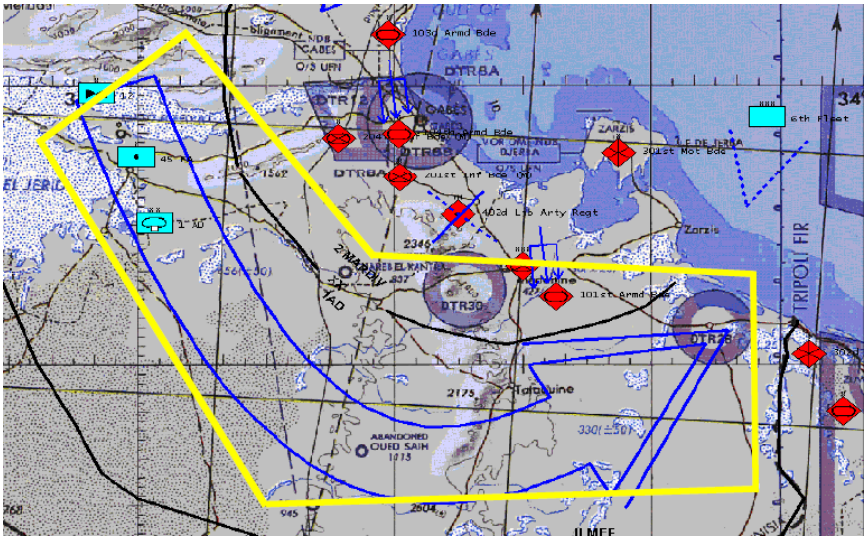

Figure 5-4: Avenue in Depth Gaming Method

3. Belts. Belts (see Figure 5-5) divide the terrain into areas that span the width of the sector (defense) or zone (offense), or area of operation. This technique is most effective when the terrain is divided in to well-defined cross compartments during phased operations (e.g., a river crossing or helicopter borne assault), or when the enemy is deployed in clearly defined echelons. This technique is based on the sequential analysis of events in each belt; that is, events are expected to occur more or less simultaneously. This type of analysis is preferred because it focuses on essentially all forces affecting particular events in one timeframe. A belt will normally include more than one event. When time is short, the Commander may use a modified belt technique; i.e., belts are separated and selected on the basis of the locations of critical events, which, again, are expected to occur in the same timeframe. At a minimum, belts should include the area of:

- Initial contact along the forward line of own troops, the line of departure and/or line of contact or in the covering force area.
- Initial penetration or initial contact along the forward edge of the battle area.
- Passage of the reserve or commitment of a counterattack.
- The objective (offense) or defeat of the enemy (defense), such as the limit of advance for the counterattack.

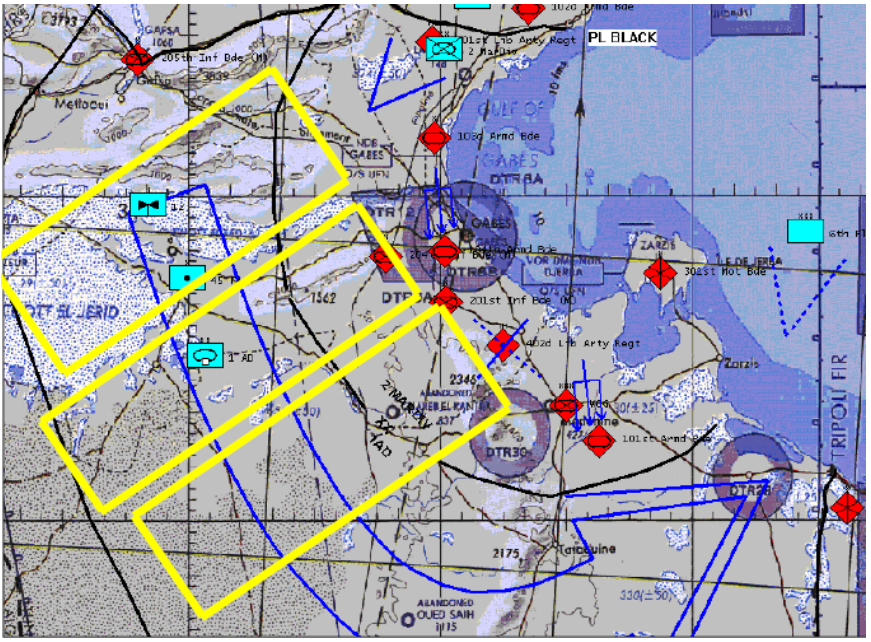

Figure 5-5: Belt Gaming Method

4. Box. The box technique (Figure 5-6) is a detailed analysis of a critical area, such as a colored landing beach, an infiltration route, or a raid objective. It is most useful when time is limited. This technique applies to all types of units. When using it, the staff isolates the area and focuses on the critical events within that area. The assumption is that the friendly units not engaged in the action can handle the situations in their region of the battlespace and the essential tasks assigned to them.

c. Record and Display War Game Results

One of the most important activities the OPT will do during wargaming is record actions and results. Recording will help to:

- Synchronize the Warfighting Functions and Lines-of-operation.
- Identify decision points and develop Decision Support Templates.
- Analyze each COA by using the Commander's and the staff's Evaluation Criteria.
- Refine task organizations and relationships.
- Validate or refine CCIR(s)

- Facilitate the COA war game brief and more importantly, orders development

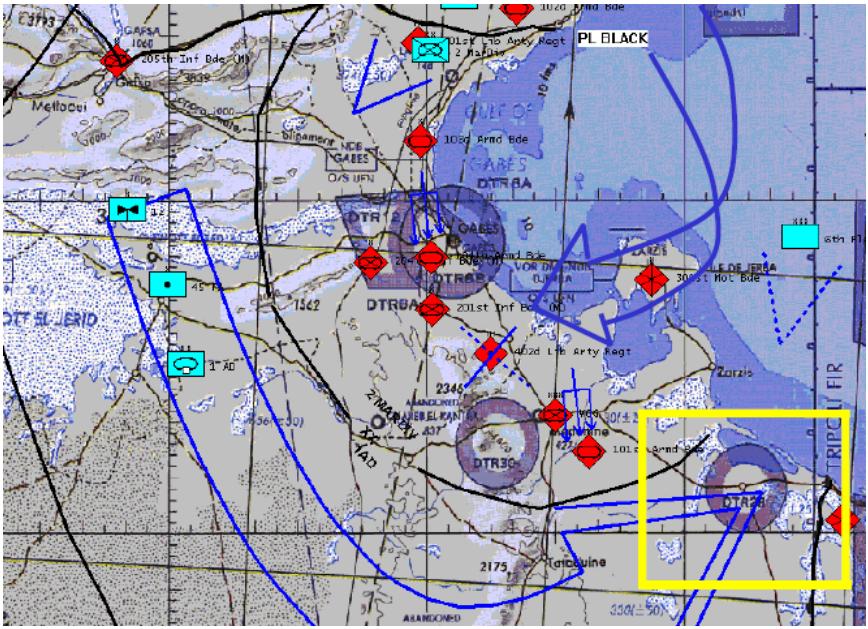

Figure 5-6: Box Gaming Method

COA 1, Stage A; Box: Most Likely							
Action	**Re-action**	**Counteraction**	**Assets**	**Approx. Time**	**DP**	**CCIR**	**Remarks**
MARDIV envelops Orange-land forces north of Gray City	102nd & 103rd Armored Brigades counter-attack	MAW interdicts moving adversary forces. MARDIV engages & destroys enemy armor at long range	Surge MAW attack assets to interdict adversary armor	D+3	DP 3	Will 102nd & 103rd Armored Brigades move West to counter-attack?	MARDIV has priority for close air support
DP = Decision Point							

Figure 5-7: Sample Course of Action War Game Worksheet

One method of recording the results of the war game is the synchronization matrix (Table 4-3). It allows the staff to synchronize a COA across time and space in relation to the enemy COA. Another useful method of recording war games is the COA war game worksheet. The COA war game worksheet is used to record friendly action, enemy reaction, and friendly counter-action. It is also used to capture critical information such as potential CCIR(s), decision points, and named areas of interest. (See

Figure 5-7 of this Pamphlet as well as MCWP 5-10, Appendix E for examples of COA War Game Worksheets).

d. Assess the War Game and its Results

The conduct of the war game is usually done using game turns. A game turn covers all friendly and threat actions that are planned to occur during a specified time interval and are focused on a specific task or event. Each game turn usually consists of three moves-two by the friendly force, one by the threat force. The friendly force has two moves because the activity is intended to validate and refine the friendly force COA not the threats.

- **Friendly Force Action**. Friendly force Commanders describe the operations of all forces involved during this event. They describe the force, its mission, and the desired outcome. They annotate the force list to account for all forces employed in the event.

- **Threat Reaction.** The red cell leader describes the operations that his forces are currently executing. He includes the forces outside the immediate area of operations, but within the area of interest that he intends to employ during this event. This allows friendly wargamers to validate the portion of their plan that addresses these additional threat forces. The red cell leader and friendly Commanders determine where they would have had contact.

  The red cell leader describes the locations and activities of his assets identified as high-value targets. He highlights points during the operation where these assets are important to the threats COA. If these points affect the friendly COA, friendly wargamers identify the high-value targets as high payoff targets, thereby making their engagement an integral part of the friendly COA. With this information, the operational planning team updates the situation and event templates to reflect tactical areas of interest that support the engagement of those high payoff targets.

  The operational planning team discusses the probable outcome of the contact on both friendly and threat forces. Recording tools are used to annotate the discussion. If they can agree on the outcome, the game turn proceeds. If they do not agree, the facilitator determines the outcome, and the war game proceeds.

- **Green Cell Turn.** The war game facilitator determines whether the green cell "turn" is played after the red cell "reaction" or following

the "counteraction." Regardless, the green cell provides the civil environment response to both the friendly activities and red cell reactions.

- **Friendly Counteraction**. The friendly force Commander, in discussion with the red cell / green cell leaders and the OPT leader, determines the additional actions and resources necessary to achieve the original purpose. This is a critical part of the war game. When modifying the COA, it is necessary to revalidate the location and composition of the main and supporting efforts, reserves, and control measures that affect their employment. If resources needed for the counteraction are available and can be reallocated from any intended use in a subsequent game turn, the friendly Commander can add the additional forces to the COA.

TTP: Time management is the most common point of friction during wargaming. The OPT facilitator must keep the wargame on schedule and ensure that dialogue is focused and purposeful.

Wargaming a COA

The method chosen for any given COA wargame is situationally dependent. However, whatever method is chosen will focus efforts and feature consistent wargaming turns. The following list of duty assignments/steps illustrates just one of many possible COA wargame methods.

1. Assign personnel the Wargame Staff positions
    a. Facilitator: leads the group through the Wargaming process and determines the contents of the Synchronization / Wargaming Matrices.
    b. Arbitrator: final authority in the resolution of disputes.
    c. Two Recorders
        i. The Synchronization Matrix Recorder inserts decisions into the synchronization matrix—heart of OPORD / Annexes.
        ii. The Wargame Matrix Recorder captures salient points from the wargame in "brief-able" form.

d. Mr. Doctrine: This individual reinforces doctrinal integrity by looking up definitions/concepts from authorized doctrinal publications during group discussions.

e. A Red Cell represents the adversary. It forms during the Problem Framing step of the MCPP. It uses enemy doctrine tactics and weapons. For the wargame it uses what the staff has assessed to be the adversary's most likely or most dangerous COA. The Commander chooses which COA to employ.

   i. Whenever possible, Red Cell membership should include representation from all the Warfighting Functions.

   ii. The Red Cell must develop and bring to the Wargame the same tools as friendly forces—Event Template, Decision Support Matrix and Synchronization Matrix. These tools will be used to portray adversary reaction and thought processes during the wargame.

Note! The goal of the Red Cell is not to win but to accurately portray the enemy COA in order to improve the friendly plan.

f. Organize a Green Cell: most situations require a Green Cell during Problem Framing to represent the impact of unit operations on indigenous civilians. The Green Cell is normally formed from civil affairs personnel.

2. Suggestions for Conduct of the Wargame

a. Step 1: Orientation: Both friendly & Red Cell brief the entire R&S plan—to include NAIs & TAIs—before Turn 1 begins — this highlights what can be identified by both sides and highlights flaws in the friendly R&S plan and possible counter-recon fight which then can be adjusted on the synchronization matrix

b. Step 2 Action: Start with friendly action first—brief friendly actions by warfighting functions. These actions should already be recorded on the draft synchronization matrix developed during COA Development. Briefs should be concise and succinct. We suggest that the group wait until the end of warfighting function briefs to discuss any clarifying information. A running time line is kept in order to determine duration of entire operation.

c. Step 3 Reaction: The Red Cell briefs the adversary's reaction by warfighting functions in the same manner as friendly forces. The Green Cell briefs the population's reaction.

d. Step 4 Counter-Action: During this step friendly forces adjust the Synchronization Matrix (by warfighting functions), and the Decision Support Matrix based on adversary's/populations reaction. Proposed CCIR's are validated, branch plans identified and minor adjustments to the plan are completed. This is also the time to adjudicate combat engagements, etc. The Adjudicator needs to consider "chance" when arbitrating engagements between friendly and adversary forces. We suggest the use of dice. Remember, friendly forces are briefing by warfighting functions and the facilitator keeps the process disciplined and progressing. Suggest planners use the Wargaming worksheet to capture/summarize the results of the turns — a great briefing tool!

3. Suggested Wargame Brief
   a. Higher HQ Mission/ Intent (2 levels up)
   b. Higher HQ Mission / Intent (1 level up)
   c. Unit Mission / Intent
   d. Updated IPB
   e. Wargame Adversary COA (MDCOA / MLCOA based on CG guidance)
   f. Review Friendly COA
   g. Wargaming Worksheet (used to brief wargame results by turn/COA with time estimate for entire operation by phase, step etc.)
   h. Advantages / Disadvantages (each COA)
   i. Decision Support Matrix (optional-based on personality of Commander)
   j. Repeat steps f through i for each COA to be briefed
   k. Risk Assessment
   l. Specific COA Resource Shortfalls (Optional)
   m. Any Recommended changes to COA / Task Org / RFFs (based on Wargame results)

n. Updated COG Analysis
o. Branch Plans / Sequels
p. Updated Assumptions
q. Updated consolidated decision points
r. Updated CCIRs
s. Updated ISR and collection plan
t. Updated RFIs
u. Overall Resource Shortfalls

4. For more information, see MCWP 5-10, *Marine Corps Planning Process*.

5005. Results of the COA War Game

Required results of the COA war game are the wargamed COA graphic and narrative and information on the Commander's evaluation criteria. Additional results may include:

- Updated IPB products
- Planning support tools including the COA war game worksheet and synchronization matrix
- War game results such as initial task organization, identification of assets required and shortfalls, refined CCIR(s), and the list of critical events and decision points
- Refined Staff estimates
- Subordinate Commander's estimates of supportability
- Branches and sequels identified for further planning

5006. Branches and Sequels

Many plans require adjustment after the initial stages of the operation. Consequently, flexibility is built into a plan by developing branches and sequels to preserve freedom of action in rapidly changing conditions. *Branches* are contingency options built into the basic plan. They typically provide different ways or sets of means to accomplish the existing mission or objective of an ongoing operation. Such branches could change the main and supporting efforts, shift priorities, change command relationships, or change the very nature of the operation itself. Branches

add flexibility to plans by anticipating situations that could alter the basic plan. Such situations could be a result of the opportunity to exploit success, adversary action, availability of friendly capabilities or resources, or even a change in the weather or season within the AO. A branch answers the question, "What if . . .?"

- *Sequels* anticipate and plan for subsequent operations based on the possible outcomes of the current operation — victory, defeat, or stalemate. For every action or major operation that does not accomplish a strategic or operational objective, there has to be a sequel for each possible outcome, such as "win, lose, draw, or win big." Sequels answer the question, "What's next?"
- Once Commanders and their staffs have determined possible branches and sequels as far in advance as practicable, they must determine what or where the decision points should be. Decision points are often represented by battles or engagements that, despite everything being done to anticipate their outcome can be either lost or won. Each branch from a decision point requires different actions, and each action demands various follow-up actions, such as sequels or potential sequels.
- Each branch plan and sequel requires the OPT to review the problem framing information, and conduct COA development through transition. At the same time the OPT monitors the current operation to determine the impact on the branches and sequels. The OPT also reviews the targeting priorities, and updates the branches and sequels as necessary to support the targeting board and current operations.
- Planning branches requires the Commander's input. To focus the efforts of the OPT, the Commander identifies and prioritizes the branches he wants the OPT to further develop.
- Frequently, branch and sequel planning occurs during execution. To maintain good situational awareness, the OPT must continue to receive information on the operation from their current operations section representative. Battle update briefs and "board walks" are a good opportunity for the OPT to retain its situational awareness.

TTP: Immediately assign a member of the OPT to begin branch planning as soon as the requirement is identified.

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Part VI

Course of Action Comparison and Decision

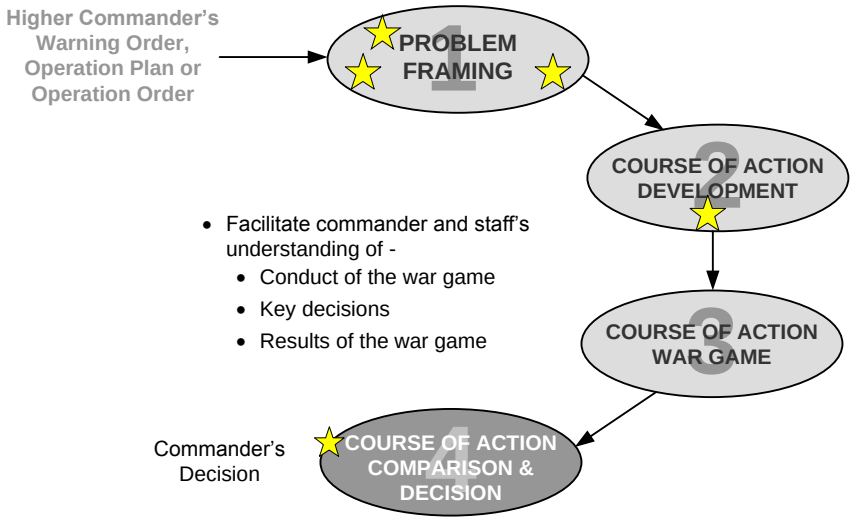

Figure 6-1: Operational Planning Team in Course of Action Comparison and Decision

6001. Introduction

In COA Comparison and Decision, the Commander **evaluates** all friendly COA(s) against established criteria, the Commander then **compares** each Course of Action against each other, and **decides** which COA he believes best accomplishes the mission. The Commander may refine his mission statement (including his Commander's Intent and essential tasks), Concept of Operations, and identify any branches of the chosen COA that should be developed. This step requires the involvement of the Commander, his subordinate Commander's, and their staffs, as well as the Commander's principal staff from start to finish. As such, this step is often referred to as "The Commander's Step".

