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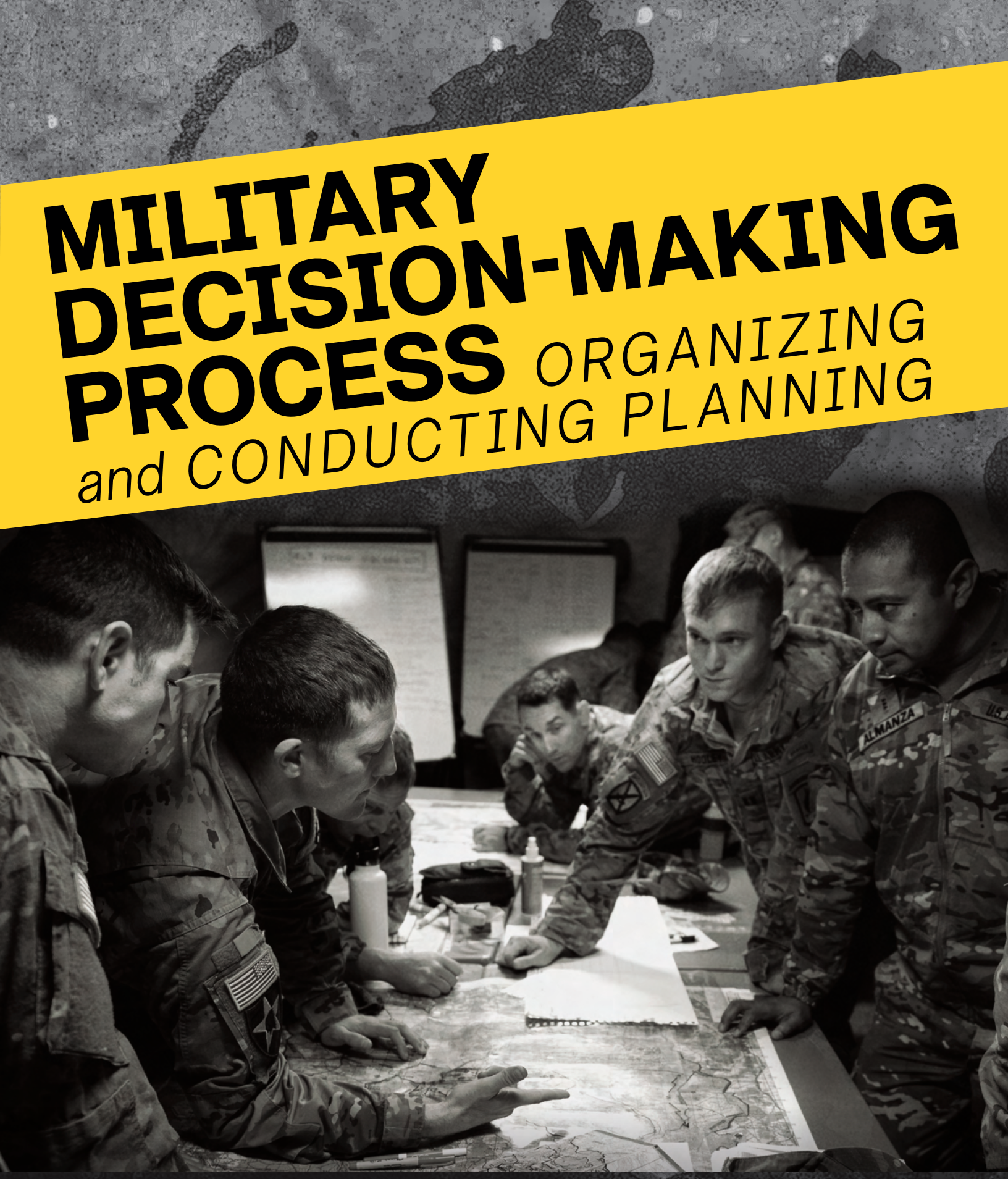

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Foreword

> "Plans are nothing; planning is everything."
>
> —GEN Dwight D. Eisenhower

The military decision-making process (MDMP) is not a boogey man to be feared, but a process to be embraced and mastered by all staffs charged with developing operations plans and orders. It is a systematic process that enables commanders and their staffs to apply critical and creative thinking and doctrine to solve problems and establish the framework and conditions for commanders to make effective decisions. And, like everything else in the Army, it requires time and training for staffs to become experts in the process. Observations emanating from the combat training centers (CTCs) and Mission Command Training Program (MCTP) consistently bear out that commanders and staffs are more successful when they have done the hard work of training the MDMP in the run-up to their rotation.

True story. I was a brand new second lieutenant on loan from my parent battalion to 1-16 Infantry's S-3 section during a National Training Center (NTC) rotation. The staff members had already established their competency in executing the MDMP in an ideal environment. But in the middle of executing the MDMP for the next mission, the battalion commander purposely cut all power to the tactical operations center (TOC) minus what was required to operate the radios and fire support systems. The observer coach/trainers (OC/Ts) present in the TOC whipped out their green notebooks faster than Wyatt Earp drawing his six gun and prepared to take notes on what they thought would be an epic disaster. Without missing a beat, however, the battalion staff executed a well-rehearsed battle drill to conduct the MDMP in a degraded environment. The planners withdrew themselves from their computers, and from under the planning table emerged tough boxes that contained all the tools required to produce (and reproduce) critical unit fighting products and an operation order (OPORD) without the benefit of electricity. Under the able guidance of the battalion executive officer (XO) and S-3, the staff developed a feasible, acceptable, suitable, and complete OPORD that enabled the battalion to lock horns with Blackhorse the next day.

Those battalion staff members executed the MDMP to standard in a degraded environment because they were experts in their craft. They had spent the year before that rotation relentlessly training on the MDMP, and used every opportunity in garrison to practice the process. The battalion commander placed as much emphasis on training his staff as he did on Bradley gunnery and maneuver training. He was well rehearsed in providing the guidance his staff needed to plan, and the staff members had proven standard operating procedures (SOPs) that enabled and enhanced their planning efforts. Commanders must be engaged to drive the process and provide the time and space in garrison to train their staffs to execute the MDMP under all conditions.