At a minimum, the OPT helps the Commander answer the following questions:

- How does each COA stack up against the others?
- What are each COA's advantages and disadvantages?
- What are the risks and shortfalls (if any)?

The OPT helps the Commander identify and determine the COA that best accomplishes the mission. The OPT supports the Commander's decision-making process by clearly portraying his options and recording the results of the process. The OPT ensures the selected COA is faithfully captured as the Concept of Operations. The Concept of Operations—along with the supporting concepts (intelligence, fires, logistics) – forms the basis for the operation plan or order. Once a COA is selected, the OPT may prepare a warning order to issue to subordinate commands to facilitate the development of their plans.

In the event the Commander selected a single COA for wargaming, this step closely examines detailed attributes of the COA focused on risks and shortfalls and may include expanded examination of branches and sequels.

6002. Issues for Consideration

- The OPT is in a supporting role to assist the Commander and his staff, as required. This is a Commander-led discussion with his staff and MSC/MSE Commanders, not a brief.
- It is critical the MSC/MSE Commanders and the principal staff participate in this step; usually, the Chief of Staff will drive their participation.
- The Commander will rely on his experience, knowledge, expertise, his staff, and the MSC/MSE Commanders during this step to help him determine the Course of Action to best accomplish the assigned mission.
- MSC/MSE Commander's Estimates of Supportability and Staff Estimates are crucial to the decision-making process and thereby require continued refinement throughout the MCPP.
- The warning order identifying the selected COA is important to allow the MSC/MSE(s) to complete their planning efforts.

6003. Injects

COA Comparison and Decision requires the W*ar Gamed COA graphics and narratives* and the *Commander's Evaluation Criteria*. Other injects might include—

- Updated IPB products
- Planning support tools including the COA War Game Worksheet and Synchronization Matrix
- War Game results such as initial task organization, identification of assets required and shortfalls, refined CCIR(s), and the list of critical events and decision points
- Refined staff estimates
- Subordinate Commander's Estimates of Supportability
- Branches and sequels identified for further planning

6004. Process

During COA Comparison and Decision, the Commander with OPT assistance performs the following:

COA Evaluation: The Commander, with his OPT and Battlestaff, separately evaluates each COA against the Commander's Evaluation Criteria (Table 6-1). They especially consider advantages, disadvantages and risks.

Commander's Evaluation Criteria	COA 1
Friendly COG vs. enemy COG	Operational pause after penetration to sort through unit locations and control measures (disadvantage)
Simplicity	Too many control measures to track during execution (disadvantage)
Rapidly defeats the 2nd echelon	2nd echelon may withdraw before decisively engaged (advantage)
Rapidly penetrates enemy forces	Rapid penetration impeded in complicated use of FSCM's that restrict maneuver (cause for concern)
Amphibious, operations; risk, complexity, and timing	Landing area within range of enemy rocket launchers (disadvantage)
Effects of weather	Need favorable weather for shaping of enemy 2nd echelon by H+6 –ACE (cause for concern)
Risk	Comm loss between RLTs (disadvantage)

Table 6-1: Sample Course of Action Evaluation Matrix

NOTE: COA comparison occurs only after COA evaluations are complete. A COA Evaluation Matrix (see Table 6-1 for an example) is a useful tool for facilitating the evaluation process.

TTP: It is important to ensure that the Commander and his staff have approved any tool(s) used for displaying information.

COA Comparison: Utilizing the advantages, disadvantages and risk data determined during COA evaluation, the Commander and Battlestaff compare each COA with the others. They then determine which will best accomplish the mission. A useful tool for collectively displaying each COA's advantages, disadvantages and risk against each of the evaluation criteria is a COA Comparison Matrix as provided in Table 6-2:

Commander's Evaluation Criteria	COA 1	COA 2	COA 3
Friendly COG vs. enemy COG	BFT mitigates unit ID problem (advantage)	Requires greater ground combat power early (disadvantage)	Requires greater apportionment of attack aviation to support air assault (disadvantage)
Simplicity	Requires more rehearsal (cause for concern)	Less control measures and rehearsal required (advantage)	Control measures complex (disadvantage)
Rapidly defeats the 2nd echelon	Favorable combat power ratio Permits withdrawal (advantage)	Must commit reserve early Sustainability issues (disadvantage)	Sustainability issues to be decisive (cause for concern)
Rapidly penetrates enemy forces	Penetration impeded (cause for concern)	Link-up issues after penetration (disadvantage)	Some link-up issues (cause for concern)
Amphibious operations; risk, complexity, and timing	SEAD requirement moderate (cause for concern)	Phasing control ashore affects assembly area preparation (cause for concern)	DOS above required levels (cause for concern)
Effects of weather	Factor in initial shaping (cause for concern)	Lower visibility enhances maneuver (advantage)	Degrades critical event accomplishment (disadvantage)
Risk	Moderate (advantage)	Moderate-high (cause for concern)	High (disadvantage)

Table 6-2: Sample Course of Action Comparison Matrix

- Commander's Decision: Once all COA(s) are evaluated and compared, the Commander selects the course of action that will best accomplish his mission. In making his decision, he may—

- Select a COA without modification.
- Modify a COA to overcome disadvantages.
- Develop a new COA by combining favorable elements of multiple COA(s).
- Discard all COA(s) and resume problem framing or COA development as required.

TTP: Re-wargame any COA that has been significantly modified. This ensures they are fully tested against possible enemy COA(s).

- Upon COA Decision, the Commander should review the COA with his subordinate Commanders. This review includes the mission statement to ensure the COA captures all essential tasks. The Commander's decision guides warning order development, the concept of operations, and eventually orders development.
- Prepare the Concept of Operations: The staff prepares the Concept of Operations, which is a 'key input' for Orders Development. The Concept of Operations is the basis for supporting concepts, such as those of fires, logistics, or force protection. Included in the Concept of Operations is a general description of actions to be taken and a generic organization for combat.
- Issue the Warning Order: After the staff prepares the Concept of Operations, the Commander may issue a new warning order or update the existing warning order to allow subordinate Commanders to continue concurrent planning.
- Refine IBP Products: The staff continues to refine and reference IPB products throughout the remainder of MCPP.

6005. Results

The required result of COA Comparison and Decision is the *Concept of Operations*. Additional results may include—

- Updated IPB products (Modified Combined Obstacle Overlay, Situation Template, Event Template and Matrix, Decision Support Template and Matrix, High-Value Targets, and High-Payoff Targets).
- Planning support tools

- Updated CCIR(s)
- Staff estimates
- Commander’s identification of branches for further planning
- Warning Order

Part VII

Orders Development

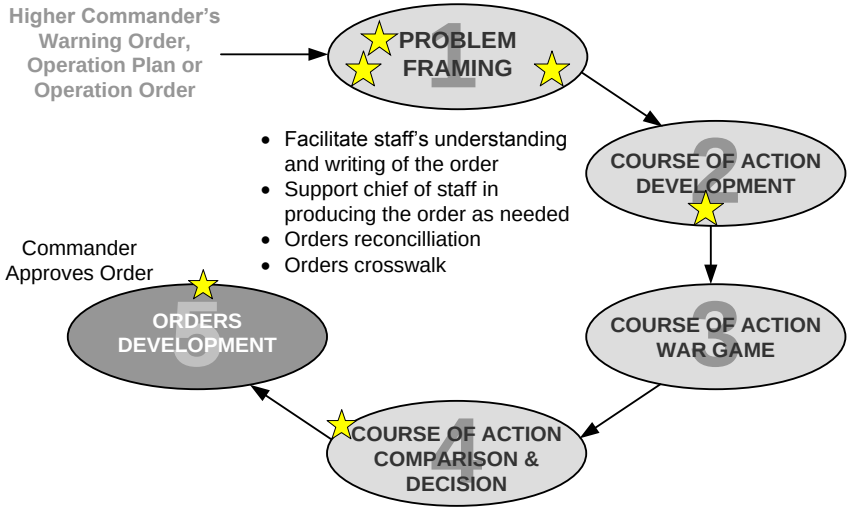

Figure 7-1: The OPT in Orders Development

7001. Introduction

Orders development produces an operations order that communicates the Commander's intent, guidance, decisions, and any other pertinent information regarding execution to all organic and attached elements of the MAGTF (see Figure 7-1). The order should only contain critical or new information – not routine matters normally found in SOPs. The Chief of Staff (CoS) or Executive Officer (XO), as appropriate, directs orders development. Orders development includes an essential two-step quality control approach to the writing phase of the order or plan. The MAGTF staff then conducts a *Reconciliation*. This is an internal review of the entire order. It identifies gaps and discrepancies in the order. Specifically, the staff compares the Commander's Intent, the mission, and CCIR(s) against the concept of operations and supporting concepts. A *Crosswalk* is an external review of higher, adjacent, and subordinate orders to ensure unity of effort and to ensure the HHQ Commander's Intent is met.

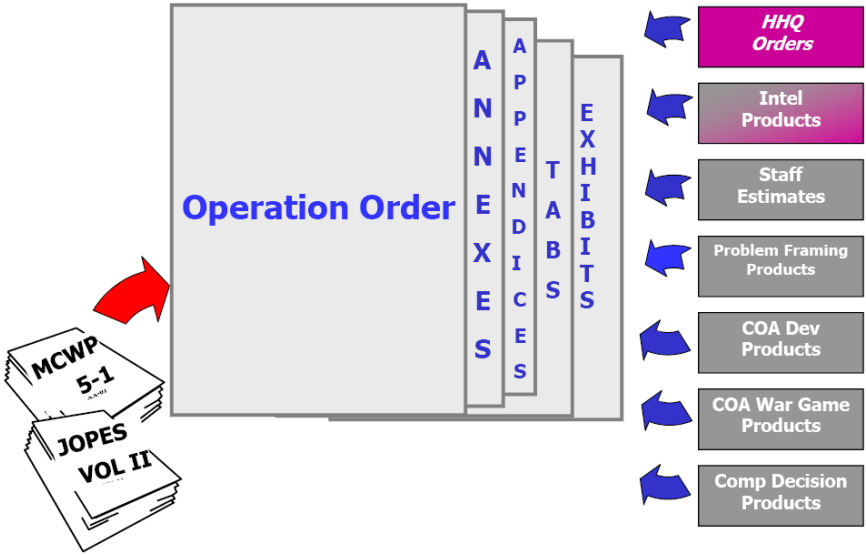

Figure 7-2: Orders Process Overview Depicting Products Incorporated Into the OPORD

7002. Issues for Consideration

The staff, with OPT assistance, concentrates on the following questions during Orders Development:

- How can we communicate the plan so subordinates, higher, and adjacent units easily understand it?
- How can we best direct and focus subordinate unit tasks and activities?
- Are the basic order, annexes, appendices, tabs, and exhibits complete and in agreement with one another?
- When compared with higher, adjacent, and subordinate command orders, does the MAGTF order achieve unity of effort and meet the Commander's intent?

7003. Injects to Orders Development

The initial task organization, mission statement, Commander's intent, concept of operations, and specified and implied tasks are the required injects to orders development. See Figures 7-3 through 7-11 below. Other injects may include:

- Updated intelligence and IPB products

- Planning support tools
- Updated CCIR(s)
- Staff estimates
- Commander's identification of branches for further planning
- Warning Order(s)
- Existing plans, standing operating procedures and orders
- Guidance from the Chief of Staff or XO

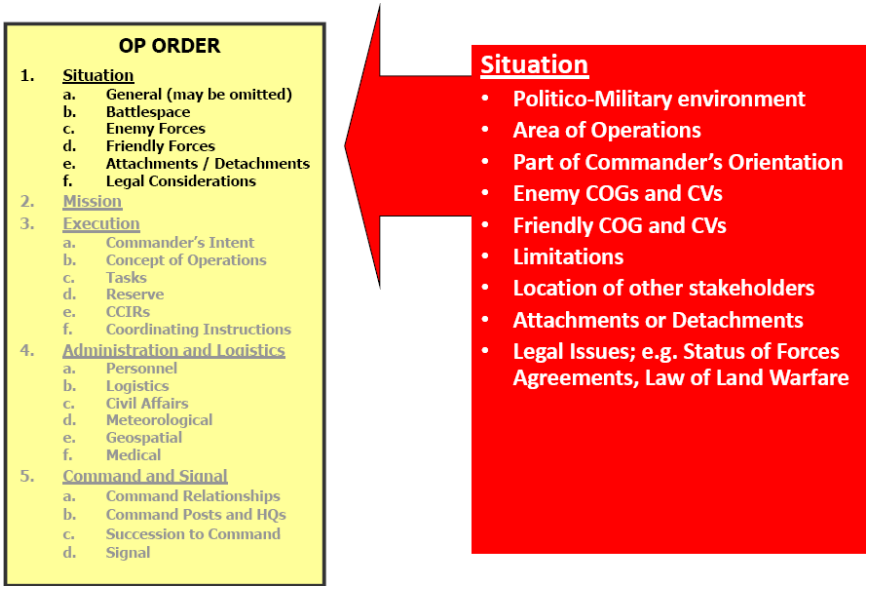

Figure 7-3: Input to Paragraph 1, Situation

7004. Process for Conducting Orders Development

The orders development step consists of five parts – refine staff estimates and IPB products, preparation of the order or plan, orders reconciliation, orders crosswalk, and Commander's approval of the plan. Each of these parts is essential to articulating a clear, concise, complete plan or order to those that will execute the order. Normally, the CoS or XO coordinates with staff principals to ensure completion of this step of MCPP.

a. Refine Staff Estimates and IPB Products

The staff continues to refine its estimates and IPB products during orders development. IPB products developed throughout the planning effort are often captured and reflected in Annex B of the OPORD or OPLAN.

Figure 7-4: Input to Paragraph 2, Mission

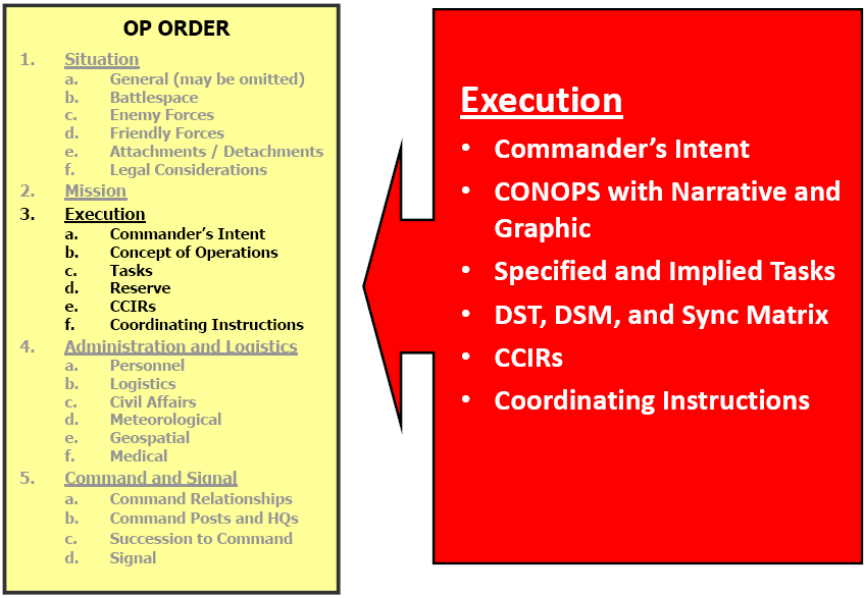

Figure 7-5: Input to Paragraph 3, Execution

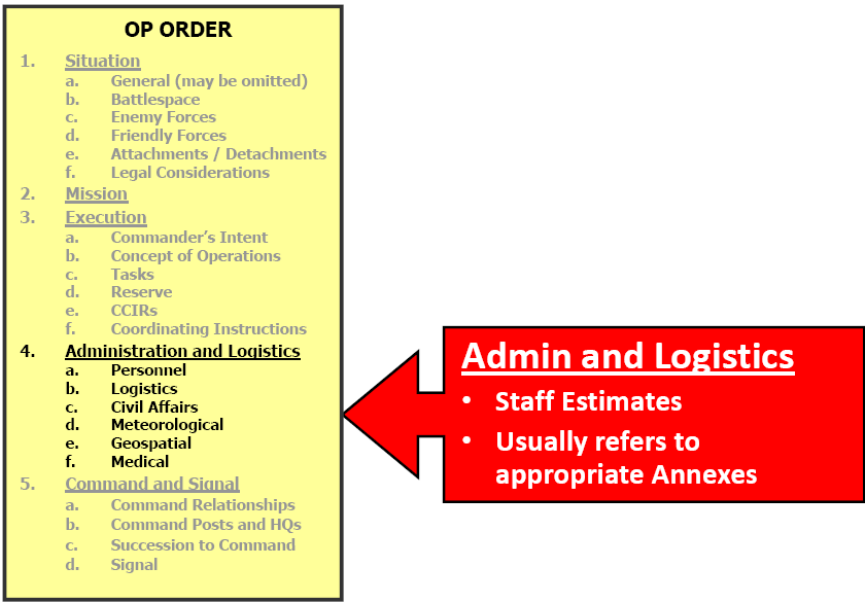

Figure 7-6: Input to Paragraph 4, Administration and Logistics

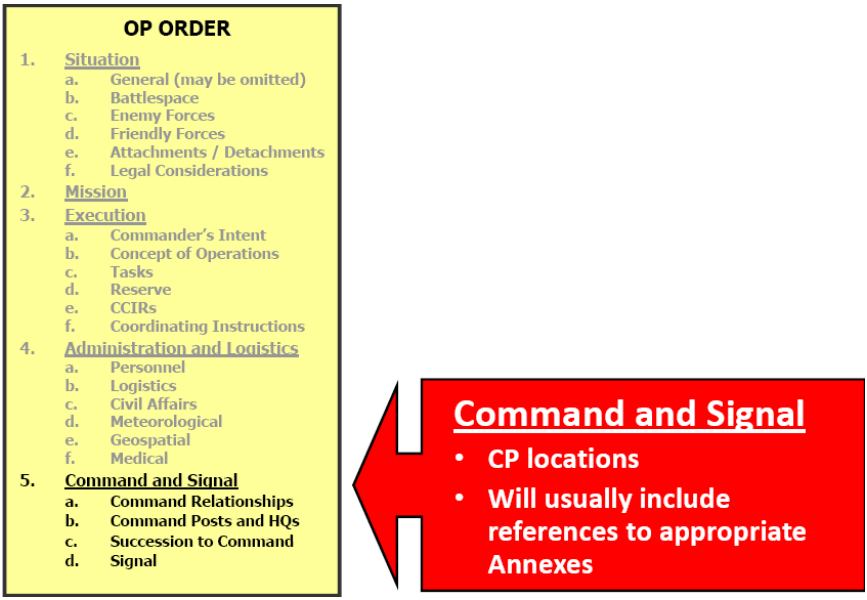

Figure 7-7: Input to Paragraph 5, Command and Signal

b. Preparation of Order or Plan

- The CoS or XO
  - Dictates the format for the order
  - Sets and enforces the time limits and development sequence
  - Assigns responsibility for annex development to the appropriate staff sections

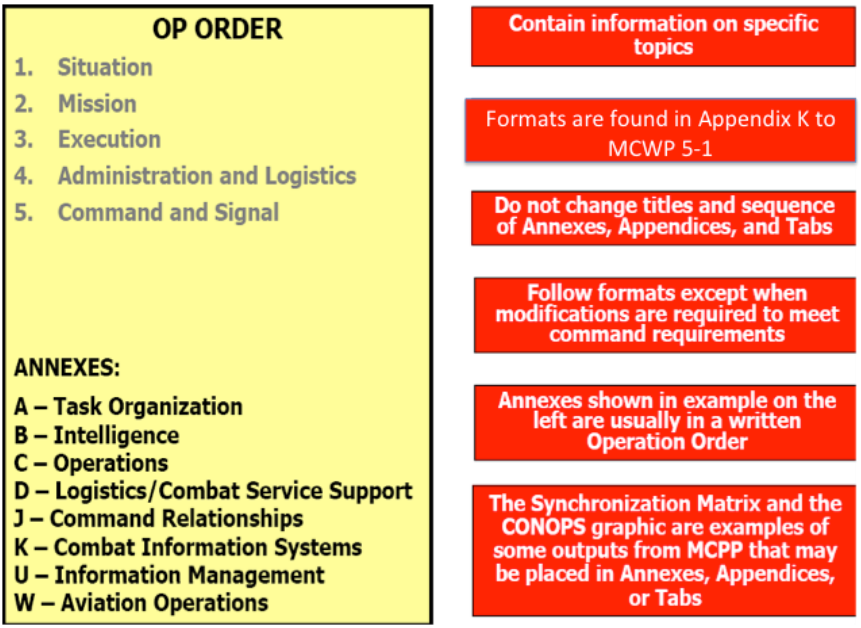

Figure 7-8: Annexes, Appendices and Tabs

- Each principle staff officer should review their respective annexes, appendices and tabs (Figure 7-8). Use JOPES Vol. II (CJCSM 3122.03A), FM 5-0, MCWP 5-10, or theater order standards to prepare the plan or order. Usually an operations order will contain at a minimum the following—
  - Basic plan or order
  - Annex A, Task Organization
  - Annex B, Intelligence
  - Annex C, Operations
  - Annex D, Logistics

- Annex J, Command Relationships
- Annex K, Combat Information Systems
- Annex U, Information Management
- Annex X, Execution Checklist
- Annex W, Aviation

TTP: Due to the expertise required in producing the Annex W, its development is normally relegated to the ACE.

- The synchronization matrix and decision support matrix—developed during the COA war game—are the basis for Annex X.
- Ensure the specified, implied, and essential tasks are reflected in paragraph 3c or 3d. For ease of task analysis by those in receipt of the order, strive not to place tactical or critical tasks in annexes and appendices. Do not place any tasks below the appendix level. Ensure measurable conditions and end states are assigned to tasks and transitions between phases.
- Maintaining version control is critical. This methodology may be best articulated in the MAGTF Information Management Plan (IMP). Many MAGTF's retain an IMP as part of their SOP that specifies format, naming conventions, shared and website access and addresses, etc.
- Identify the supporting concepts of C2, intelligence, fires, logistics, maneuver, and force protection in the basic order to prevent them from being overlooked in the annexes or appendices.
- Staffs produce orders in a variety of forms - detailed, written documents with many supporting annexes, or as simple as verbal commands. Their form depends on time available, complexity of the operation, and levels of command involved.
- Staff estimates, subordinate Commander supportability estimates and other planning documents form the basis for the supporting portions of the order or plan, such as annexes and appendixes.
- A WARNORD may have been issued following Problem Framing and/or COA Comparison and Decision. If so, ensure the WARNORD(s) are appropriately incorporated and referenced.

- Issuing a FRAGO to subordinate Commanders is possible only when the basic order already exists. A FRAGO should properly reference all additions, changes, and deletions to the basic order.
- Whatever the format; orders and plans must be clear, concise, timely, and useful. Also, consider addressing a methodology for MSC/MSE(s) to "acknowledge receipt" to prevent confusion between "message sent" and "message received." Acknowledge receipt means the order has been read and understood.

c. Orders Reconciliation

Orders reconciliation is an internal process in which the MAGTF staff conducts a detailed review of the entire MAGTF order (Figure 7-9).

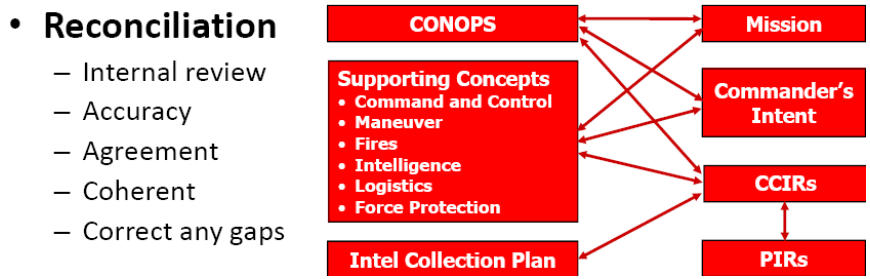

Figure 7-9: Reconciliation – Conducted Internally

- Ensure the basic order and all the annexes, appendixes, etc., are complete and in agreement.
- Compare the MAGTF Commander's intent, the mission, and the CCIR(s) against the concept of operations and the supporting concepts (e.g., intelligence, maneuver, fires, etc.).
- Focus on the tasks from the basic order and whether the annexes (particularly annex A, B, C, D, J, and X) and appendices are logically linked to those tasks in terms of intent and synchronization.
- It may be helpful to use the decision support template, decision support matrix, and synchronization matrix to ensure the order accurately captures what was planned.
- Check the coordinating instructions to see that they provide complete and appropriate information.

- Ensure priority intelligence requirements and the intelligence collection plan support the MAGTF Commander's CCIR(s).
- Identify and correct all discrepancies or gaps in the planning effort.

d. Orders Crosswalk

Orders Crosswalk is the process of comparing the MAGTF plan or order with the plans or orders of higher and adjacent Commanders to achieve unity of effort and ensure the MAGTF Commander's intent is met.

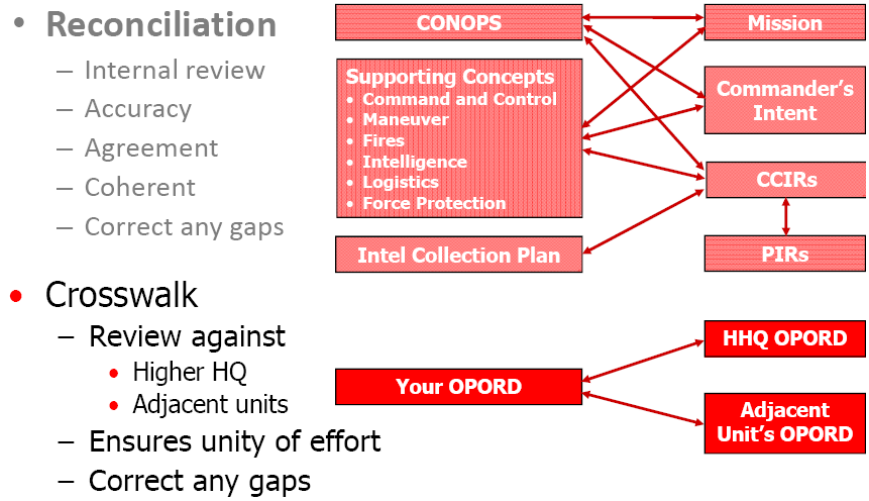

Figure 7-10: Crosswalk – Conducted Externally

- Compare the MAGTF plan or order with higher, adjacent and subordinate headquarters' plans or orders.
- Identify and correct discrepancies or gaps.
- Focus on the major tasks assigned by the unit. Ensure the subordinate units have addressed their assigned tasks in their concept of operations.
- Pay attention to the timing of the subordinate unit's activities in relation to the issuing command's activities.
- Check the major annexes and appendices to make sure they are coordinated.

Compare the subordinate unit's concept of operations sketches to the issuing command's sketch to determine if the boundaries, fire support control measures, and maneuver control measures agree.

e. Commander Approves the Order or Plan

The final action in orders development is the approval of the order or plan by the Commander (see Figure 7-11). While the Commander does not have to sign every annex or appendix, it is important that he review and sign the basic order or plan.

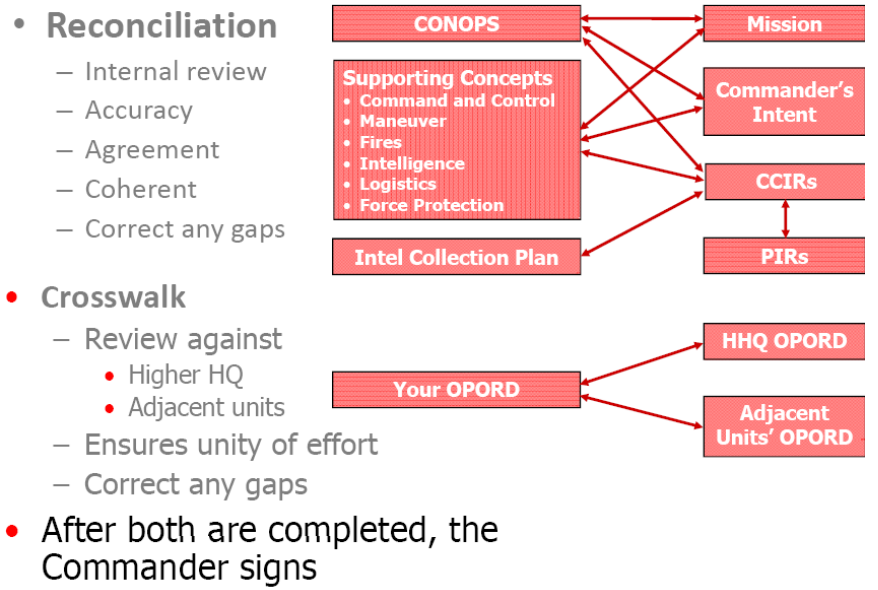

Figure 7-11: Commander Signs the OPORD/OPLAN after Order Reconciliation and Crosswalk occur

7005. Results of Orders Development

The result of Orders Development is an approved order / plan.

Additional results may include:

- Refined intelligence and IPB products
- Planning support tools
- Outline FRAGO(s) for branches

Part VIII

Transition

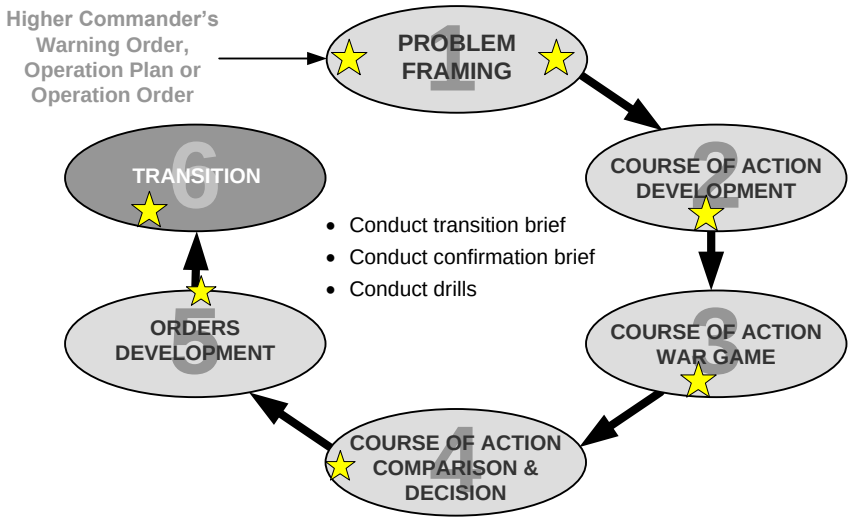

Figure 8-1: Operational Planning Team in Transition

8001. Introduction

Transition is the final step of the MCPP. It may involve a wide range of briefs, drills, or rehearsals to ensure a successful shift from planning to execution. Transition is subject to the variables of command echelon, mission complexity, and most importantly time. The Transition process enhances the overall situational awareness of the major subordinate commands or elements that will execute the plan or order. It also maintains the intent of the concept of operations, promotes unity of effort, and maintains or raises operational tempo. Transition is a continuous process that requires a free flow of information between Commanders and staffs by all available means.

There are two phases of Transition: *internal* and *external*.

1. *Internal transition* occurs when the planning staff moves its plan to execution – that is, the plan is transitioned from the OPT (formed

around the future operations section (FOPS)) to the current operations section (COPS) within the command.

2. *External transition* occurs when the MAGTF FOPS section presents and briefs the OPLAN or OPORD (or FRAGO) to the MSC/MSE Commanders and their planning staffs. For the MSC(s), this external transition provides the final input for their respective planning process. Transition for the MSC(s) will culminate with a Confirmation Brief back to the higher MAGTF headquarters in order to ensure understanding of MAGTF Commander's mission, intent, and concept of operations.

Depending on the time available, the MAGTF Commander may also conduct a Rehearsal of Concept (ROC) drill wherein MSC/MSE(s) participate in order to gain full understanding and situational awareness of their roles in execution of the OPLAN or OPORD.

8002. Issues for Consideration

Although a formal Transition occurs on staffs that have separate planning and execution teams, a similar process of Transition takes place at all levels of command. At the higher echelons, the Commander may designate a representative as a proponent for the operation plan or order. Normally this is the G-3 future operations representative. As a full participant in the development of the plan or order, this proponent can answer questions, help in the use of the decision support tools, and assist the planning staff in determining adjustments to the plan or order. At lower levels of command, where time for planning and personnel may be limited, the Transition process takes place intuitively as the planners are also the executors.

The OPT concentrates on the following questions during Transition—

- How can we best communicate the Commander's intent and the plan?
- How can we best build the situational awareness of those who must now execute the plan?
- How can we ensure all the plans within the command are synchronized?

8003. Injects to Transition

Before Transition begins there must be an approved OPORD (or FRAGO). Other Transition injects may include -

- Refined intelligence and IPB products
- Planning support tools (Synch Matrix, DST and DSM)
- Outline FRAGO(s) for branches
- Information on possible sequels
- Any outstanding issues

The transition process cannot take place without the OPORD because it contains the mission, intent, supporting concepts, and all planning support tools resulting from detailed planning. The OPORD is the primary tool for Transition and is the most widely disseminated planning product because not everyone can be at the Transition briefings and drills.

Transitions can take the form of briefs, drills, exercises, or rehearsals. The greater the detail provided in the transition brief, the greater the collective understanding of the MAGTF. See Figure 8-2 below for the six (6) common types or methods of Transition.

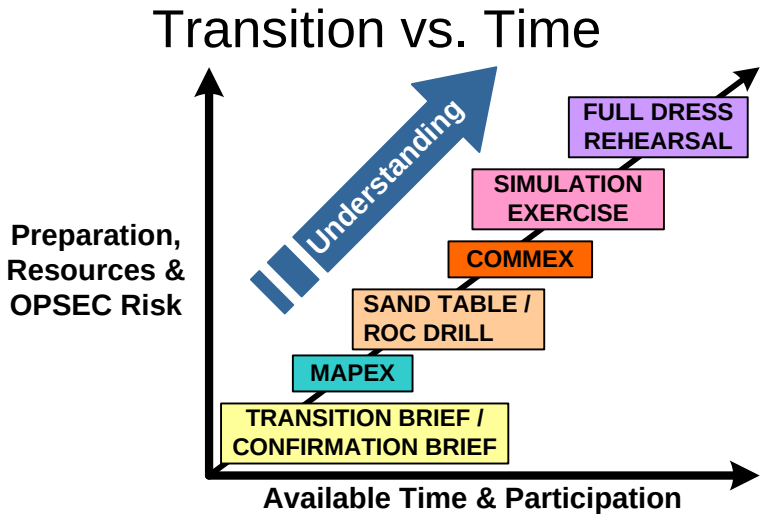

Figure 8-2: Transition vs. Time

Depending on the time available to the MAGTF Commander, the Transition and Confirmation briefs may be run concurrently. Done correctly, the MAGTF Commander will have had his intent and guidance clearly conveyed to the MSC/MSE(s), who will execute the OPLAN or OPORD. At the same time, the MSC/MSE(s) will be able to demonstrate their understanding back to the MAGTF Commander. For more detail on how Transition drills and rehearsals are conducted, see Appendix F, of Army FM 6-0, *Mission Command: Command and Control of Army Forces.*

8004. Process for Conducting Transition

During transition the OPT performs the following—

- Conduct the internal transition drill or brief (i.e. FOPS to COPS then to MSC/MSE(s) and their planning staffs). Brief all planning support tools (decision support template and matrix, synchronization matrix, execution checklist), enemy situation, concept of operations, and supporting concepts (intelligence, fires, logistics, and maneuver) in detail.