This handbook seeks to reverse the negative MDMP trends observed in CTC and MCTP exercises. It is not a replacement for Field Manual (FM) 5-0, *Planning and Orders Production* (16 May 2022), but compliments the doctrine by providing commanders and staffs with best practices for training and executing the MDMP.

The MDMP is a proven process, but it requires commander involvement and staff mastery to make it effective. It is the vehicle by which staffs operationalize the commander's vision, but like a crew-served weapon system, it requires time and training to master it. The dedicated staff member also never loses sight of the fact that the MDMP is not merely a "check the box staff exercise," but ultimately impacts the ability of that U.S. Army Soldier at the tip of the spear to successfully complete their mission. Now get planning.

Scott W. Mueller
COL, AR
Director, Center for Army Lessons Learned

Prologue

Assume an active role while reading this handbook. Identify gaps and seams in planning processes or standard operating procedures (SOPs); find solutions to improve your process. Digest the doctrine, lessons, and best practices. Recognize the role of commanders in the planning process and the guidance they provide their staff. Watch the staff focus on achieving the commander's guidance through its planning sessions. Study how the staff primaries take an active role in their struggle to understand and apply that guidance. Empathize with them as they do it all under the duress and tyranny of time. Learn from this handbook and gain proficiency, efficiency, and effectiveness in the military decision-making process (MDMP).[1]

This decision-making handbook underscores the importance of decisions. The smallest, most innocuous decisions can have disproportionate impacts on a brigade's success.[2]

This handbook uses Center for Army Lessons Learned (CALL) 20-16, *Defense of the Cajun Bayou*, *The Joint Readiness Training Center Operatios Group,* April 2020, as a backdrop. The intent is to get readers (primarily commanders and staffs) in a tactical mindset before reviewing the MDMP. Commanders and staffs should envision themselves in similar planning and decision-making situations as the brigade in *Defense of the Cajun Bayou*, study the MDMP, and seek to develop and improve their unit's planning and decision-making capabilities that will undoubtably occur in a time-constrained, high-tempo environment such as in the aforementioned publication.

The 3/21 Infantry Division (ID) is a fictional light infantry brigade combat team (IBCT) task organized with additional enablers.[3]

Before deployment, 3/21 conducted a combat training center (CTC) rotation. The rotation exposed gaps in the brigade's planning processes, planning standard operating procedures (PSOP), and overall commander and staff capability and capacity to plan effectively and efficiently. This led Cajun 6 to focus on staff planning iterations at home station to rapidly improve this capability. The brigade tested its updated planning standard operating procedures (PSOPs) and tactical standard operating procedures (TACSOPs) during a series of command post exercises (CPXs) using simulations at its home-station mission training complex to train the planning staff and current operations sections. In short, the 3/21 commander and staff was ready to conduct planning iterations in an actual operational/tactical context.[4]

The 3/21 "Ragin' Cajuns" deployed to Atropia in response to destabilizing activities by the neighboring country of Ariana.[5] The primary focus of the brigade was to support the civil and military authorities of the Republic of Atropia (ROA) and protect vital U.S. interests in the region. Shortly after arrival, 3/21 found itself in a rapidly developing situation. Arianan forces attacked along the Atropia border, eventually crossing into Atropia. Atropian forces, surprised by the cross-border incursion, were pushed back. Cajun 6 received orders to assist Atropia with restoring its border. Brigade planning for operations against Arianan forces began immediately—time to put all the staff's MDMP training to use.[6]

Initial operations by 3/21 were challenging. Two days into the fight, the brigade needed to gain momentum. Anticipating an upcoming higher operation order (OPORD), Cajun 6 knew he had to focus and guide the staff through the MDMP.[7]

It's day three of operations, and Cajun 6, though tired, is ready to go.[8]

ENDNOTES

1. Center for Army Lessons Learned (CALL) 20-16, *Defense of the Cajun Bayou, The Joint Readiness Training Center Operations Group*, April 2020, pages iv and 1. This publication provided the context for the fictional 3/21 IBCT. Some items were added by the author to establish operational context; however, the base concept is from the original document cited.

2. Ibid, page ii.

3. Ibid, page 1.

4. Ibid. Some items were added by the author to establish operational context; however, the base concept is from the original document cited.

5. Retrieved from the webpage Decisive Action Training Environment at https://date.army.gov.au/. Ariana is a fictional country utilized in these training exercises, and can be found at https://date.army.gov.au/operating-environments/caucasus/ariana.

6. Center for Army Lessons Learned (CALL) 20-16, *Defense of the Cajun Bayou, The Joint Readiness Training Center Operations Group*, April 2020, pages 1 and 2. This publication provided the context for the fictional 3/21 IBCT. Some items were added by the author to establish operational context; however, the base concept is from the original document cited.

7. Ibid, pages 1 and 2.

8. Ibid, pages 1 and 2.

Introduction

Day 3, 0600 Hours, Brigade Main Command Post

Cajun 6 was tired. He had stayed up most of the night ensuring the brigade (BDE) would seize its objectives and had managed to squeeze in a couple hours of sleep before the heat of the day set in. He drank too-strong coffee out of a too-hot canteen cup and shook away the last of the sleep from his eyes. A long day awaited him. The BDE had not destroyed the 1711 Battalion-Sized Detachment (BDET) and now intelligence from joint task force (JTF) 21 said the 17th Division Tactical Group (DTG) was on the move.

This morning's intelligence summary said the 1713 BDET was moving to reinforce the 1711 BDET and that it should arrive in a few days. The BDE was not first in priority for anything. The BDE was still in a close fight, did not own any of the key terrain, and now, another enemy formation was breathing down its neck. It had yet to receive an order to defend; Cajun 6 knew it was coming. He was already prepared to drive the operations process. First, though, he needed to figure out exactly what was going on in his area of operations (AO) before the order hit.