- Conduct a Confirmation Brief. (i.e. MSC/MSE) brief the higher MAGTF Commander) – This is **imperative in order to conduct successful Transition for those who will execute the mission**. This allows the MAGTF Commander to confirm how the MSC/MSE(s) plan to accomplish their assigned missions as well as identify gaps, discrepancies and resource shortfalls that require mitigation or resolution.

- Assist the Commander in the execution of the ROC drill. Ensure subordinate Commanders conduct a Confirmation Brief of their plan to the higher headquarters so the MAGTF Commander can identify gaps, discrepancies, and resource shortfalls between his and subordinate Commander's plans.

- Consider providing a transition (FOPS) representative to the current operations section, particularly in high tempo or complex operations. The transition representative should have in-depth knowledge of the plan or order and is best suited to immediately recognize changes occurring as a result of execution. The transition representative can thus aid decision making in the Combat Operations Center (COC) and for the MAGTF Commander.

8005. Results of Transition

A successful transition ensures subordinate Commanders and staffs are—

- Ready to execute the order and possible branches
- Prepared to plan sequels in priority

It is important to note the OPT neither dissolves nor does their work end after the order or plan has been transitioned. The planning process continues as FOPS continues to provide direction and oversight to the OPT to develop or plan for the execution of potential branch plans and sequels. The continuing actions of the OPT generate tempo for the MAGTF Commander in order to meet contingencies and/or accomplish follow-on missions.

8006. Common TTP(s) for Transition

- Internal and external Transition briefs or drills are captured in the Information Management Plan (ANNEX U) in order to enable efficient distribution of information and version control.
- OPT briefings to the MAGTF Commander for each MCPP step culminate and become the basis for the final Transition or Confirmation Brief to MSC/MSE(s).
- OPT (FOPS) provides a transition representative to COPS after the order or plan is transitioned for execution.
- Confirmation Briefs to the MAGTF Commander are provided by subordinate Commanders.
- If a ROC drill is conducted by the MAGTF, ensure all MSC/MSE(s) and their battle staffs participate, covering all warfighting functions or supporting concepts.
- MSC/MSE(s) must avoid the tendency to re-do the COA War Game in a ROC drill. **The ROC drill is a coordination event where participants become familiar with the operation by reciting their key actions to accomplish the mission**.

During the ROC drill, ensure fidelity of terrain model and that MSC/MSE(s) appoint their respective recorders to capture learning or

changes, employ ‘smart packs’ and execution checklist to include planning/decision support tools.

Appendix A

Role of the Battle Staff

Staffs exist to help the Commander make and implement decisions. The Commander's staff must function as a single, cohesive unit. The staff is responsible for conducting the detailed planning for the Commander: the OPT is not solely responsible for planning. Each staff member must know his own duties and responsibilities in detail and be familiar with the duties and responsibilities of other staff members. This appendix discusses the role of the battle staff during planning.

A-1. Problem Framing

During Problem Framing the battle staff helps the Commander determine the mission and understand the threat, terrain, weather, and current and projected friendly capabilities. The staff and OPT members engage in critical thinking and dialogue with the Commander. This Design dialogue develops greater understanding within this small group and informs the Commander's decision making process. This greater understanding must be developed into large common understanding within the command through briefings, written products, and basic leadership actions that expand the group actively discussing the problem the command will work to solve. They provide the necessary information for the Commander to review the higher headquarters' warning order or OPORD, intelligence estimate, and IPB products (modified combined obstacle overlay, doctrinal template). They begin staff estimates to address problems, and provide critical facts and assumptions to orient the Commander. They support the Commander's development of planning guidance and check the mission for accuracy and clarity. The battle staff assists the OPT by providing them critical facts, assumptions and guidance. Possible guidance and information for the OPT includes—

- **Chief of Staff/Executive Officer**; the Chief of Staff/Executive Officer provides the staff's battle rhythm. He also provides the internal planning timeline, and when—and in what format—the plan or order will be issued to subordinates. He must ensure the information management plan is being used and supports staff interaction.

- **G/S-1 Officer**; the G/S-1 officer provides the projected personnel strengths, critical military occupational specialty (MOS) shortages, assumptions on replacements, and morale level.
- **G/S-2 Officer**; the G/S-2 officer provides the enemy's purpose, objectives, COG(s) and critical vulnerabilities, and the enemy Commander's profile. He identifies, evaluates, and prioritizes possible enemy COA(s) (with templates and matrices). He also provides terrain and weather analysis. The G/S-2 officer develops IPB products and high-value targets. He informs the OPT of projected intelligence collection assets and capabilities (higher and organic). He also supervises the Red/Green Cell.
- **G/S-3 Officer**; the G/S-3 officer helps identify tasks, friendly COG(s), and critical vulnerabilities and determine if the AO is the correct size to accomplish the mission and protect the force. The G/S-3 officer ensures the assumptions are logical and the end state is clear. He helps to determine the risk the Commander is willing to accept. He also identifies the command relationships and the impact of the ATO cycle on the command's battle rhythm.
- **G/S-4 Officer**; the G/S-4 officer provides the projected logistics requirements. He identifies the capability of the distribution system, critical shortfalls, and the maintenance status for critical end items. He also provides the movement plan, noting mobility, counter-mobility, and survivability requirements and capabilities.
- **G-5 Officer**; the G-5 officer coordinates with the Marine Corps component for required airlift and sealift; he ensures the time-phased force and deployment data is validated. He provides information on the next potential mission and the plans of the adjacent and supporting commands.
- **G/S-6 Officer**; the G/S-6 officer provides projected availability and capability of command, control, communications, computers, and intelligence (C4I) assets. He identifies the electronic warfare and information warfare threat.
- **G/S-9 Officer**; The G/S-9 officer helps identify tasks and determines civil considerations in the AO and their impact on the mission. He also recommends the civil affairs force size and command relationships. He is also responsible for staffing the Green Cell. If the unit lacks an assigned civil affairs operations

officer, the Commander assigns these responsibilities to another staff member.

- **Medical Officer**; the medical officer provides projected treatment and evacuation capabilities and the medical return to duty rate.
- **Staff Judge Advocate**; the SJA identifies the legal constraints and restraints. He also provides information on the rules of engagement, law of war, treaties, United Nations resolutions, etc.

A-2. Course of Action Development

During COA development the battle staff assists the Commander by ensuring the OPT generates options that are practical and meet the Commander's planning guidance. They continue to develop and update staff estimates, update critical facts and assumptions, and support Commander's development of wargaming guidance and evaluation criteria. The battle staff continues their close interaction with the OPT. They ensure graphics and other information is clear and accurate. Possible guidance and information for the OPT includes—

- **Chief of Staff/Executive Officer**; the Chief of Staff/Executive Officer ensures that the OPT meets its planning timeline, follows the Information Management (IM) plan, and fully understands and follows the Commander's operational design. He ensures the OPT identifies friendly high-value assets to focus force protection efforts. He refines and manages the CCIR(s) as necessary.
- **G/S-1 Officer**; the G/S-1 officer ensures the personnel support concept is adequate. He also checks the updated projected strengths, critical MOS shortages, assumptions on replacements, priority of support, and enemy prisoner of war handling.
- **G/S-2 Officer**; the G/S-2 officer ensures the collection plan is adequate for each COA. He provides updated or refined enemy COA(s), COG(s), critical vulnerabilities, modified combined obstacle overlays, and event templates and matrices. The G/S-2 officer provides the OPT and Red Cell the enemy's most likely and most dangerous COA(s). He also updates the high-value targets.
- **G/S-3 Officer**; the G/S-3 officer ensures the decisive and shaping actions meets the Commander's intent and guidance. He determines if the assigned AO is appropriate and recommends

necessary refinement to the Commander. He looks at the forms of maneuver, concepts of maneuver and fire, terrain management, relative combat power, rear area functions, and the use and location of the reserve. The G/S-3 officer evaluates the COA to determine if it exceeds the risk the Commander is willing to accept to achieve a decision. He ensures friendly high-value assets (critical vulnerabilities) are protected. He also looks at the command relationships and task organization. He helps identify high-payoff targets and targeting objectives.

- **G/S-4 Officer**; the G/S-4 officer ensures the concept of logistics supports the shaping and decisive actions. He checks the priority of support, locations of support areas and bases, main supply routes, and traffic control measures.
- **G-5 Officer**; the G-5 officer provides information on the next potential mission and the plans of the adjacent and supporting commands.
- **G/S-6 Officer**; the G/S-6 officer ensures the C4I support concept is adequate. He also checks the locations of higher, adjacent, and subordinate command posts.
- **G/S-9 Officer**; the G/S-9 officer ensures the civil information plan is adequate for each COA. He provides updated or refined civil populace COA(s), dislocated civilian estimates, and event templates and matrices. The G/S-9 officer provides the OPT and Green Cell the populace's most likely and most dangerous COA(s). He also updates the key leader engagement list.
- **Medical Officer**; the medical officer provides the medical support concept and the location of medical facilities.
- **Staff Judge Advocate**; the SJA continues to identify the legal constraints and restraints.

A-3. Course of Action War Game

During COA wargaming the battle staff supports the Commander by evaluating the effectiveness of COA(s) against both the threat's COA(s) and Commander's evaluation criteria. They continue staff estimates and update critical facts and assumptions. They participate in the war game to ensure the COA(s) are suitable, feasible, acceptable, distinguishable, and

complete. This helps ensure planning factors are correct and critical events, decision points, and advantages and disadvantages for each COA are understood. The battle staff continues to provide guidance to the OPT. Possible guidance and information for the OPT—

- **Chief of Staff/Executive Officer**; the Chief of Staff/Executive Officer ensures the OPT continues to meet the planning timeline, the information management plan is being used, and the Commander's intent and planning guidance are being followed.
- **G/S-1 Officer**; the G/S-1 officer continues to ensure there are sufficient personnel to accomplish the mission and the planning factors are accurate (combat and non-combat casualty projections, estimated personnel strengths, critical MOS shortages, and replacements, replacement policies, enemy prisoners of war projections, etc.).
- **G/S-2 Officer**; the G/S-2 officer ensures the collection plan has adequate assets to cover all named areas of interest. He identifies high-payoff targets. He ensures intelligence products are provided to subordinate units to assist their planning. He identifies any collection asset shortages. The G/S-2 officer ensures the collection plan tracks enemy high-payoff targets (HPT). Once detected, he sees the HPT is tracked until desired results are achieved. He also supervises the Red Cell, especially during wargaming.
- **G/S-3 Officer**; the G/S-3 officer ensures friendly strength is used against enemy critical vulnerabilities while protecting friendly critical vulnerabilities. He ensures deep, close, and rear operations are synchronized across the warfighting functions. The G/S-3 officer ensures the accuracy of movement planning factors and combat actions. He also monitors the effects of shaping, operational reach, time to accomplish the mission, relative combat power, risk assessment, and rear area functions.
- **G/S-4 Officer**; the G/S-4 officer ensures the supply planning factors are accurate and the distribution system is adequate. He looks at potential shortfall in requirements or capabilities. He ensures traffic control and the number of military police to execute the traffic management plan is adequate. The G/S-4 officer ensures each COA has an acceptable enemy prisoner of war plan.

- **G-5 Officer**; the G-5 officer provides updates or changes on the next potential mission and the plans of the adjacent and supporting commands.
- **G/S-6 Officer**; the G/S-6 officer ensures the C4I planning factors and equipment are sufficient to support the unit.
- **G/S-9 Officer**; the G/S-9 officer ensures each COA effectively integrates civil considerations. He assesses how operations might affect civilians and estimates the requirements for stability tasks Commanders might have to undertake based on the COA.
- **Medical Officer**; the medical officer ensures there are adequate treatment and evacuation capabilities for each COA.
- **Staff Judge Advocate**; the SJA assesses the impact of legal constraints, restraints, and rules of engagement on the COA(s). He requests modifications of constraints, restraints, or rules of engagement, or of the COA.

A-4. Course of Action Comparison and Decision

During COA comparison and decision, the battle staff helps the Commander compare COA(s) and decide which COA should be executed. They compare the COA(s) using the Commander's evaluation criteria and their recommendations from staff estimates. From the war game they understand the critical events and decision points. The battle staff ensures approved branch plans are developed to support the plan. They should be prepared to recommend a preferred COA to the Commander based upon their assessment of his decision criteria as well as their recommendation based solely on their area of staff expertise (i.e. from the G/S-4 "all of the COAs are logistically supportable but COA 2 provides the most secure and capable LOCs for follow on operations.")

A-5. Orders Development

During orders development, the battle staff helps the Commander issue a complete, concise, and clear plan or order that develops common understanding and ensures mission accomplishment. The Chief of Staff/Executive Officer determines the format of the plan or order and which annexes will be published. The battle staff sets and enforces time limits and development sequence for the basic plan or order and annexes.

They conduct an orders reconciliation and crosswalk by reviewing appropriate annexes, appendices, etc. to ensure they are complete and agree with the rest of the order and higher headquarters' order. Finally, once approved by the Commander, they issue the order.

A-6. Transition

During transition the battle staff ensures that both the staff and subordinate units understand the Commander's order. This includes the order itself, branch plans, sequels, and decision support tools. They assist subordinate staffs with their planning and coordination. They recommend priority and allocation of time for rehearsal events and participate in transition briefs and rehearsals (ROC drills and confirmation briefs).

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Appendix B

Major Subordinate Command / Major Subordinate Element OPT Considerations

The MSC/MSE OPT(s) enhance integrated planning by providing a representative to the MAGTF OPT. When manpower levels allow, this MSC/MSE representative should be a dedicated planner within the MAGTF OPT. The MAGTF OPT may also have LNO(s) from units internal or external to the MAGTF. The sending Commander uses an LNO to transmit critical information while bypassing layers of staff and headquarters. A trained, competent, trusted and informed liaison officer is key for success. The LNO must have the proper rank and experience for the mission and have the Commander's full confidence. Among many other duties, the LNO(s) represent their parent command and bear the responsibility of accurately conveying the planning effort. The LNO must understand his own unit capabilities and how a MAGTF is employed. (See JP 3-0 and FM 6-0, Appendix E for additional information on LNO.) Integrated planning also requires major subordinate Commanders, their staff, and OPT(s) to coordinate actions with each other. The actions discussed under the following paragraphs are items the major subordinate command OPT(s) should contemplate while the MAGTF OPT is conducting each MCPP step.

Before the major subordinate command OPT begins problem framing — and while the MAGTF OPT is conducting problem framing —it should:

- Orient the MSC/MSE Commander so he can develop his operational design and prepare his initial guidance
- Use the command's representative or LNO to the MAGTF OPT to gain situational awareness and insight on the MAGTF Commander's proposed purpose of the operation
- Begin to gather initial information
- Ensure the G/S-2 begins its IPB with a focus on the unit's requirements

To better enable the MAGTF OPT to develop detailed COA(s), the major subordinate commands' OPT(s) should:

- Produce an initial draft of the estimates of supportability (given by the Commander(s)) based on the MAGTF's initial COA(s)
- Begin to discern a rough concept of intelligence, fires, logistics, and maneuver as the estimates of supportability near completion. The staff will continue to refine their staff estimates throughout the planning effort. This rough concept should be forwarded to the command's representative at the MAGTF OPT.

Before the MAGTF OPT conducts its war game, the major subordinate commands should complete their estimates of supportability.

To ensure the major subordinate commands use the same enemy doctrine and capabilities, their Red Cell leaders should participate or observe the MAGTF Red Cell during planning and wargaming.

Although the MCPP applies to all Marine Corps units, there are unique considerations for each major subordinate command OPT. The following sections deal with specific planning considerations for each major subordinate command.

B-1. Ground Combat Element

a. Problem Framing

- Provide input to the MAGTF to ensure battlespace concerns, resource shortfalls and supportability of proposed MAGTF COA(s) are considered
- Have the ground combat element (GCE) representative to the MAGTF brief the GCE OPT daily on all developments and issues
- Anticipate subject matter expert requirements (e.g., translators, foreign area officers) for planning
- The OPT facilitator and G-2 plans officer should collect basic, relevant information from higher headquarters and other sources for the Commander to support development of his initial guidance
- The OPT facilitator will establish a battle rhythm to ensure members have fixed periods of time daily they can use to communicate and develop information to support the OPT
- Ensure OPT augmentees and LNO(s) are briefed on OPT procedures and the MCPP before the start of problem framing

- Ensure the LCE, aviation combat element (ACE), and rear area LNO(s) are present at the outset of planning. They should provide their command's ability to support GCE operations

b. Course of Action Development

- When considering the various forms of maneuver in determining initial COA(s), ensure the other element LNO(s) brief the concepts being developed by their OPT(s). The ACE LNO should also brief the aviation battlespace shaping concept and related issues. He should also recommend fires support coordination measures to the MAGTF OPT.
- GCE control measures must be introduced with strong consideration of the MAGTF single battle. Close coordination in the development of control measures with MAGTF, ACE and the logistic combat element OPT(s) will maximize the use of each command's capability without severely limiting their freedom of action.
- If tasked with providing the MAGTF reserve, recommend the use of the GCE reserve as the MAGTF's reserve. If this option is adopted, the use of the reserve by the GCE would require the MAGTF Commander's approval.

c. Course of Action War Game

Have subordinate maneuver units provide a representative to maneuver their unit during the war game. This provides multi-dimensional value to the planning process.

d. Course of Action Comparison and Decision

The GCE OPT members should have representatives available when the Commander makes his COA decision. They can record branches and sequels that the Commander identifies for further planning.

e. Orders Development

Ensure the GCE order follows the MAGTF orders format.

f. Transition

- The GCE OPT should consider sending current operations maneuver and logistics representatives to the aviation combat and

logistic combat element's transition briefs or drills. They should invite the other element's representatives to the GCE transition brief or drill. This will ensure understanding of all the element's concepts in support of the MAGTF single battle.

- To provide a smooth transition, the OPT should include a member of the current operations staff (operations officer, assistant operations officer, prospective senior watch officer, etc.) as a member of the OPT.
- Conduct a confirmation brief to the MAGTF Commander.
- If time permits, conduct a combined arms rehearsal to synchronize fires and maneuver.