Cajun 6 walked into his main command post (CP). The chief of operations (CHOPS) called the CP to attention.

"Carry on," Cajun 6 called. "Just need a morning battle update brief (BUB) to get me started today."[1]

In this excerpt, Cajun 6 anticipated an order and was prepared to initiate and drive the operations process, primarily via the military decision-making process (MDMP).

Field Manuals (FM) 3-96, *Brigade Combat Team,* and FM 5-0, *Planning and Orders Production*, state the MDMP is an iterative planning methodology to understand the situation and mission, develop a course of action (COA), and produce an operation plan (OPLAN) or order (Army Doctrine Publication [ADP] 5-0, *The Operations Process*, 31 July 2019). The result of detailed planning is a succinct, synchronized plan that provides mission-type orders for the staff and subordinate units.[2]

There are six Army processes that are associated with and interact with each other to conduct Army planning. Understanding how these processes interact assists in driving the unit to a timely, understandable, and executable plan. They are—

- **Operations process.** Plan, prep, execute, and assess.
- **Commander's process.** Understand, visualize, describe, direct, lead, and assess.
- **Military decision-making process.** Army's planning process, which overlays on the understand, visualize, describe, and direct (UVDD) of the commander's process
- **Intelligence preparation of the battlefield.** Intelligence preparation of the battlefield (IPB) is a sub process within the MDMP focused on understanding the problem's operational environment (OE).

- **Targeting process or decide, detect, deliver, and assess framework.** The framework that is embedded in the MDMP process and is overlayed on the describe and direct (DD) portion of the commander's process
- **Army design methodology.** Can begin and feed the MDMP process by applying critical and creative thinking to understand, visualize, and describe problems and approaches to solving them.

For commanders and staffs, the focus is not just on producing an order via the MDMP. The staff should focus on the MDMP because of what the staff learns about the terrain, the enemy, and their own friendly formations, which increases the staff's and commander's understanding and leads to more effective operations.

The following unit fighting products are key outputs from the MDMP:

- **Modified combined obstacle overlay (MCOO).** This is best prepared using digital capabilities. However, analog overlays are an option if digital capabilities are degraded.
- **Event template (EVENTEMP).**
- **Intelligence collection synchronization matrix (ICSM).**
- **Concept sketch with task organization diagram (concept of operations).** FM 5-0, figure 5-6, pages 5-34 and 5-35 are examples of the diagram.[3]
- **Synchronization matrix (SYNCMAT).**
- **Decision support matrix (DSM).**
- **Fire support execution matrix (FSEM).**
- **Operations graphics overlay (analog and digital).**

Planning is not complete until conditions are set to rehearse the operation. Rehearsals should be a point of emphasis during the MDMP, as rehearsals are a decisive point of planning. They often confirm or deny your planning efforts or yield areas where your plan requires refinement. See Center for Army Lessons Learned (CALL) handbook 19-18 at https://api.army.mil/e2/c/downloads/2023/01/19/48e6a637/19-18-commander-and-staff-guide-to-rehearsals-a-no-fail-approach-handbook-jul-19-public.pdf.[4] The following are critical rehearsals:

- Combined arms rehearsal (CAR).
- Information collection (IC)-fires rehearsal or IC-fires.
- Sustainment.
- Command and control (C2).
- Fires technical.

Staff training at home station is a "must do" event to gain proficiency and build efficiency. Some commanders arrive at combat training centers (CTCs) self-assessing that they have completed little to no staff training before their rotation. Typically, commanders are not familiar with Training Circular (TC) 6-0.2, *Training the Mission Command Warfighting Function for Divisions and Corps*, 15 July 2019 (see reference list), and do not deliberately plan staff training. Commanders and staffs

must understand the inherent generational gaps in experience, which range from commanders with 22 years to field grade staff officers with 12 to 15 years, and staff captains (those doing the primary planning), with 5 to 7 years.[5] The "sets and reps" conducted during training enhances teamwork, identifies gaps and seams in planning processes, builds proficiency, and allows for agile and effective mission management.

CALL, with input from CTCs, has a wealth of products that outline lessons, best practices, guidance, and ways to improve planning processes. *CTC Trends*, published annually by CALL, provides commanders and staffs "answers to the test." Additional CTC products are available to support effective and efficient planning processes. Access to these products require a common access card (CAC) and can be found at https://armyeitaas.sharepoint-mil.us/teams/lessonslearned.

This handbook supports effective planning using the MDMP and references doctrine and CALL products. Its readers should be proficient and familiar with doctrinal and CALL references that provide, in greater detail, the foundation and lessons/best practices for planning processes.

One year earlier, shortly after Cajun 6 assumed command, he reorganized the BDE battle rhythm. The changes came quickly; his introduction to the BDE happened when the executive officer (XO) handed him a printout of an Outlook calendar on a 5x8 index card. It showed wall-to-wall meetings from 0800 hours to 2100 hours. Cajun 6 asked, "What's this?"

"It's the brigade battle rhythm, sir," replied the XO.

Cajun 6 looked at it again. The entire concept was unsustainable. The staff only updated its estimates once per day. They used the night shift to prepare pretty slides for a 0800 hours BUB. Those slides sat unused the rest of the day and were never employed in the fight. More importantly, that train of meetings, working groups, and decision boards would have left him, the commander, scrambling to find time to get outside of the main CP's confines to see his BDE and apply leadership where required.

"This is nuts," he said as he handed the card back to the XO.

"Delete everything except the commander's update brief (CUB), operations synchronization (OPSYNC), and targeting board."

The XO looked up at him as the commander told him to "find a way to make it work." The XO did and the staff started toward becoming a fighting staff.[6]

ENDNOTES

1. CALL 20-16, *Defense of the Cajun Bayou, The Joint Readiness Training Center Operations Group*, April 2020, page 8.

2. FM 5-0, *Planning and Orders Production*, 4 November 2022, page 5-1, and FM 3-96, *Brigade Combat Team*, 19 January 2021, page 4-13.

3. Ibid, pages 5-34 and 5-35.

4. CALL 19-18, *Commander and Staff Guide to Rehearsals*, 10 July 2019.

5. Archambault, Matthew, T., LTC, *The Three-Generation Dilemma*, Military Review Online, 29 June 2018, https://www.armyupress.army.mil/Journals/Military-Review/Online-Exclusive/2018-OLE/Jun/Three-Generation-Dilemma/.

6. CALL 20-16, pages 8-9.

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CHAPTER 1

"Answers to the Test"

Following the battle update brief (BUB), Cajun 6 told Cajun 5 he expected the joint task force (JTF) to publish the order for the defense in the afternoon but not to wait for it.

"Tell the staff to start gathering the tools," Cajun 6 said. "Be ready to give me an initial look when I get back from battlefield circulation (BFC) with the Gators (near Batoor), Razorbacks (at Sangari), and Nutria (near Self Airfield). In the meantime, we need to continue to press the attack until we hold defensible terrain."

After the commander departed, Cajun 5 turned to the rest of the staff members and told them to put out the word that the staff would gather in the plans tent at 1400 hours to start the military decision-making process (MDMP). Meanwhile, they were to "gather the tools and come ready to plan."

One of the assistant S-3s (AS3s), a young, pre-career course captain who joined the section three weeks earlier, raised his hand and asked the XO, "What does gather the tools even mean?"

"Start asking higher (headquarters) for draft products and update your running estimate," replied Cajun 5.

The S-3 added, "That also means updating the overlays, gathering map markers, dry erase markers, cleaning off the expired products, and reviewing the brigade combat team (BCT) planning standard operating procedure (PSOP)."[1]

Rarely does one receive answers to a test beforehand; however, the Army, as a learning organization, uniquely provides both the answers (and trainers) to assist with successful exercises (test-taking). The following are suggested "ways" to enhance and gain MDMP efficiency and effectiveness:

- **Outcome focus.** Focus on the outcome of each step of the process so you are efficient with your work. This helps prioritize your time to get the most important things done first and keeps you focused on relevant information and work that has a purpose in the MDMP.
- **Phased operation.** Treat the MDMP like a phased operation. While executing the current step, you are also setting conditions for the transition to the following step. For example, during mission analysis (MA), the staff is focused on analysis, but someone is also responsible for preparing the products necessary for the start of course of action (COA) development, such as blank synchronization matrixes (SYNCMATs), blank acetate for operations graphics, blank decision support matrixes (DSMs), etc.
- **Planning standard operating procedure.** Like "gathering the tools for war-game," units benefit from gathering tools for the MDMP. A unit-tailored PSOP that prescribes formats and mediums for presentations or commander's touchpoints facilitates efficient and effective communication between commanders and staffs. Units attempting to develop a format in stride with MDMP execution will inject an unnecessary level of difficulty to the overall process.

This is especially disadvantageous during parallel planning and when time is of the essence. Commanders and staffs must consider whether to develop analog or digital products, how the commander best receives information, and whether the unit can sustain that process in an expeditionary or large-scale combat operations (LSCO) environment.

- **Timeline.** To the best possible extent, provide the staff team a measure of predictability. When are the deliverables due? When are the rehearsals? What is the impact of a shift in the brigade's timeline?

- **Time, task, and schedule management.** Time, task, and schedule management at different levels of the organization is a problem that can be difficult but is solvable. However, it is harder than just saying "use the one-third, two-thirds rule." The XO's timeline must account for all the internal requirements of each step of the MDMP. One can make all the changes they want to the MDMP process but failing to articulate time management challenges at echelon results in lower-level units (down to the ones fighting the plan) struggling to give effective orders.

- **Presumptive planning.** Presumptive planning is a good thing. If you do not know a piece of required information to keep planning, then assume and drive on. Do not waste time waiting. The best-case scenario is that you save time for the line companies to rehearse; the worst-case scenario is your staff must adjust its work if the assumption is incorrect. Once a staff makes an assumption, they must figure out how to confirm or deny that the assumption is valid. Staffs cannot make an assumption and move on without verification.

- **Understand the commander's process.** Staffs must understand how the MDMP supports the commander's process of understand, visualize, describe, and direct (UVDD) (lead/assess).

- **Duties and responsibilities.** Have clearly defined duties and responsibilities for your staff noncommissioned officers (NCOs) so they know their responsibilities in the MDMP. NCOs, when incorporated into the planning team, can bring years of experience into the MDMP.

- **Digital or analog.** Digital capabilities should be maximized to build, confirm, and rapidly distribute planning products. Digital capabilities enhance parallel planning efforts, allow for rapid information exchange, and assist with the development and refinement of unit fighting products. Analog capabilities should not be shunned. A loss of network or power generation capabilities requires immediate transition to analog planning actions. The current 21st-century battlefield demonstrates the need to be able to operate in degraded and denied environments.

- **Planning at pace.** You must execute a detailed operations process at the pace required in a decisive action training environment. The following are helpful tips:
  - Maintain and follow a detailed timeline throughout the planning process.
  - Integrate external units and enablers into the operations process early.
  - Define, establish, and maintain an analog/digital common operational picture (COP) and staff running estimates, which allow for a continuous operations process.
  - Establish a battle rhythm that supports the development of shared understanding and integrates the MDMP to enable a continuous operations process.
  - Capture key due outs/updates from the BCT combined arms rehearsal (CAR) and disseminate appropriately.