B-2. Aviation Combat Element

a. Problem Framing

- IPB should be tailored to the aspects of aviation planning, to include airspace coordination, helicopter routes, enemy air defense, radar coverage, forward arming and refueling points (FARP), sea lanes (if considering amphibious operations using aviation assets or T-AVB support), and unmanned aerial system [UAS] routing. IPB should also focus on host nation capabilities for aviation, such as airfields (and include capabilities inherent with each airfield).
- In aviation operations, there are normally many implied tasks that will not be specifically tasked by the MAGTF. The use of FARP(s), aerial refueling tracks, antiair warfare, electronic warfare, tactical recovery of aircraft and personnel, UAS(s), etc. can all be implied tasks. It is important not to get too detailed with tasks that are normally accomplished in accordance with aviation unit SOPs. A good way to narrow down implied tasks is to focus on those tasks that support specified tasks.
- Often, the tactical tasks assigned by the MAGTF will determine the essential tasks for the ACE. Common tactical tasks are to screen a flank, interdict an enemy unit, and/or neutralize or destroy an enemy unit or capability. The ACE mission statement is developed by combining the essential tasks identified by the ACE OPT with the Commander's purpose for the mission. When analyzing tasks,

consider the effects of terrain, weather, and task duration. The following is an example of a generic mission statement:

At D + 40, Marine Aircraft Wing (MAW) screens the MEF's western flank, interdicts the 18th Armor Corps, and disrupts 7th Artillery Group in order to support the MEF's rapid movement southward to the Blueland border.

b. Course of Action Development

This is the most difficult of the MCPP steps for ACE planners.

- When considering the possible COA(s), it is best to look at the assigned tactical tasks. Often, the way to design COA(s) is to determine the support necessary through the positioning of intermediate support bases and FARP(s). In addition, it is important to have aviation logistics representatives in the OPT to determine logistic requirements, and how to support intermediate support bases and FARP(s). To ensure continuous operations, the OPT must focus on command and control and logistics of all available assets (e.g., aerial refueling, amphibious ships for refueling and rearming, or rapid ground refueling). To have a continuous generation of sorties, it may be detrimental to displace aviation assets as GCEs are conducting operations.
- When developing a COA, one technique is to determine the requirements based on aviation function rather than units. For example, determine the assault support requirements rather than "MAG-16" requirements; determine close air support requirements rather than individual Marine aircraft group (consider both fixed- and rotary-wing close air support) requirements.
- One of the more difficult aspects of COA development is to determine methods to make the COA(s) distinguishable. The following are considerations to make COA(s) different and distinguishable—
    - Look at essential/tactical tasks and consider different aircraft capabilities (i.e., screen with rotary- or fixed-wing assets).
    - How to employ airfields and FARP(s) (different units at different sites, movement rates, and logistics required to support, movement control, etc.).

- Different employment concepts to support an amphibious landing
- Deception using aviation assets
- When to surge sorties. A surge is planned and tied to the MAGTF Commander's concept of operations. Reactive surges are less effective. This requires extensive planning to determine the effort and resources (ordnance, fuel, maintenance, and air crew) to accomplish the assigned tasks. Moreover, the ACE Commander's apportionment recommendation (and subsequent allocation and allotment decisions) must be tied to the estimate of supportability.
- Foul weather plan
- Night versus day operations
- Positioning/validation of existing fire support coordinating measures (i.e., joint fires area)
- Task organization
- Different methods to attack enemy critical vulnerabilities
- Different methods for command and control; for amphibious operations, how will the Commander exercise command and control? Will he use the joint command and control architecture or naval command and control capabilities? Will he phase ashore the Marine Air Command and Control System?

- **Relative Combat Assessment**; this process is challenging for aviation planners because they may not have the same enemy, environmental, or infrastructure concerns as the MAGTF or GCE. If there is a significant enemy air threat (enemy aircraft, air defense, etc.) they may compare their aviation combat power relative to the enemy aviation threat. They could also look at the tactical tasks and the enemy laydown to determine how many sorties are necessary to accomplish the task. For assault support, the assessment often requires detailed planning to see if there are enough rotary-wing assets to accomplish all the assault support tasks, especially if the weather does not allow fixed-wing operations.
- **Synchronization Matrix**; instead of dividing the synchronization matrix by warfighting function, the aviation planners may instead divide it by aviation function.

c. Course of Action War Game

One technique to war game ACE COA(s) is to use the "sequence of essential tasks" mentioned in paragraph 5004.b.1 of this pamphlet for each COA. The planners then look at each essential/tactical task as a critical event using a box technique rather than a belt or avenue of approach method. Wargaming should include the weather and look at three scenarios—

- Unrestricted fixed-wing/unrestricted rotary-wing operations
- Restricted fixed-wing/unrestricted rotary-wing operations
- Restricted fixed-wing/restricted rotary-wing operations

d. Course of Action Comparison and Decision

The ACE OPT members should have representatives available when the Commander makes his COA decision. They can record branches and sequels that the Commander identifies for further planning.

e. Orders Development

Special consideration should be given to the MAGTF's Annex W (Aviation Operations). The tasks from the MAGTF's basic order, Annex W, and Annex C provide direction for the ACE's required support to attain the MAGTF Commander's single battle. The ACE order is an internal document that focuses on the ACE's subordinate commands and their support to the MAGTF. ACE orders development require careful scrutiny of the MAGTF order to identify applicable portions of the MAGTF order that need to be included in the ACE order. As a result, some portions of the MAGTF order should be directly inserted in the ACE order; others require elaboration for aviation-specific operations, while others may be omitted completely. The ACE operations order provides basic information, such as general sortie generation, airspace control measures and responsibilities, initial apportionment and allocation, and planning factors that will be continually refined and amplified by the daily airspace control order and MAGTF ATO.

f. Transition

Like the other elements, transition has to occur within the staffs of the ACE. This includes the internal transition from the planners to the executers on the ACE staff and the external transition from the ACE staff

to the group staffs. In addition, the ACE Commander conducts a confirmation brief to the MAGTF Commander.

B-3. Logistics Combat Element

a. Problem Framing

Although logistics may set the limits on operational capabilities, the LCE OPT's Problem Framing should be conducted with an attempt to generate tempo, maximize operational reach, and increase the endurance of the force.

- Conduct a detailed analysis using the MAGTF Commander's Problem Framing products—principally his initial guidance, refined intent, and approved mission statement.
- The LCE Commander's guidance may include; requests or warnings about weather patterns or phenomenon that could impact logistics operations (typhoons, monsoons, tidal ranges); desired actions at ports and airfields; footprint required ashore (terrain management guidance); desired throughput rate; and expected/projected stockage levels (i.e., anticipated controlled supply rates versus required supply rates).
- The MAGTF Commander will set the battlespace for all major subordinate commands and will determine the COG for the entire MAGTF. On occasion, the LCE may conduct their own COG analysis and may determine their COG to be a flexible distribution system. The LCE Commander will have to provide combat service support mission-unique CCIR(s) and his own Commander's intent for his forces.
- The Commander should begin by considering logistics shaping (size, shape, location, concept of operations). The logistics effort must be integrated; it cannot just be allowed to happen over time. Will there be a need to take specific operational actions to expand logistics capabilities in order to support the decisive action? What are the logistic characteristics of the AO and the area of interest? What is the logistics infrastructure of the battlespace (what exists in the battlefield that may be put to use)?
- Logistics intelligence tools such as the Physical Network Analysis (PNA) and the Logistics Intelligence Preparation of the Operational Environment (IPOE) are specific intelligence

information products that assist logistic organizations in mission accomplishment. (See MSTP Pam 4-0.2, *A Logistics Planner's Guide*, Appendix B, for more info on PNA.) PNA focuses on the infrastructure in the area of interest. This may extend back to the continental U.S. PNA is largely environmental information and is focused toward logistics requirements and is not enemy information exclusively. PNA answers the question "How would weather, enemy, and terrain affect logistics operations?"

- The LCE OPT will usually find only a few specified tasks in the higher headquarters operations order. Most of the combat service support tasks are implied. The OPT must use experience and judgment to determine the LCE tasks.
- In addition to the normal elements of a mission statement, a LCE mission statement has several more. These additional elements identify the supporting unit, define the specific support mission, and identify the supported unit. The following are examples of generic mission statements:

  On order, the Marine Logistics Group (MLG) conducts general support and direct support combat logistics support operations in order to support the MEF's attack to the limit of advance. On order, the MLG conducts logistics over the shore (LOTS) operations in the vicinity of Greentown in order to support continued movement south to the limit of advance.

  On order, CLR-25 conducts general support health service support operations in support of designated nongovernmental organizations and private voluntary organizations in order to prevent the spread of disease beyond the current containment zone.

  On order, the CLB-1 conducts direct combat logistics support operations to RCT 1 in order to defeat the 104th Armored Brigade in zone. On order, continue direct combat logistics support operations to RCT 1 south to the MARDIV limit of advance.

- At the completion of problem framing, the LCE Commander should issue a refined Commander's intent along with his mission statement.

b. Course of Action Development

The LCE must produce a reasonably complete estimate of supportability to ensure the MAGTF COA(s) are supportable. They can then produce a

COA for logistics support and ultimately contribute to the development of a MAGTF concept of logistics.

- While the MAGTF G-4 and LCE LNO to the MAGTF OPT prepare staff estimates, the LCE OPT prepares an estimate of supportability consisting of *significant facts, required events,* and *conclusions* based on analyzed data. This estimate of supportability is an analysis of logistic factors affecting MAGTF mission accomplishment. The LCE planners use these estimates to recommend logistic COA(s) and develop plans to support the selected MAGTF COA.

- The logistics estimate of supportability uses the six logistics functional areas to integrate the analysis of MAGTF support requirements. It evaluates mission requirements in a detailed document that highlights the capabilities and limitations of the LCE. The estimate compares capabilities and requirements. The possible COA(s) for logistics support should begin to become apparent to the OPT once the estimate of supportability is completed.

- The MAGTF's concept of logistics should reflect the LCE's concept of operations and other subordinate force's concepts of logistics to explain how logistic assets will be organized and positioned to execute the mission. It may include the planned employment of unit organic logistics capabilities, combat logistics forces, and host nation support. Other considerations include the phasing and shifting of priorities; the focus of effort/priority of work; tasks, responsibilities, and support relationships; organization on the ground; potential displacements; and planned operational pauses.

- If the MAGTF OPT has begun a synchronization matrix as part of its COA development, it can be a very useful tool in completing the COA for logistics support.

- One fundamental issue for consideration is the number of COA (s) the LCE OPT will develop. The LCE will normally develop one COA in order to support the MAGTF COA because it is often difficult to develop multiple LCE COA(s) that are readily distinguishable. Logistics infrastructure and distribution network characteristics, coupled with the requirement to use multiple and simultaneous distribution means in order to support MAGTF

requirements, may drive the LCE OPT to one COA with multiple potential branches.

- The OPT should produce an initial COA for logistics support and brief it to the LCE Commander for a rudder check. The single COA should maximize redundant means and modes of the distribution network and optimize the throughput capabilities of the nodes available to the LCE.
- Since the LCE is usually a supporting effort, it will not conduct a relative combat power assessment of the opposing forces combat service support elements and agencies. It will, however, use the relative combat power assessment of the MAGTF's main effort to better determine support requirements and potential decisive actions or other places or times of anticipated heavy combat.

c. Course of Action War Game

The LCE war game evaluates the COA(s) for logistics support against the MAGTF's COA(s) to validate logistics estimates of supportability and develop solutions to anticipated support requirements. During the war game the COA for logistics support is wargamed against each MAGTF COA to determine how to best support the MAGTF concept of operations and scheme of maneuver while integrating the six logistics functions.

- The LCE OPT should war game the COA for logistics support. It is unlikely that there will be multiple concepts of logistics. The sequence of essential task method is well suited for highlighting the sustainment activities necessary to support planned operations. This technique also allows war gamers to concurrently analyze the essential tasks required to support the MAGTF concept of operations.
- The logistics system capabilities are finite and will limit the available means for carrying out any assigned mission. Conditions or measures of effectiveness have to be developed to assess the system, its configuration, and the application of capabilities toward the requirements identified by the supported units.
- The LCE has to conduct a war game of its own. It must "what if" logistics risks in the plan and those proposed to support the concept of operations. The synchronization matrix and event matrix, decision support template and matrix from both the MAGTF and

the main effort are essential components to a successful LCE war game. These tools can highlight critical events to support or critical tasks to execute. The LCE OPT should look closely at the MAGTF decision points and ask, "What are the effects of these decision points?" "What actions did they require the LCE to take that are outside the realm of the proposed concept of logistics?"

- The COA should be designed to generate a flexible response. It should provide multiple responses to *unpredictable battlefield developments*. The LCE OPT must "what if" the operations plan against unexpected successes or setbacks. These could lead to an unanticipated tempo change (increased or decreased battle rhythm) or an unforeseen opportunity for exploitation (or early initiation of pursuit operations). They must "what if" the operations plan against unexpected failures. These could lead to unplanned for and very complex, retrograde operations; delay, defend or withdraw. They must "what if" the operations plan against unexpected emergencies and unpredicted enemy actions.
- The LCE war game should build the logistics decision support template and matrix.
- The LCE OPT must identify logistics branch plans consistent with the potential needs of the supported force.

d. Course of Action Comparison and Decision

The COA chosen by the MAGTF Commander will largely drive the LCE COA for logistics support. Prior to COA comparison and decision, the LCE Commander must issue his evaluation criteria for his proposed COA for logistics support. The logistics planning factors and the individuals who prepared them have to be available to the MAGTF OPT to justify and explain the factors so the MAGTF Commander can make informed decisions about his separate COA. The LCE battle staff and OPT must be able to answer any logistics related questions the MAGTF Commander and OPT may pose.

- If the LCE Commander has decided to use a multi-site, multi-distribution mode system, then his comparison and decision is little more than validating the logistics system that will be established to support the MAGTF concept of operations.
- If multiple COA(s) for logistics support were developed, the LCE Commander must choose the one that best optimizes support.

- The LCE concept of operations is the COA graphic and narrative that best supports the MAGTF concept of operations. The LCE concept of operations provides the details of the logistic system that will be developed to support the other elements of the MAGTF. It also provides the foundation from which the MAGTF G-4 writes the MAGTF concept of logistics.

e. Orders Development

- The LCE OPT must refine and publish its concept of operations for its subordinate, adjacent, and higher units.
- The LCE battle staff will contribute to the MAGTF concept of logistics. It will contain the LCE concept of operations along with joint, host nation, ACE, and GCE factors. Additionally, they will contribute to the key logistics annexes in the MAGTF order, most notably Annexes D, E, P, and Q.
- The LCE must complete and publish its operations order with all the appropriate annexes, appendices, and tabs.

f. Transition

- The LCE operations order must be disseminated to all appropriate commands within the MAGTF.
- The LCE Commander must brief subordinate Commanders on the details and requirements of the operations order.
- The LCE Commander also must deliver a confirmation brief to the MAGTF Commander. It is also a good practice to brief the supported unit Commander on the LCE concept of operation and answer any questions he may have.
- The LCE OPT should begin planning for the execution of sequels.

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Appendix C

Tactical Tasks

The following are commonly assigned MAGTF tactical tasks that may be specified, implied, or essential tasks. These tactical tasks define the actions Commanders may take to accomplish their mission. The text in bold indicates some considerations for planners when developing and assigning tasks.

Examples of enemy oriented tactical tasks include—

- **Ambush**: A surprise attack by fire from concealed positions on a moving or temporarily halted enemy.
- **Attack by Fire**: Fires (direct and indirect) to destroy the enemy from a distance normally used when the mission does not require or support occupation of the objective. This task is usually given to the supporting effort during offensive operations and as a counterattack option for the reserve during defensive operations. The assigning Commander must specify the intent of fire—destroy, fix, neutralize, or suppress. **[A clear purpose must accompany the assignment of the task attack.]**
- **Block**: To deny the enemy access to a given area or to prevent enemy advance in a given direction or on an avenue of approach. It may be for a specified time. Units assigned this task may have to retain terrain. **[A force assigned the task of "block" should be assigned a specified time frame and/or the degree of success to be achieved (the size of force to be blocked) in support of its purpose.]**
- **Breach**: To break through or secure a passage through a natural or enemy obstacle. **[A force assigned the task of "breach" should know what size force is to be passed through the breach.]**
- **Bypass**: To maneuver around an obstacle, position, or enemy force to maintain the momentum of advance. Previously unreported obstacles and bypassed enemy forces are reported to higher headquarters. **[A unit assigned the task "bypass" should also be given *bypass criteria. Bypass criteria* are measures established**

during the conduct of an offensive operation by higher headquarters that specifies the conditions and size under which enemy units and contact may be avoided.]

- **Canalize**: The use of existing or reinforcing obstacles or fires to restrict enemy operations to a narrow zone. **[The tasked unit should be given the physical limits of the narrow zone, the size of the force to be canalized and desired duration of the task.]**
- **Contain**: To stop, hold, or surround enemy forces, or to keep the enemy in a given area and prevent his withdrawing any part of his forces for use elsewhere. **[The tasked unit should be given the physical limits of the area, the size of the force to be contained, and desired duration of the task.]**
- **Cover**: Offensive or defensive actions to protect the force from surprise, develop the situation, and give Commanders time and space in which to respond to the enemy's actions.
- **Defeat**: To disrupt or nullify the enemy Commander's plan and overcome his will to fight, thus making him unwilling or unable to pursue his adopted course of action and yield to the friendly Commander's will. **[When assigning the task of defeat, a statement that describes end state conditions should be used to define task completion ("By defeat I mean …").]**
- **Destroy**: Physically rendering an enemy force combat-ineffective unless it is reconstituted. **[The degree of destruction should be specified in terms of observable enemy capabilities and not simply in terms of numbers and percentages. *Destroy* as an interdiction objective (attack effect) calls for ruining the structure, organic existence, or condition of an enemy target that is essential to an enemy capability (MCRP 3-16A). *Destroy* as a fires effect requires that a target physically be rendered combat ineffective or so damaged that it cannot function unless restored, reconstituted, or rebuilt. Setting automated fire support default values for destruction such as 30% does not guarantee the achievement of the Commander's intent; the surviving 70% may still influence the operation. Destruction missions are expensive in terms of time and resources. Consider whether neutralization or suppression may be more efficient.]**

- **Disrupt**: To integrate fires and obstacles to break apart an enemy's formation and tempo, interrupt his timetable, or cause premature commitment or the piecemealing of his forces. **[A force assigned the task "disrupt" should normally be assigned the degree of success to be achieved and/or the duration of the "disruption" in relationship to its purpose. In targeting, we *disrupt* enemy plans by precluding effective interaction or the cohesion of enemy combat and combat support systems. In Air Force interdiction doctrine, disrupt forces the enemy into less efficient and more vulnerable dispositions.]**

- **Exploit**: Take full advantage of success in battle and follow up initial gains. Offensive actions that usually follow a successful attack, designed to disorganize the enemy in depth. **[A force assigned the task of "exploit" should normally be assigned the degree of success to be achieved and/or the duration of the "exploitation" in relationship to its purpose.]**

- **Feint**: An offensive action involving contact with the enemy to deceive him about the location or time of the actual main offensive action.