- **Fill in the blanks.** Many doctrinal charts/tables depict the MDMP as a series of sequential steps leading to a terminal objective—the operation order (OPORD). However, if in the current step you develop or have information or answers to a later step, then fill that into the appropriate chart, etc. Do not wait until the actual step to do this. This saves you time during the following steps so you can issue the OPORD faster to your subordinates. Again, think of the MDMP as a phased operation. During the current phase, the focus is on accomplishing the main purpose, yet other actions are also taking place in parallel and to set conditions for a following phase.
- **Unit fighting products.** Emphasize creating your products. Many commanders have three to five fighting products they want to use. The staff must create the format for these products and have the commander approve them. Add them to the unit standard operating procedure (SOP) once approved, preferably before planning starts but as early as possible. Have those formats available at the beginning of planning so staff members can fill them in as they develop inputs throughout the MDMP.
- **Doctrinal briefing agendas.** Use Army doctrinal briefing agendas (see Field Manual [FM] 6-0, appendix B)[2] as they are given. They are time-tested including all pertinent information in a logical sequence that builds context from the big picture down to individual tasks. Audiences expect to receive this information in this order. When you deviate from that order you may impact your audience's ability to understand and you may begin getting numerous questions because of the lack of context. They may also think that something you moved to later in the brief was left out.
- **Parallel planning.** Units subordinate to the BCT must conduct parallel planning; there is not time to wait. This is particularly true for BCT-enabler units such as the brigade engineer battalion (BEB), brigade support battalion (BSB), cavalry (CAV) squadron, and field artillery (FA) battalion (BN).

ENDNOTES

1. Center for Army Lessons Learned (CALL) 20-16, *Defense of the Cajun Bayou, The Joint Readiness Training Center Operations Group*, April 2020, page 11.

2. FM 6-0, *Commander and Staff Organization and Operations*, 16 May 2022, appendix B, pages B-1 to B-6. The appendix highlights the types of briefings and their intended purpose.

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CHAPTER 2

The Commander's Role in the Military Decision-Making Process

Cajun 5 was losing his patience. He already pushed the start time for the mission analysis (MA) brief 30 minutes to the right at the S-2's request and knew this was eating into their planning timeline.

The joint task force (JTF) finally published an order on the SECRET Internet Protocol Router Network (SIPRNET) SharePoint page at 1750 hours, but luckily the brigade combat team (BCT) had not waited to start planning. The BCT had been actively coordinating with its higher headquarters (HHQ) and using their upper tactical internet (TI) to check for the products. The daily commander's update brief (CUB) was scheduled for 1800 hours, but Cajun 6 was still out on battlefield circulation (BFC) and took the update via the BCT operations and intelligence (O&I) frequency modulation channel. In a cascading effect, the CUB pushed back the receipt of mission brief, but it was worth the delay. The CUB was critical to Cajun 6 both as a battle rhythm event that helped him visualize and direct, but also critical to the staff for the opportunity to brief and hear from commanders what was happening on the ground."How do you read me, Cajun 5?" Cajun 6's voice had come through the radio. The staff cringed reflexively.

"Loud and clear, sir."

"Okay, let's get this going." Cajun 6 said.[1]

Commanders drive the operations process and focus planning—period.[2]

COMMANDERS FOCUS PLANNING

"The responsibility for planning is inherent in command. Commanders are planners—they are the central figures to effective planning. Commanders often have the most planning experience, and they are ultimately responsible for the development and execution of the plan. As such, the plan must reflect how commanders intend to conduct operations. Commanders ensure the approaches to planning meet the requirements of time, planning horizons, level of detail, and desired outcomes. Commanders ensure that all plans and orders comply with domestic and international laws and the Army ethic. They confirm that the plan or order is relevant and suitable for subordinates."[3]

"Generally, the more involved commanders are in planning, the faster staffs can plan. Through personal involvement, commanders learn from the staff and others about a situation and ensure the plan reflects their commander's intent. While staffs perform essential functions that amplify the effectiveness of operations, commanders drive the operations process through understanding, visualizing, describing, directing, leading, and assessing operations as shown in figure 2-1. During planning, commanders focus their activities on understanding, visualizing, and describing. While depicted sequentially, the activities of understanding and visualizing are iterative."[4]

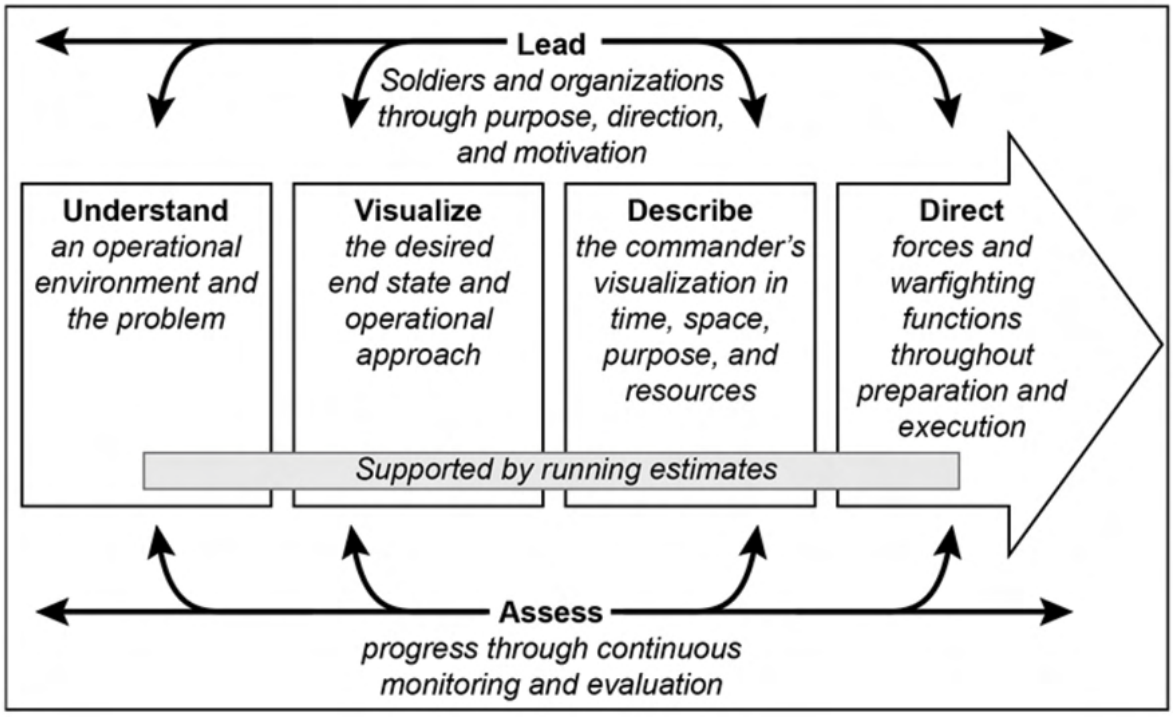

Figure 2-1. Commander's role in the operations process[5]

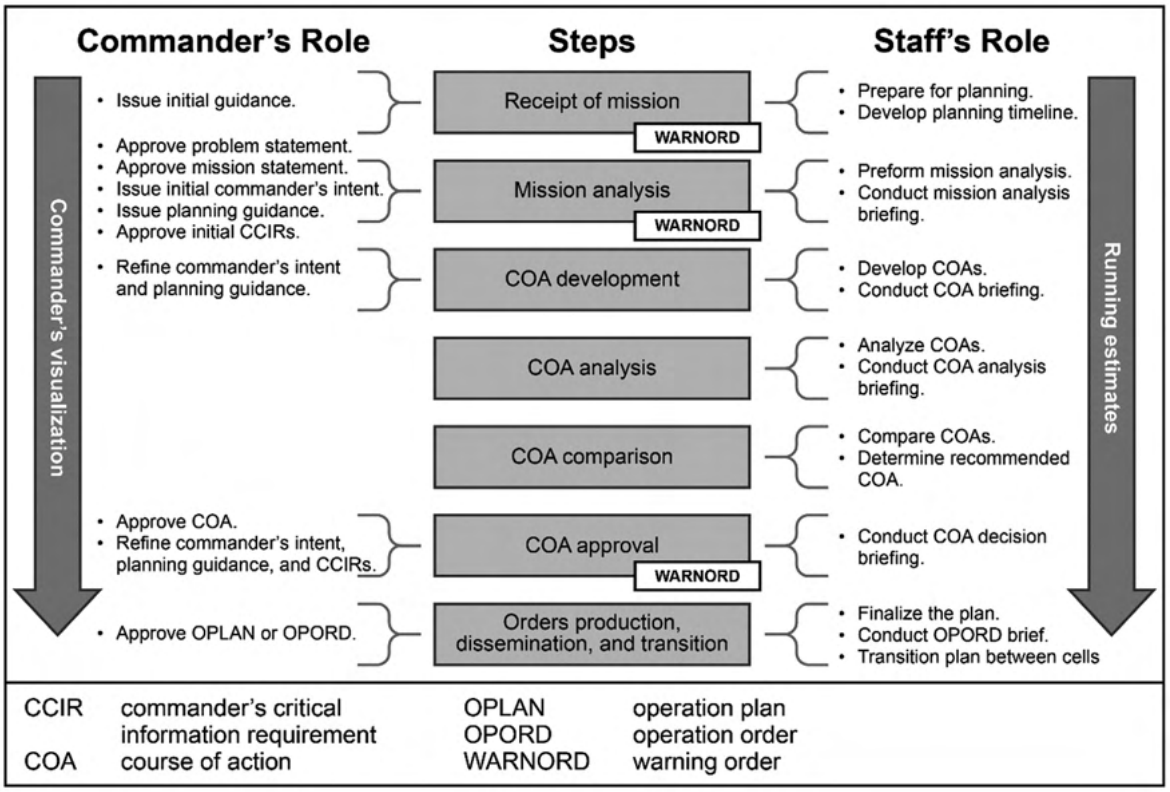

Figure 2-2. Commander and staff interaction[6]

Increased Commander's Involvement

"Commanders can often set the conditions for success well before the initiation of a plan. Ensuring that planners understand the way in which the commander generally views operations and plans can assist in the development of more timely and accurate plans with less personal involvement because of an inherent understanding by the planning staff. While commanders cannot spend all their time with their planning staffs, especially in large-scale combat operations (LSCO), the greater the commander's involvement in planning, the faster the staff can generally plan. In time-constrained conditions, commanders who participate in the planning process can quickly make decisions (such as course of action [COA] selection) without waiting for a detailed briefing from the staff. With increased commander involvement the amount of time spent on briefings is significantly reduced as a common understanding already exists between the commander and staff."[7]

Limit the Number of Courses of Action to Develop

"Limiting the number of COAs developed and analyzed can save planning time. If available planning time is extremely limited, the commander can direct development of only one COA. In this case, the goal is an acceptable COA that meets mission requirements in the time available. This technique saves the most time. The fastest way to develop a plan has the commander directing development of one COA with branches against the most likely enemy COA or most damaging civil situation or condition. However, this technique should be used only when time is severely limited. In such cases, this choice of COA is often intuitive, relying on the commander's experience and judgment. The commander determines which staff officers are essential to assist in COA development. Normally commanders require the intelligence officer, operations officer, plans officer, chief of fires (deputy fire support coordinator or fire support officer [FSO]), engineer officer, sustainment officer, civil affairs (CA) operations officer, information operations (IO) officer, military information support operations officer, cyber electronic warfare officer, and executive officer (XO). They may also include subordinate commanders, if available, either in person or by video teleconference. This team quickly develops a flexible COA that it feels will accomplish the mission. The commander mentally war-games this COA and gives it to the staff to refine."[8]

Commanders effectively anticipate future planning requirements including offensive-defensive transitions and tentative tactical tasks in the absence of an approved higher echelon order. Commanders do not effectively task-organize their staffs to initiate planning or manage available planning time based on observations at combat training centers (CTCs). Commanders often prioritize current operations duties to their XO (in the main command post [CP]), S-3 (in the tactical command post [TAC]), and chief of plans (execution fragmentary orders [FRAGORDs] in the main CPs). Field Manual (FM) 5-0, *Planning and Orders Production*, 4 November 2022, paragraph 5-9, states, **"The commander is the most important participant in the military decision-making process (MDMP)" and must task-organize their staff to initiate the MDMP on anticipated requirements.**[9]

Commanders issue effective initial planning guidance that triggers efficient planning actions. Observed at CTCs, commanders excel in providing broad visualization of the fight and desired effects on the enemy. However, CTC observations point to commanders who are challenged with providing refined planning guidance that enables staffs to synchronize critical details within unit fighting products. The most effective commanders use a standardized planning guidance worksheet to support detailed initial planning guidance (see tables 2-1 through 2-3).