- **Fix**: To prevent the enemy from moving any part of his forces either from a specific location or for a specific period of time by holding or surrounding them to prevent their withdrawal for use elsewhere. **[The size of the force to be fixed, the duration of the task, and where to fix the enemy should be specified.]**

- **Interdict**: An action to divert, disrupt, delay, or destroy the enemy's surface military potential before it can be used effectively against friendly forces. **[A force assigned the task of "interdict" should normally be assigned the degree of success to be achieved (i.e., the effect desired relative to enemy capabilities) and/or the duration of the "interdiction" in relationship to its purpose.]**

- **Neutralize**: To render the enemy or his resources ineffective or unusable. **[A force assigned the task of "neutralize" will normally be assigned a specific time frame or degree of neutralization to be achieved in relationship to its purpose. Neutralization effects should be described in terms of observable enemy activity. Planners should avoid articulating**

neutralization effects in terms of numbers or percentages whenever possible. Neutralization fire results in enemy personnel or material becoming incapable of interfering with an operation or COA. Key questions planners must ask are when and how long does the Commander want the target to be neutralized. Most planned fire missions are neutralization fires.]

- **Penetrate**: To break through the enemy's defense and disrupt his defensive system.
- **Reconnoiter**: To obtain, by visual observation or other methods, information about the activities and resources of an enemy or potential enemy. **[A force assigned this task should be assigned a specific duration and specific information requirements as related to the force.]**
- **Rupture**: To create a gap in enemy defensive positions quickly.
- **Support by Fire**: Where a maneuver force moves to a position where it can engage the enemy by direct fire to support another maneuvering force by either support by fire using overwatch or by establishing a base of fire. The supporting force does attempt to maneuver to capture enemy forces or terrain.

Examples of terrain oriented tactical tasks include—

- **Clear**: The removal of enemy forces and elimination of organized resistance in an assigned zone, area, or location by destroying, capturing, or forcing the withdrawal of enemy forces that could interfere with the unit's ability to accomplish its mission. **[The degree of success to be achieved should be specified by describing what is meant by "organized resistance" (see bypass criteria above).]**
- **Control**: To maintain physical influence by occupation or range of weapon systems over the activities or access in a defined area. **[The area to be controlled and duration of the task should be specified.]**
- **Occupy**: To move onto an objective, key terrain, or other man-made or natural terrain area without opposition, and control the entire area. **[A unit assigned the task "occupy" should be**

assigned the duration of the "occupation" in relationship to its purpose.]

- **Reconnoiter**: To secure data about the meteorological, hydrographic, or geographic characteristics of a particular area.
- **Retain**: To occupy and hold a terrain feature to ensure it is free of enemy occupation or use. **[A unit assigned the task of "retain" should be given a specific timeframe in relationship to its purpose.]**
- **Secure**: To gain possession of a position or terrain feature, with or without force, and to prevent its destruction or loss by enemy action. The attacking force may or may not have to physically occupy the area. **[The attacking force may or may not have to physically occupy the area. Conditions should be established that define when a position or terrain feature is "secured." Usually, conditions can be expressed in terms of observable enemy activity.]**
- **Seize**: To clear a designated area and gain control of it. **[A unit assigned the task of "seize" will usually have to gain physical possession of a terrain feature from an enemy force. Note that the task "clear" is imbedded within the definition of the task "seize." See the definition of "clear" for specific planning considerations.]**

Examples of friendly force oriented tactical tasks include—

- **Disengage**: To break contact with the enemy and move to a point where the enemy cannot observe nor engage the unit by direct fire.
- **Displace**: To leave one position and take another. Forces may be displaced laterally to concentrate combat power in threatened areas.
- **Exfiltrate**: The removal of personnel or units from areas under enemy control.
- **Follow**: The order of movement of combat, combat support, and combat service support forces in a given combat operation.
- **Guard**: To protect the main force by fighting to gain time, while also observing and reporting information. **[A force is assigned the task to "guard" as one of the tasks in security force operations.**

Before assigning a unit the task of "guard", planners should ensure that they specify the scope of the task in terms of time and terrain. A guard force normally operates within the range of the main body's indirect fire weapons.]

- **Protect**: To prevent observation, engagement, or interference with a force or location. **[A force assigned the task "protect" should be assigned the degree of success to be achieved and/or the duration of the "protection" in relationship to its purpose.]**
- **Screen**: To observe, identify, and report information, and only fight in self-protection. **[A unit assigned the task "screen" may be required to maintain surveillance; provide early warning to the main body; or impede, destroy, and harass enemy reconnaissance within its capability without becoming decisively engaged. The scope of task should be articulated in terms of time and terrain.]**

In special circumstances, the above tasks may be modified to meet the requirements of mission, enemy, terrain and weather, troops and support available—time available (METT-T). The Commander must clearly state he is departing from the standard meaning of these tasks. One way this can be done is by prefacing the modified task with the statement, "What I mean by [modified task] is…"

Understanding of the task to be accomplished is important, but the purpose or "in order to" of the mission is enduring and quite possibly even more important to get correct. The purpose of the operation will be included in both the Commander's intent and the higher Commander's intent. A clear understanding of your and higher's purpose is essential for maintaining tempo in both planning and execution. A purpose should do one of two things as articulated in the mission statement – allow the main effort to do something or prevent the enemy from doing something to the main effort. The following are commonly used purposes of operations in which you may receive from higher headquarters. While not doctrinally defined it is important, as with tasks, to receive clear guidance from the Commander, or ask for clarification.

- **Allow**: To permit something to happen or exist.
- **Create**: To cause to happen; bring about; arrange, as by intention or design.

- **Enable**: To make able; give power, means, competence, or ability to; authorize.
- **Influence**: The action or process of producing effects on the actions, behavior, opinions, etc., of another or others.
- **Protect**: To defend or guard from attack, invasion, loss, annoyance, insult, etc.; cover or shield from injury or danger.
- **Cause**: A person or thing that acts, happens, or exists in such a way that some specific thing happens as a result; the producer of an effect.
- **Deceive**: To mislead or falsely persuade others.
- **Facilitate**: To assist the progress of.
- **Prevent**: To keep from occurring.
- **Support**: A person or thing that gives aid or assistance.

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Appendix D

Tactical Center of Gravity Analysis

Definitions: Center of Gravity and Critical Factors

Carl von Clausewitz introduced the center of gravity concept in his book, *On War*. "What the theorist has to say is this: one must keep the dominant characteristics of both belligerents in mind. Out of these…a certain center of gravity develops, the hub of all power and movement, on which everything depends." In 1996, Dr. Joseph Strange modernized this concept and made it practical by identifying and defining four critical factors within the center of gravity framework:

- Center of Gravity: Primary sources of moral or physical strength, power, and resistance.
- Critical Capability: Primary abilities that merit a COG to be identified as such in the context of a given scenario, situation, or mission.
- Critical Requirement: Essential conditions, resources, and means for a critical capability to be fully operative.
- Critical Vulnerability: Critical requirements or components thereof that are deficient or vulnerable to neutralization, interdiction, or attack in a manner achieving decisive results.

Joint doctrine adopted the four critical factors but defined them differently:

- Center of Gravity: The source of power that provides moral or physical strength, freedom of action, or will to act. MCRP 5-12C amplification: A key source of strength without which an enemy cannot function.
- Critical Capability: A means that is considered a crucial enabler for a center of gravity to function as such and is

essential to the accomplishment of the specified or assumed objective(s).

- Critical Requirement: An essential condition, resource, and means for a critical capability to be fully operational.

- Critical Vulnerability: An aspect of a critical requirement which is deficient or vulnerable to direct or indirect attack that will create decisive or significant effects.

  MCRP 5-12C amplification: An aspect of a COG that, if exploited, will do the most significant damage to an adversary's ability to resist. A vulnerability cannot be critical unless it undermines a key strength.

Proposed Analytic Method: Hybrid "Inside Out" and "User-Doer/Used"

Joint and Marine Corps doctrine provide definitions and a framework for the center of gravity and critical factors but fall short in providing a logical methodology for center of gravity analysis. Numerous authors have proposed a variety of methods; the below analytic methodology is a hybrid of Rueschhoff's and Dunne's "inside out" method and Eikmeier's "doer-user/used" method. It can be employed to determine an adversary's tactical-level center of gravity, critical capability, critical requirements, and critical vulnerabilities in order to identify the adversary's high value and high payoff targets within the context of the Marine Corps Planning Process.

During the Problem Framing step of the Marine Corps Planning Process, the OPT applies the design methodology, supported by the intelligence preparation of the battlespace process, to understand the environment and the problem. This allows the OPT to identify the principal adversary unit within the MAGTF's area of operation, as well as that unit's mission and/or objectives. Armed with this information, the intelligence planner and/or the Red Cell can identify the capability that allows the adversary to accomplish its mission. This is the heart of the "inside-out" approach: begin with the capability required by the adversary to accomplish its mission

rather than first trying to identify a center of gravity before fully understanding what the adversary is trying to do and how he is trying to do it.

An adversary force possesses numerous capabilities. The capability that allows the adversary to accomplish its mission in a certain operational environment is the critical capability. The critical capability is expressed as a verb. The adversary unit that performs that critical capability is the center of gravity. The center of gravity is expressed as a noun. It is the "user" of resources and the "doer" of the critical capability. The adversary's center of gravity may differ depending on its assigned mission, the nature of the terrain on which it is operating, and the threat it is facing. Additionally, the adversary's center of gravity may shift during each phase and stage of an operation as conditions change or it receives a new mission.

The identified center of gravity uses various resources in order to operationalize its critical capability. These resources are critical requirements, which enable the adversary's center of gravity to perform the critical capability that allows it to accomplish its mission within a defined operational environment. Critical requirements that are deficient or vulnerable to friendly action are critical vulnerabilities. Critical requirements and critical vulnerabilities are resources that are used by the center of gravity, and are expressed as nouns.

The value in conducting tactical center of gravity analysis ultimately lies in identifying the adversary's high value targets and high payoff targets. These are synonymous with the adversary's critical vulnerabilities. The identification of HVTs/HPTs contributes to Course of Action Development by helping to identify, in part, how the MAGTF can accomplish its mission by attacking the adversary's center of gravity through its critical vulnerabilities.

Tactical Center of Gravity Analysis Example

Note: the below is a simplified scenario to highlight the process for conducting tactical center of gravity analysis using the proposed model. The adversary is based on the opposition force (OPFOR)

contained in FM 7-100.1, *OPFOR Operation*s and TC 7-100.2, *OPFOR Tactics*.

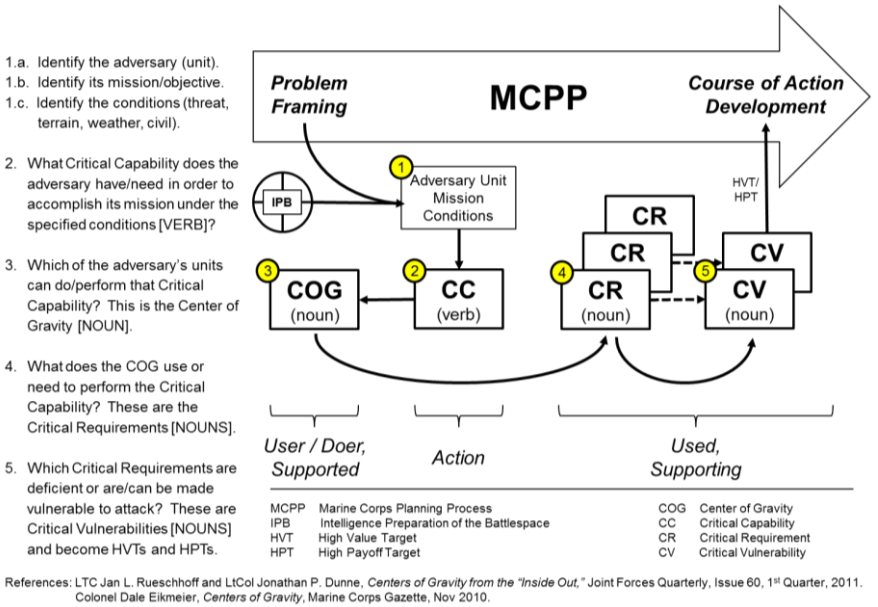

Figure D-1: Tactical Center of Gravity Analysis Process

Situation: The country of Orange has invaded Portlandia in order to gain access to hydrocarbon resources. Orange's Operational Strategic Command (OSC) South is currently occupying Portlandia with three divisions. One motorized infantry division is securing Portlandia's oil-producing region, one motorized infantry division is securing Portlandia's principal port and airfield, and one mechanized infantry division is in reserve. At the direction of the president, WESTCOM formed a JTF to conduct forcible entry operations in Portlandia and expel Orange forces and restore territorial integrity and sovereignty. The MEF, subordinate to the JTF's JFMCC, is tasked to conduct the initial forcible entry to seize an air and sea port of debarkation (APOD/SPOD) in order to allow the introduction of follow-on forces. The terrain is characterized by a narrow coastal plain with few suitable landing beaches backed by high, steep hills and mountains; it is severely restricted due to slope and vegetation and offers excellent cover and concealment for the defender.

MEF Mission: At H-Hour on D-Day, the MEF conducts an amphibious assault to seize Port City in order to allow JFLCC forces to enter the JOA.

Step 1: Identify the Adversary, Mission, and Conditions. The OPT determines that the 1st Motorized Division is the principal adversary force in the MEF's proposed area of operations; the adversary center of gravity analysis will focus on this unit. The G-2 assesses that the 1st Motorized Infantry Division's mission is to conduct an area defense to defeat the MEF and retain Port City in order to deny the key APOD/SPOD to the JTF. The division is defending on severely restricted terrain with excellent cover and concealment that favors the defender.

Step 2: Identify the Critical Capability. The 1st Motorized Division is organized and equipped as follows:

101st Motorized Infantry Brigade (BTR-80)

102nd Motorized Infantry Brigade (BTR-80)

100th Mechanized Infantry Brigade (BMP-3)

110th Integrated Fires Brigade (GHN-45, SCUD)

120th Air Defense Brigade (SA-6, SA-7/14, various AAA)

After analyzing the 1st Motorized Infantry Division's range of capabilities based on the above task organization and within the context of its mission and the terrain, the OPT determines that the critical capability the division possesses to accomplish its mission is its ability to mass indirect fires on predictable landing areas and avenues of approach. This is the division's capability that most significantly threatens the MEF's mission accomplishment.

Step 3: Identify the Center of Gravity. The OPT determines that the unit within the 1st Motorized Infantry Division that possesses the capability to mass indirect fires is the 110th Integrated Fires Brigade; this unit is the division's center of gravity.

Step 4: Identify Critical Requirements: In order to perform the critical capability, the 110th Integrated Fires Brigade requires the following resources: artillery tubes (GHN-45), surface to surface missile launchers (SCUD TELs), air defense assets (SA-6, SA-7/14, various AAA), camouflage, cover, concealment, and deceptive positions, ammunition resupply, radio communications architecture, forward observers, battlefield surveillance and counterbattery radars, unmanned aerial vehicles, and automated fire control systems.

Step 5: Identify Critical Vulnerabilities: The OPT determines that the following critical requirements are critical vulnerabilities based on the MEF's capabilities: radio communications architecture (vulnerable to

COMINT intercept and jamming), battlefield surveillance and counterbattery radars (vulnerable to ELINT intercept and jamming), UAVs (vulnerable to friendly anti-air capabilities), and automated fire control systems (vulnerable to friendly offensive cyber operations). The OPT's COG analysis output is captured in one slide:

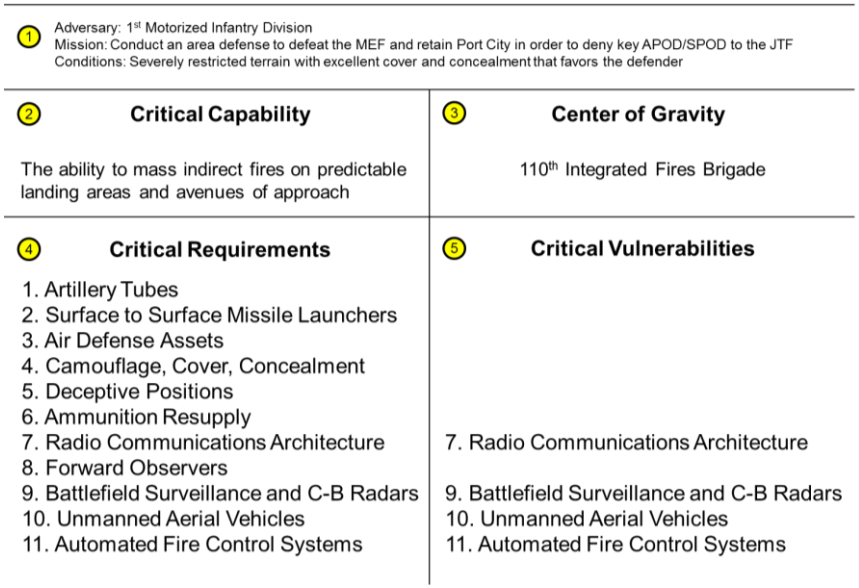

Figure D-2: Tactical Center of Gravity Analysis Example

- Strip the center of gravity of essential support. In 1940-41 the German Army constituted the center of gravity of the German threat to invade England. However, the failure of the German Air Force to defeat the British Air Force and Navy made it impossible to establish the conditions under which the German Army could invade. This defeated the German COG without it ever being engaged.
- Defeat the center of gravity by exploiting a systemic weakness. Allied use of long range aircraft equipped with radar, bombs, depth charges and search lights forced German submarines, which operated best in the attack while surfaced to submerge.