Table 2-1. Examples of commander's planning guidance by WfF[10]

Command and Control	Commander's intent Course of action development guidance Number of courses of action to consider or not consider Phasing considerations Operational framework considerations Commanders critical information requirements Critical events Task organization Rules of engagement	Risk acceptance guidance Planning and operational guidance timeline Type of order and rehearsal Branches and sequels Commander's location Succession of command Command post positioning, survivability, and displacement Liaison officer guidance Communications guidance Civil affairs operations Emission control and status Requests for information
Intelligence	Information collection guidance Information gaps Most likely and most dangerous enemy courses of action	Scheme of intelligence Critical terrain and weather factors Critical local environment and civil considerations Intelligence focus during phased operations
Movement and Maneuver	Task and purpose of maneuver units Scheme of maneuver including forms of maneuver Reserve composition, priorities, and control measures Passage of lines Reconnaissance and surveillance	Tactical deception Friendly decision points Information collection direction Collateral damage or civilian casualties Any condition that affects achievement of end state Mobility and countermobility
Fires	Priority of fires Synchronization and focus of fires with maneuver High-value targets High-payoff targets Special munitions guidance Target acquisition zones Observer plan Air and missile defense positioning Task and purpose of fires	Scheme of fires Suppression of enemy air defenses Fire support coordination measures Attack guidance No strike list Restricted target list Information operations Cyberspace electromagnetic activities and electromagnetic warfare Desired enemy perception of friendly forces Initial themes and messages
Protection	Protection priorities Scheme of protection development Priorities for survivability assets Air and missile defense positioning Operations security Terrain and weather factors Intelligence focus and limitations for security Protected persons and places Anti-fratricide measures and friendly force recognition Personnel recovery Detention operations	Protection and control of civilians Vehicle and equipment safety or security constraints Environmental considerations Unexploded ordnance Acceptable risk and risk management Escalation of force and nonlethal weapons Counterintelligence Chemical, biological, radiological, nuclear, and explosives guidance Force health protection measures Cyberspace network protection measures
Sustainment	Sustainment priorities Health service support Sustainment of detention and dislocated civilian operations Controlled supply rates	Construction and provision of facilities and installations Detainee movement Anticipated requirements of Classes III, IV, and V

Table 2-2. Commander's guidance worksheet example[11]

Commander's Guidance Worksheet

Draft Mission: NLT 31 OCT 22, TF Gimlet attacks to defeat Olvanan forces on the island of Mindano IOT support the Belesian government's restoration of territorial sovereignty.

Visualization of the Operation (Draft Scheme of Maneuver w/Intent Graphics)
Type of Operation: (Offense, Defense, Stability) (Terrain or Enemy)
We are the: Main, Supporting, Decisive, Shaping
Time: 0-24, 24-48, 48-72

Intent:
Purpose: Deploy, build combat power, fight Olvanan forces and win back Belesian sovereignty. We will do this by task organizing for purpose by WFF.

Offensive Task: Seize KT

Decisive Point: Seizure of Keekee

Decisive Because: Enables TF to build/project combat power, operate off of internal lines of operations, and prepare for follow-on operations.

Key Tasks
- Rapidly Build Combat Power
- Task Organized for Purpose with Enablers/Partners Integrated
- Conduct deliberate reconnaissance to ID enemy IVO key terrain
- Employ Signature Reduction w/emphasis on Masking (visual, acoustic, thermal, electronic)
- Rapidly seize key terrain in AO
- Clear and secure routes in AO to establish GLOCs
- Win through recon, fires, sustainment, and C2

Reserve Planning:
- Follow & Support/Assume; CASEVAC; CBRN; RETRANS

Fights (By Echelon)

BCT:
- Deep Fight (Beyond PL X)
- Synchronization of Enablers (Above TF)
- Detention Ops

BN:
- Reconnaissance Fight
- Movement to Contact Synchronization
- Echelonment of TF Fires
- OBJ Isolation/Containment Plan
- Blocking Positions
- SOSRA
- MFPs
- Sustainment
- PACE Enforcement

CO:
- React to Contact
- Local SBFs
- Actions on the OBJ
- Breach
- Direct Fire Control Measures
- OBJ Containment Plan
- Local Security

Risk:
Risk to Mission (Operational Risk)
- Ability to sustain fight; (M) LOGSTAT, Speedballs, Secure GLOCs, security
- Ability to C2 fight (EW); (M) Encrypted DAGRs,
- Movement in open terrain; (M) Micro-Terrain, thermals, optics, masking

Risk to Force (Accidental Risk)
- Vehicle Accidents; (M) Slow rates of travel, licensed, marks hazards
- Hot/Cold Weather Injuries; (M) PCCs/PCIs; Class I & packing list
- Movement over Volcanic Terrain; (M) Be deliberate; Tempo vs Speed

End-State
Enemy: Olvana Forces on Mindano defeated and forced to withdraw (attrited <30% and unable to reconstitute).
Friendly: TF Gimlet has the initiative; postured for follow-on operations.
Terrain: KT seized; GLOCs secured to enable sustainment operations
Civil: Key infrastructure preserved; casualties/damage minimized; population centers protected/under control.