Appendix E

Estimates

One of the staff's most important functions is to support and advise the Commander throughout the planning process. The staff collects, analyzes, and presents relevant information to the Commander to aid his situational understanding and decision making. The staff and the subordinate Commanders prepare two basic types of estimates to support this effort. These are staff estimates and estimates of supportability.

E-1. General Information on Estimates

- Preparing estimates require the staff and subordinate Commanders to clearly understand the battlespace and mission assigned
- Estimates must be as thorough as time / circumstances permit
- Estimates may be detailed written documents, graphic representations of data and recommendations, or an oral presentation of the analysis and recommendations
- Estimates provide Commanders, staff, and planners an analysis of possible solutions to specific operational missions / requirements
- Estimates form the cornerstone for staff annexes and appendices to orders / plans
- Commanders and staff must continuously update estimates as they collect, process, and evaluate information. At a minimum, Commanders and their staffs should update their estimates when:
    - Recognizing new facts
    - Determining assumptions as invalid
    - Receiving or recognizing changes to the mission
    - Recognizing a change in requirements or capabilities
    - Modification of COA(s)

E-2. Staff Estimates

The staff and warfighting function representatives perform staff estimates. These summarize significant aspects of the situation. They also analyze the impact of all elements that may influence the course of action, and evaluate how the means available can best support the course of action. Staff sections may also require their functional representatives to develop estimates within their area of expertise - **"functional estimates."** A staff estimate is not a replacement for an order or for supporting concepts. However, if done sufficiently a staff estimate will considerably shorten the time it takes to fully develop a course of action.

Figures E-1 and E-2 highlight information that a staff estimate may include. Marine Corps Warfighting Publication (MCWP) 5-10, *The Marine Corps Planning Process*, also provides staff estimate information.

The MAGTF conducts estimates across all the warfighting functions. MSC/MSE(s) such as the LCE and the ACE may do their staff estimates across the warfighting functions and by tactical functions of logistics/aviation. The staff uses these estimates to recommend a COA (COA Comparison and Decision) and to develop plans to support the selected MAGTF COA(s). Failure to make complete estimates and projections can lead to errors and omissions when developing the COA, wargaming those COA(s), and ultimately when providing recommendations to the Commander for COA selection.

The Personnel estimate and the Logistics estimate, discussed in the following pages, represent two of the many staff estimates that should be prepared.

a. Personnel Estimate

Personnel planners (G/S-1) and health services support (HSS) planners (G/S-4) prepare the personnel estimate. This is an analysis of how all human resources and personnel factors impact the individual Marine and unit effectiveness. It includes a current overall personnel status of the organization, including its subordinate, and any attached or supporting elements.

Personnel status includes assessments of the following tangible and intangible factors:

- Patient evacuation plan, including medical evacuation and medical regulation plans (HSS personnel).
- Unit-strength management - Personnel statistics (G/S-1)
- Personnel replacement plan (G/S-1 / G/S-3)
- Unit/individual Marine readiness (G/S-3)
- Organizational climate (Commander, battle staff)
- Cohesion (Commander, battle staff)
- Discipline, law, and order (G/S-1, SJA, Commander)
- Casualty Estimation (G/S-1, G/S-3)

The personnel estimate predicts losses (where and when losses could occur) and when, where, and if such losses could cause the culmination of an operation. It contains the personnel and health services support planners conclusions and recommendations about the feasibility of supporting major operations and other specific tactical missions.

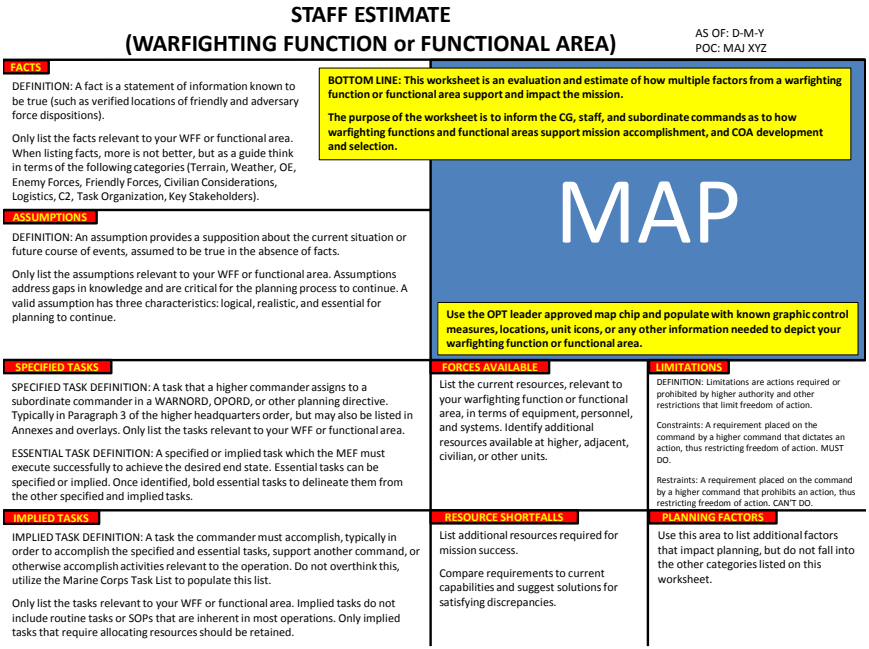

Figure E-1: Staff Estimate Format Sample

The generic staff estimate format, shown below, standardizes the way staff members construct estimates. The G-2 (with input assistance from all staff members) will still prepare and disseminate the Intelligence Preparation of the Operational Environment as separate and continuously updated products.

1. **MISSION**. Restated mission resulting from mission analysis.
2. **SITUATION AND CONSIDERATIONS**
   - **a. Characteristics of the Area of Operation**
     - **(1) Weather**. How will different military aspects of weather affect specific staff area of concern and resources?
     - **(2) Terrain**. How will aspects of terrain affect specific staff areas of concern and resources?
     - **(3) Other Pertinent Facts**. Analyses of political, economic, sociological and psychological factors and infrastructure, as they relate to the area
   - **b. Enemy Forces**. Enemy disposition, composition, strength, capabilities and COA(s) as they affect specific staff areas of concern
   - **c. Friendly Forces.**
     - (1) Friendly COA(s)
     - (2) Current status of resources within staff area of responsibility
     - (3) Current status of other resources that affect staff area of responsibility
     - (4) Comparison of requirements vs. capabilities and recommended solutions
     - (5) Key considerations (evaluation criteria) for COA supportability
   - **d. Assumptions**.
3. **ANALYSIS**. Analyze each COA using key considerations (evaluation criteria) to determine advantages and disadvantages.
4. **COMPARISON**. Compare COA(s) using key considerations (evaluation criteria). Rank order COA(s) for each key consideration. Comparison should be visually supported by a decision matrix.
5. **RECOMMENDATIONS AND CONCLUSIONS**
   - a. Recommended COA based on the comparison (most supportable from specific staff perspective).
   - b. Issues, deficiencies and risks with recommendations to reduce their impacts.

Figure E-2: Staff Estimate Format Sample (2)

b. Logistics Estimate

The G/S-4 prepares the Logistics Estimate to provide an accurate and current assessment of the CSS situation of the organization, its subordinate units, and any attached or supporting elements. The logistics estimate is an analysis of how combat service support factors can affect mission accomplishment. It contains the G/S-4's comparison of requirements and capabilities, conclusions and recommendations about the feasibility of supporting major operational and tactical missions. This estimate includes

how the logistics functional areas of supply, transportation, services, maintenance, general engineering, and health services affect various COA(s).

Logisticians throughout the MAGTF develop their own logistics estimates. Those of the ACE, GCE and the G/S-3 section of the LCE are the main contributors to the MAGTF G-4's Logistics Estimate. The LCE develops its own COA(s) with the support of the functional staff and their ***functional estimates***. It also considers the impact of Host-Nation Support (HNS), pre-positioned wartime reserves (PWR), and joint and allied force considerations when developing and MAGTF concept of support.

Marine Corps Warfighting Publication (MCWP) 4-11, *Tactical Level Logistics*, Appendix B provides a sample format for a Logistics Estimate.

c. Functional Estimates

Functional estimates are estimates developed by functional staff and supported by subordinate units with the functional expertise to support the staff in the development of staff estimates and COA(s) for logistics support. For example, the MAGTF G-4 may require the logistics functional representatives in the G-4 (Services, General Engineering, Transportation, Health Services Support, Supply, and Maintenance) to furnish functional estimates. These ***functional estimates*** should identify the **requirements** of the supported units and also determine the **capabilities** of the MAGTF to support. Comparing those requirements against MAGTF capabilities identifies **shortfalls**. Staff officers and planners who have an understanding of the requirements and capabilities of the force can then conduct an **analysis** of how the MAGTF will support the operation and recommend **solutions** in their functional area for supporting the force. Figure E-3 provides a format for capturing a functional estimate, which may be included as an annex to the formal Staff Estimate.

d. Logistics Example

Requirements: Supported unit requirements drive the need for LCE logistics support. Although supported units should provide their requirements / logistics estimates to the LCE, many times the LCE may need to determine the initial requirements to continue planning. In such cases, the LCE should begin with its worst case requirements. As more information becomes available the LCE can refine its requirements and

update its functional estimates. Some considerations when determining requirements include:

1. **Key facts and Assumptions**. *Identify key facts and assumptions associated with the specific functional area*.

2. **Functional Units Available**. *List all units assigned to the MAGTF with the functional capability to include known Host Nation and Contracted support*.

3. **Computations**. *(Focus on a worst case scenario.) Break out all requirements. The Category could be expressed as classes of supply, field services, maintenance functions, (MST support, Recovery, etc.) , Transportation types (Break Bulk, Class III, Water, etc.) or EOD support*.

Category	Total Requirements	Total Capabilities	Shortfall	Excess Capacity	Potential Solutions

4. **Analysis**.

   a. **Issues**. *(Excess capacity or shortfall): Indicate all shortfall and excess capabilities*.

   b. **Vulnerabilities / Risks**: *Indicate how any shortfalls can impact the outcome of the MAGTF mission. Be accurate, concise and direct*.

   c. **Recommendations**. *Indicate how you think the LCE can either reallocate internal CSS assets, find a way to reduce requirement, or increase capacity to counter shortfalls. Also recommend how to best make use of idle CSS assets*.

Figure E-3: Functional Staff Estimate Format Sample

- What method to use in determining logistics requirements? (Personnel density, equipment density, planning factor, operating tempo, combination, etc.?)
- What source(s) of calculations to use? (OPLOG Planner, Log 2000, MCRP 4-11A, the G-1/G-4 *Battle Book*, historical data, Logistics Estimate Worksheet [LEW], etc.?)

- What units require support? Will the units requiring support change during the operations? When?
- What are the logistics implications of the types of operations the supported units will perform – such as river crossings, pauses, deep attacks, etc.?
- Is there a chemical, biological, radiological or nuclear (CBRN) threat?

Capabilities: Review the LCE and MAGTF task organization to determine the logistics capabilities for the particular function. What is the total capacity? How can the capabilities be task organized?

Shortfall / Excess Capacity: Compare requirements with capabilities to determine shortfalls and excesses. Considerations when determining shortfalls and excesses include:

- For requirements that exceed capabilities, is the shortfall in a particular area or region, at a specific time, or an overall shortfall?
- What is the type of shortfall? Is it a supply availability shortfall, a resource shortfall (material handling equipment [MHE], personnel, facilities, man-hours, etc.), or a distribution shortfall?
- At what point is the requirement expected to exceed the capability?
- How much is the shortfall in terms of units of measurement (STON, gallons, square feet, etc.)? What does the shortfall equate to in terms of DOS?

Analysis and Solutions / Recommendations: One of the most important rolls of the staff is not to provide the Commander data, but rather provide the Commander usable or actionable information. Therefore, analysis of the collected data is paramount. The staff must be able to:

- Identify the issues associated with meeting the requirements with available capabilities
- Address the impacts and risk associated with shortfalls or excess capacity
- Develop potential solutions to shortfalls and uses for the excess capacity
- Make recommendations on a way forward for the organization.

When conducting the analysis, logistics planners and staff should consider the following:

- What is the shortfall's significance?
- What is the shortfall's potential impact?
- What is the shortfall's expected duration?
- What caused the shortfall (battle loss, time-phased force deployment sequence, etc.)?
- If the shortfall is a ***supply availability*** **shortfall**, consider the following:
  - At what level is the shortfall - MAGTF only or higher?
  - Is the supply available at other echelons and, if so, where? How long will it take to get here?
  - Is there an acceptable alternative, a substitute, or an alternative source of supply?
- If the shortfall is a ***resource*** **shortfall** (equipment, MHE, personnel, facilities, man-hours, etc.), consider the following:
  - Can similar resources be diverted or obtained elsewhere?
  - Is host nation support a viable alternative?
  - How specialized is the shortfall resource? (For example, it is easier to train a mortuary affairs specialist than it is to train a doctor. It is easier to find an automotive mechanic than it is an M-1 tank fire control specialist.)
  - Does a sister service or coalition partner have the capability?
- If a ***distribution*** **shortfall**, consider the following:
  - Is the shortfall from a lack of assets or a time-distance issue?
  - Does the shortfall require special distribution procedures?
  - Are any alternative distribution modes available?
  - What are the alternative mode requirements?
  - Are host nation distribution assets available?
  - Are sister service/coalition assets available? Are they compatible?

- How will logistics capabilities be echeloned forward? Which units will be tasked to establish forward logistics bases?

E-3. Estimate of Supportability

Estimates of Supportability are produced by subordinate Commanders in order to assist the "higher" Commander with COA selection. Staff estimates support their Commander's estimate of supportability provided to the MAGTF Commander. Estimates of supportability should indicate the subordinate unit's ability to support each COA, and identify the risks associated in supporting each COA.

The LCE/ACE estimate of supportability must consider both the warfighting functions (command and control, intelligence, fires, maneuver, logistics and force protection) and the tactical functions of logistics/aviation. The LCE/ACE Estimate of Supportability is an analysis of the MAGTF COA(s) from the LCE/ACE Commander's perspective. Ultimately, the LCE/ACE Commander must be able to articulate to the MAGTF Commander which COA his command is most capable of supporting with the associated risks from their command's perspective.

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Appendix F

Rapid Response Planning Process (R2P2)

Smaller staffs (such as those at MEU level) use R2P2 to plan missions when little time is available. The standard is to commence the mission within six hours of tasking. Mission commencement does not necessarily mean "landing the landing force" or securing an objective. It could be as simple as launching a reconnaissance and surveillance (R&S) team. It is only necessary that some element of the execution begin within the six-hour time frame. Which element that is will depend upon the situation.

F-1. Rapid Planning Considerations

The following considerations may aid in the efficiency and effectiveness of rapid planning-

- ***Anticipate the Mission***. Successful mission planners "lean forward" and start looking at potential missions and areas of interest prior to deployment. Theater threat briefs, cultural briefs, and economic briefs regarding the regions in which your expeditionary force will be operating help to build situational awareness (SA). Also, the staff should conduct command post exercises (CPX) to ensure it is ready to deploy as a cohesive unit. Once deployed, the staff can maintain its SA through daily operations-intelligence briefs, weather tracking, etc. The staff continues these briefs throughout its deployment.

- ***Establish and Validate SOP(s)***. A given unit's battle rhythm is the pace at which it conducts operations. Battle rhythm should be both personality and capability driven. The staff requires a process for developing battle rhythms that allow all elements of the command to operate in a cohesive manner. This process becomes part of a unit's standard operating procedures (SOP). Doctrinal publications for planning such as MCWP 5-10, JP 5-0 and NWP 5-01 may serve as foundations for developing sound planning SOPs.

- ***Planning Cells***. Prior to deployment, the staff should organize planning cells for each of its potential missions and establish the planning spaces they require. These planning cells must be able to

coordinate their activities. Major subordinate element (MSE) planning workbooks should contain planning cell SOPs. Planning cells may use collaborative planning tools such as IOW/GCCS, CTAPS/TBMCS, DOC/AC and IFSAS/AFATDS to improve their ability to work with each other and mission executors. Planning cells should practice coordination amongst themselves during simulation exercises.

- ***Information Flow***. If you know something, tell someone else who needs to know it. Try to provide knowledge rather than simply information. Making informed decisions requires knowledge. A focus on the Commander's critical information requirements (CCIR) mitigates information saturation and helps the staff to concentrate on the essentials. The staff should establish a single point of contact to control information flow. To facilitate effective information flow the staff should standardize as much as possible the types of graphics used in briefs, reduce briefing redundancies, and develop execution checklists and smart-packs, while maintaining records of mission planning and execution.
- ***Solid Communications***. The staff should standardize and practice its communications plans. It should also have backup and alternate plans in case the primary communication plans go awry. High frequency communications is especially important because it is how the landing force talks back to the ships. Everyone should understand all brevity codes and radio procedures.
- ***Develop a Navy-Marine Team***. A cohesive Navy-Marine Corps team requires mutual cooperation, rapport, respect, and understanding. Achieving this is not always easy and may require sustained effort and a good deal of patience.
- ***Confirmation Briefs***. In R2P2, the confirmation brief constitutes the order. A confirmation brief should be detailed and well-rehearsed. It should also occur within an established time frame.

F-2. MCPP and R2P2

The R2P2 planning process is the same as the MCPP with some modifications due to time constraints. The Problem Framing step is essentially the same. Generally COA development is limited to three COA(s). The COA war game is informal (it may involve just the S-2 and

S-3). Two of the three COA(s) are compared. The confirmation brief constitutes the order, and rehearsals are the primary means for making subordinates understand what mission execution requires.

F-3. COA Presentation Techniques

After getting the Commander's guidance, COA(s) will be developed and wargamed. The designated mission Commander will present the COA(s) to the Commander. The staff will not recommend a particular COA at this time. Instead, it should ask itself three questions about the COA(s). (1) Does everyone understand them? (2) Are there any COA(s) we have missed? (3) Are the COA(s) feasible, acceptable, and significantly different from one another? Next, the staff gives its estimates and recommendations on each COA. Staff members must stay within their respective functional areas when giving their estimates. They call the Commander's attention only to issues within their areas of expertise. The S-2 normally represents the opposing force and will give an estimate based on the enemy's perspective. The mission Commander then recommends a COA. After that, the Commander chooses a COA and detail planning commences.

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Appendix G

Commanders Considerations during Planning

These considerations are intended to assist Commanders as they exercise their responsibilities during planning. They are all linked to the *MCWP 5-10, Marine Corps Planning Process; MCDP 5 Planning; and MCDP 1-0 Operations.* This is not intended as a checklist but is designed to provide the Commander with tips for the execution of his/her role in the planning process and facilitate planning within the headquarters and in subordinate commands.

G-1. Problem Framing

a. Commander's Orientation

- Once you are informed of a pending operation and before you put pen to paper or issue guidance, you should contact your boss, peer Commanders and other stakeholders to share a sense for what's ahead. This will help you to prepare your "Commander's Orientation" and, more importantly, to understand the problem and the environment in which you must solve it.
- Prepare your own Commander's Orientation. If you do this you are driving the train; don't do it and you are along for the ride.
- When you give your Orientation, be sure your battle staff, OPT and subordinate commands all have representatives present ("Actuals" are strongly recommended).
- Representatives from your assessment cell should also be present.
- The purpose of the Commander's Orientation is to get the OPT / Staff headed down the right path. Given that Problem Framing is just beginning, you should avoid giving too much direction.
- Ensure Current Operations gives a thorough overview of friendly force posture and disposition to ensure the OPT and staff have a firm understanding of the friendly situation.

- Provide your initial thoughts to the OPT.
- Emphasize that your initial thoughts are not set in concrete and that you're looking for recommendations from the staff, OPT and subordinates on what should be changed.

b. Red Cell / Green Cell

- Provide initial guidance for Red and Green Cells.
- Demand that the Red Cell perform its own problem framing and COA Dev so that it can better inform the OPT.
- At a minimum the Red Cell should develop its own Mission Statement, Commander's Intent, Friendly and Enemy COG analysis, and COA Graphic and Narrative for the ML and MD COA(s).
- The Green Cell should provide the same level of detail as the Red Cell with regards to civil considerations.
- Make sure that your subordinate commands and supporting organizations (Navy, SOF etc.) are represented on the OPT with either full-time members or liaisons.

c. Assessment

- Ask how the Assessment Cell is represented in the OPT. Assessment cannot be an afterthought.
- The Assessment Cell must be involved throughout the planning in order to develop criteria and properly assess the accomplishment and achievement of objectives and purpose.

d. Other Considerations

- Primary Staff. Though the primary staff is represented in the OPT, the primary staff needs to be actively engaged throughout the planning effort.
- Provide a sanity check on the refinement of the COG, key facts, assumptions, shortfalls and limitations.
- Personally approve key assumptions as they represent risk.
- Start framing the COA development planning guidance you will give at the end of problem framing.

- Get a pre-brief or read ahead on the Problem Framing brief prior to going before the whole team if possible.
- Ensure the source for all tasks are identified; (i.e. OPLAN XXX, Annex C, Appendix 2 page 4 or FRAGO X-XX page X).
- Ensure essential tasks are truly essential to mission accomplishment and they are included in the mission statement.
- During the Problem Framing brief, ensure everyone that needs to be represented is present and leaves with a common understanding of the purpose of the operation as defined in the mission statement.
- Require the staff issue a warning order to subordinate commands once you approve the mission statement, Commander's intent and Commander's planning guidance. This will ensure your subordinates are on the same sheet of music during their concurrent planning efforts.
- Issue your COA guidance after the Problem Framing brief and make sure it's understood.
- You may want to take a break after receiving the Problem Framing Brief and prior to approving the mission statement/providing COA Dev Guidance. You don't have to give COA guidance right away if you're not comfortable.
- Indicate how many COA(s) you want and what differentiates them. Try to limit the number to what can be reasonably developed during the time allotted.
- If your experience, education, understanding and intuition lead you to a pretty good of idea of how you want to accomplish the mission, lay that out as the skeleton of a single COA or elements common to the COA(s).
- Make sure you reemphasize what you consider to be the decisive action.
- If appropriate, identify shaping and sustaining requirements.
- Tell the OPT to identify significant shortfalls early as they may result in a Request for Forces (RFF) to your higher headquarters who will need time to react.

- Tell the OPT what you want included in the COA descriptions: Narrative, Graphic and Task Organization and Command Relationships.
- Remind the OPT to run the COA(s) through the Feasible, Acceptable, Suitable, Distinguishable and Complete (FASDC) filter and to discard any that don't pass through that filter. Do not allow presentation of throw-away COA(s) just to achieve the required number of COA(s).

G-2. COA Development

- Check in with the OPT periodically but, at a minimum, **schedule a time for a "rough cut" COA brief** to ensure you're all on the same wavelength.
- After the rough cut COA briefing, work on your wargaming guidance and COA evaluation criteria that will be provided when approving the COA(s) to be wargamed.
  - Focus on the parts of the COA that are critical to mission success and on the evaluation criteria that are important for you to determine the best COA to accomplish your mission.
  - Remember, some wargaming methods are more appropriate for specific aspects of an operation - i.e., Box method around an airfield or port- than others.
- During the COA Development outbrief, refrain from indicating a preference if there's more than one COA – save that for the Comparison and Decision step of the planning process.
- Avoid going to your comfort level by getting into details best left to your subordinate commands.
- Ensure the COAs are complete and ready to be wargamed before you approve them. Each COA should have a synchronization matrix completed during the COA development step. If the synchronization matrix has not been completed, do not allow the OPT to begin wargaming. A well-developed synchronization matrix is essential to a productive war game.
- Make any adjustments to the COA(s) prior to moving into the Wargaming Step. For example; "I like the vertical assault part of COA #1 but I don't think we've gone deep enough into the enemy's

flank. The objective is the same but I want to adjust the scheme of maneuver to address this."

- Solicit wargaming ideas from your OPT and staff and then provide guidance on the method(s) and criteria to evaluate the value of the COA(s).
- Determine whether the OPT will use the Most Likely and/or the Most Dangerous Enemy COA as the basis for wargaming.
- Acknowledge the Red/Green Cell and emphasize its role in helping the OPT understand how the opposition or environment might react to friendly actions. If required, assign the G-3 or future operations officer (FOPSO) as the arbiter.
- Enforce the importance of not comparing COA(s) during wargaming
- Do not allow anyone to fall in love with any one COA.

G-3. COA War Game

- **Remind the OPT that they are wargaming each COA against the opposition – not against each other (the Comparison and Decision step).**
- The OPT will use a variety of tools to help them through the wargaming process. Don't get bogged down in those templates or tools.
- If more than one COA is being developed, the OPT leader may opt to form breakout groups to work on individual COA(s). If this is the case, make sure the COA groups come together to share their products.
- Stop in with the OPT periodically to answer questions and discuss the thorny issues. Direct the primary staff to do the same, but don't get bogged down in the process.
- Keep a copy of your guidance handy so that when you get to the wargaming outbrief and COA Comparison and Decision, you can compare what was done with what you asked to be done.
- During the wargaming out brief, ensure the synchronization matrix has been updated / refined and that a wargaming worksheet was

developed for each turn. Additionally, the OPT should provide you with a decision support matrix and decision support template that identify the linkage between your CCIR(s), Decision Points and collections assets. These products (synch matrix, DSM and DST) will assist in COA Comparison and Decision, and eventually in Orders Development and Transition.

- Ensure the OPT identifies the need for any branches or sequels requiring planning.
- Approve the results of the war game; designate the COA(s) to go forward for comparison and issue comparison criteria or guidance.

G-4. COA Comparison and Decision

- Ensure the OPT and subordinate commands are evaluating and comparing the COA(s) using the results of wargaming and additional comparison criteria you may have provided.
- This is an art form; use of quantitative evaluations is likely to be less useful than intuition and experience (qualitative).
- Ask your Deputy, COS, each of your principal staff officers (Staff Estimates) and all subordinate Commanders (Estimates of Supportability) for their personal evaluation of each COA and force them to commit to the one they believe is the best based on (1) their functional responsibilities and (2) their experience as MAGTF officers. You may want to consider doing this in a private session without others present to ensure an unvarnished discussion.
- Don't be sucked into selecting the COA that receives the most votes. Keep your evaluation criteria in mind (bring a copy with you). Be flexible enough to adjust your criteria if it is proven wrong.
- After full consideration of the input from your people (you may want to take a break here), announce your decision on the COA selected with any changes that have been made during wargaming and comparison/decision.
- Make any final adjustments to the selected COA.
- If the result of COA Comparison is a significantly modified or completely new COA, you must direct the OPT to return to COA

Development and then Wargaming before moving forward to an approved CONOPS and Orders Development.

- Remind the COS of the need to get an updated warning order to subordinate commands.

G-5. Orders Development

- **Ensure your CoS/XO drives the Orders Development step.**
- While the order is being developed, discuss options for the Transition step with the CoS, G-3 and OPT. The earlier you can decide on the form of the transition, the more time the staff and subordinates will have to prepare.
- Once your staff produces the FRAGO/OPORD it should consider having another unit or organization review it for omissions, conflicts or mistakes. Sometimes your staff will be so close to the problem that they'll miss things that will be obvious to others.
- The order your staff produces is your order. Even if it's signed "for" or "by direction" ensure you read and understand it.

G-6. Transition

- The purposes of the transition step are (1) ensure a smooth passing of the plan from plans/future ops to current ops and (2) ensure complete understanding by subordinate commands. Confirmation briefings, table-top discussions, computer assisted rehearsals and sand tables are just a few possible formats for transition.
- Attend the transition brief/rehearsal.
- Acknowledge that this step is important to everyone, not just the Commander.
- You may also be required to provide a CONOPS brief to HHQ to ensure you are achieving the task and intent of your Commander.

G-7. Final Thoughts

- The planning process starts with efforts by you, your staff, the OPT and the subordinate commands to define and formulate the problem prior to and during Problem Framing. Critical thought, collective dialogue and open discussion are contributors to a positive command climate and critical to effective planning.

- The planning process is the Commander's decision process – this can't be outsourced.
- Never underestimate your intuition or instincts.
- Be thick-skinned and receptive to input and new ideas.
- The best planning ideas sometimes come from unexpected sources.
- Be inclusive in your planning. Always ask who should be involved in the process that isn't currently.
- The OPT leader's job is thankless unless you recognize his unique status within the command and relationship to you.
- Your OPT leader might have an MAGTF Planners' MOS (0505) with the benefit of selective training as a planner at the School of Advanced Warfighting or School of Advanced Military Science. If not, he will require more time with guidance and mentoring.
- Make sure your OPT leader keeps the CoS and G-3/5 informed of any one-on-one discussions you have with him.
- Principal staff officers are sometimes overloaded with their day-do-day requirements. That's no excuse for avoiding their roles in the planning process. Hold them responsible!
- Remember that documents produced during planning need to be accurate and complete. Those not directly participating in the process will only know what they read or are told.
- Remember, the Marine Corps Planning Process works in many situations. It is an interactive, participatory and discovery process that allows you and your subordinates to increase understanding of yourself, the operating environment, the threat(s) and the problem to be solved with the objective of developing a plan to meet your objectives and succeed in accomplishing the mission.

Appendix H

Glossary

Section I
Acronyms

Note: Acronyms change over time in response to new operational concepts, capabilities, doctrinal changes, and other similar developments. The following publications are the sole authoritative sources for official military acronyms:

1. Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms*.
2. MCRP 5-12C, *Marine Corps Supplement to the Department of Defense Dictionary of Military and Associated Terms*.

AC ..... Adobe Connect
AO ..... area of operations
ACP ..... airspace control plan
APEX ..... Adaptive Planning and Execution
ATO ..... air tasking order

C2PC ..... Command and Control Personal Computer
C4I ..... command, control, communications, computers, and intelligence
CBRN ..... chemical, biological, radiological or nuclear
COA ..... course of action
COG ..... center of gravity
COPS ..... current operations
CPOF ..... Command Post of the Future
CPX ..... command post exercise
CSS ..... combat service support

DCO ..... defense connect online

FAO ..... foreign area officer
FARP ..... forward arming and refueling point

FRAGO ..... fragmentary order
FOPS..... future operations
FOPSO.....future operations officer

HHQ .....higher headquarters
HNS .....host nation support
HSS.....health services support

IM ..... information manager / management
IOC ..... intelligence operations center
IPOE ..... Intelligence Preparation of the Operational Environment

JOPES .....Joint Operation Planning and Execution System

LCE.....logistics combat element
LEW ..... logistics estimate worksheet
LNO .....liaison officer
LOC ..... line of communication
LOI .....letter of instruction
LOO.....line(s) of operation
LOTS ..... logistics over the shore

MAGTF ..... Marine air-ground task force
MCDP ..... Marine Corps doctrinal publication
MCPP ..... Marine Corps planning process
MCRP .....Marine Corps reference publication
MCWP .....Marine Corps warfighting publication
MEF .....Marine expeditionary force
METT-T .....mission, enemy, terrain and weather, troops and
.....support available, time available
MHE .....material handling equipment
MOS ..... military occupational specialty
MTOE..... modified table of organization and equipment
MSC.....major subordinate command
MSE.....major subordinate element

NAI.....named area of interest
NIPRNET ..... Nonsecure Internet Protocol Router Network

OPLAN..... operation plan

OPORD ..... operation order
OPT ..... operational planning team

PNA ..... Physical Network Analysis
PWR ..... pre-positioned wartime reserves

R & S ..... reconnaissance and surveillance
R2P2 ..... rapid response planning process
RFF ..... request for forces
RFI ..... request for information
ROC ..... rehearsal of concept

SIPRNET ..... SECRET Internet Protocol Router Network
SJA ..... staff judge advocate
SME ..... subject matter expert
SOP ..... standing operating procedures

T-AVB ..... civilian operated aviation logistics ship
(T=civilian operated, AV = aviation logistics, B = Series of the vessel)
TAI ..... target area of interest
TTP ..... tactics, techniques, and procedures

UAS ..... unmanned aircraft system

WFF ..... warfighting function

Section II
Definitions

Note: Definitions of military terms change over time in response to new operational concepts, capabilities, doctrinal changes, and other similar developments. The following publications are the sole authoritative sources for official military definitions of military terms:

1. Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms*.
2. MCRP 5-12C, *Marine Corps Supplement to the Department of Defense Dictionary of Military and Associated Terms*.

B

branch(es)—A contingency plan or course of action (an option built into the basic plan or course of action) for changing the mission, disposition, orientation, or direction of movement of the force to aid success of the operations based on anticipated events, opportunities, or disruptions caused by enemy actions. (MCRP 5-12C)

C

centers of gravity—Those characteristics, capabilities, or localities from which a military force derives its freedom of action, physical strength, or will to fight. (JP 1-02)

Commander's critical information requirements—Information regarding the enemy and friendly activities and the environment identified by the Commander as critical to maintaining situational awareness, planning future activities, and facilitating timely decision-making. Also called **CCIR**. (MCRP 5-12C)

course of action—1. A plan that would accomplish, or is related to, the accomplishment of a mission; 2. The scheme adopted to accomplish a task or mission. It is a product of the Joint Operation Planning and Execution System concept development phase. The supported Commander will include a recommended course of action in the Commander's estimate. The recommended course of action will include the concept of operations, evaluation of supportability estimates of supporting organizations, and an integrated time-phased data base of combat, combat support, and combat

service support forces and sustainment. Refinement of this data base will be contingent on the time available for course of action development. When approved, the course of action becomes the basis for the development of an operation plan or operation order. Also called **COA**. (JP 1-02)

critical vulnerability—An aspect of a center of gravity that if exploited will do the most significant damage to an adversary's ability to resist. A vulnerability cannot be critical unless it undermines a key strength. Also called **CV**. (MCRP 5-12C)

H

host-nation support — Civil and/or military assistance rendered by a nation to foreign forces within its territory during peacetime, crises or emergencies, or war based on agreements mutually concluded between nations. Also called **HNS.** (JP 4-0)

J

Joint Operation Planning and Execution System—A continuously evolving system that is being developed through the integration and enhancement of earlier planning and execution systems: Joint Operation Planning System and Joint Deployment System. It provides the foundation for conventional command and control by national- and theater-level Commanders and their staffs. It is designed to satisfy their information needs in the conduct of joint planning and operations. JOPES includes joint operation planning policies, procedures, and reporting structures supported by communications and automated data processing systems. JOPES is used to monitor, plan, and execute mobilization, deployment, employment, and sustainment activities associated with joint operations. Also called **JOPES**. (JP 1-02)

L

logistics over-the-shore operations — The loading and unloading of ships without the benefit of deep draft-capable, fixed port facilities; or as a means of moving forces closer to tactical assembly areas dependent on threat force capabilities.

M

materials handling equipment — Mechanical devices for handling of supplies with greater ease and economy. Also called **MHE.**

N

named area of interest — The geospatial area or systems node or link against which information that will satisfy a specific information requirement can be collected. Named areas of interest are usually selected to capture indications of adversary courses of action, but also may be related to conditions of the operational environment. Also called **NAI.**

O

operational planning team—A group built around the future operations section which integrates the staff representatives and resources. The operational planning team may have representatives or augmentation from each of the standard staff sections, the six warfighting functions, staff liaisons, and/or subject matter experts. Also called **OPT**.

P

Physical Network Analysis — A complete assessment of the theater for key aspects and features that are crucial in the overall logistics support concept. Also called **PNA.** (MCWP 3-21.2)

S

sequel — In a campaign, a major operation that follows the current major operation. In a single major operation, a sequel is the next phase. Plans for a sequel are based on the possible outcomes (success, stalemate, or defeat) associated with the current operation. See also **branch.** (JP 5-0)

T

T-AVB — Aviation logistics support ships assigned to the Military Sealift Command Prepositioning Program. They carry aviation maintenance equipment in support of U.S. Marine Corps fixed and rotary wing aircraft.

target area of interest — The geographical area where high-value targets can be acquired and engaged by friendly forces. Not all target areas of interest will form part of the friendly course of action; only target areas of interest associated with high priority targets are of interest to the staff. These are identified during staff planning and wargaming. Target areas of interest differ from engagement areas in degree. Engagement areas plan for the use of all available weapons; target areas of interest might be engaged by a single weapon. Also called **TAI.**

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