Table 2-3. Commander's guidance worksheet example (continued)[12]

Commander's Guidance Worksheet (continued)

Planning Guidance to Staff/WFFs

Intelligence:
Planning Priorities: Find Enemy RECON, Fires, Maneuver, C2, Obstacles
Anticipated DPs: 1. Detection of the above drives branches
Other: 1. Maintain enemy kill chart by OOB & Zone, 2. Use all sensors
Reconnaissance: Stealthy and Deliberate vs Rapid and Forceful (DP); Terrain, Obstacles, or Enemy

Movement and Maneuver:
Planning Priorities: Tempo, Concentration, Audacity, Ability to C2
Anticipated DPs: 2. Launch Recon; 3. Initiate Mvmt; 4. Commit Reserve
Other: Develop Contingencies (Loss of Comms w/RECON); Movement to Contact versus Penetration

Fires (Lethal/Non-Lethal:
Planning Priorities: 1.Win C-Fire fight, 2. Adhere to HPTL, 3. Support targeting cycle
Anticipated DPs: 5. Designate FFA
Other: Rehearse/Prioritize clearance of air/ground and counter-fire

Protection:
Planning Priorities: Mobility, Survivability, Counter-mobility
Anticipated DPs: 6. Shifting priority of support
Other: T/O engineers to support 2x AoAs; Chemical Threats = MOPP Level

Sustainment:
Planning Priorities: Anticipate support (Speedballs), Responsive support (CASEVAC/MEDEVAC - AXPs/LRPs), Establishment of CTCP, Priority is Class V, I, and III
Anticipated DPs: 7. When/Who to resupply; 8. Jump CTCP, 9. FLE establishment
Other: Address Heavy Drops

Command and Control:
Planning Priorities: C2 Node Survivability, Maintain PACE, RETRANS
Anticipated DPs: 10. Launch TAC; 11. Jump TOC
Other: Develop Contingencies (COMSEC Compromise)

CCIR:
PIR:
EEFI:
FFIR:

COA Guidance:
How many?
Brief description of each:
COA Evaluation Criteria:

Directed Rehearsals:
BN: Sustainment, Fires Tech w/Counter-Fire, CAR and 2x COMMEX
CO: React to Contact/IDF/Chemical Attack and Breach
Directed Fighting Documents: Ops Graphics (Analog/WINTAK), T/O with COMREL, SYNCMAT/EXCHECK, ICSM, FS EXMAT, DSM, Commo Card

Select Tasks, Assumptions, Constraints, Limitations, or RFIs:
- Where is the BHO with HNSF
- Understand Boundaries
- What are the OBJs?
- Understand Mindano climate

Concerns or Directed Guidance (Include Backbriefs/Timeline):
- Support and keep our higher HQs informed
- Enforce the BR
- KT to us is KT to the enemy
- Report FLOTs
- Risk Management = Awareness + Action; Increase your Awareness

The commander's guidance worksheet example provides "a way" commanders create and disseminate guidance for the staff during the MDMP. Tables 2-2/3 provide a model that enables commanders to visualize and describe the operations process to the staff and initiate planning actions. **Note.** The red text in table 2-3 indicates a decision point for a warfighting function.

The majority of commanders delegate planning to their XO and operations officer (S-3), who further delegate it to assistant staff officers. Commanders who are physically present in the future operations integrating cell (FOIC) during the MDMP have a direct and positive impact on the quality and speed of their staff's MDMP. FM 5-0, paragraphs 5-9 and 5-10 outline the value of commander involvement, and FM 5-0, figure 5-1, page 5-3, details commander and staff interaction (see figure 2-2).[13] The following are two observed vignettes from brigades training at a CTC:

Vignette 1

Commander A was only present for MDMP briefs (MA), COA development, and COA approval; and prioritized the staff's attention on current operations in the close area. This led to commander A's XO and S-3 focusing their attention on the close area and not the MDMP. Losing focus on the MDMP resulted in a single pre-command captain conducting the MDMP without support from the other staff sections. The final plan was neither suitable nor complete, and two battalions (BNs) were destroyed in the vicinity of the brigade (BDE) breach lane.

Vignette 2

Commander B was physically present for each step of the MDMP, including COA development and COA analysis. The commander and staff were able to skip MDMP briefs because all key leaders were present and continuously synchronized. The brigade produced detailed synchronization matrixes (SYNCMATs) that enabled multiple combined arms rehearsals (CARs) before execution. The brigade executed the plan effectively across all warfighting functions (WfFs) and five brigade outstations.

A commander's ability to understand, visualize, describe, and direct (UVDD) during the operations process is paramount. For example, during a CTC rotation, a brigade commander was particularly effective at visualizing the fight by speaking in plain language, across all WfFs. This brigade commander broke down the fight into distinct areas of operations (AOs), described how each WfF shaped the enemy as it passed through AOs, and gave specific planning tasks to each staff section. This led to the staff developing a simple and detailed plan that was successfully executed. Successful commanders visualize the overall fight and give specified visualization to each staff section across each AO and phase of the operation.

Commanders mentally develop and maintain a running estimate for effective visualization, planning, and guidance (see figure 2-3 for a generic base running estimate format). This assists with planning guidance and guiding the operations process.[14]

1. SITUATION AND CONSIDERATIONS.

a. Area of Interest. Identify and describe those factors of the area of interest that affect functional area considerations.

b. Characteristics of the area of operations.

(1) Terrain. State how terrain affects a functional area's capabilities.

(2) Weather. State how weather affects a functional area's capabilities.

(3) Enemy Forces. Describe enemy disposition, composition, strength, and systems within a functional area. Describe enemy capabilities and possible courses of action (COAs) and their effects on a functional area.

(4) Friendly Forces. List current functional area resources in terms of equipment, personnel, and systems. Identify additional resources available for the functional area located at higher echelon, adjacent, or other units. List those capabilities from other military and civilian partners that may be available to provide support in the functional area. Compare requirements to current capabilities and suggest solutions for satisfying discrepancies.

(5) Civilian Considerations. Describe civil considerations that may affect the functional area, including possible support needed by civil authorities from the functional area and possible interference from civil aspects.

c.Facts and Assumptions. List all facts and assumptions that affect the functional area.

2. MISSION. Show the restated mission resulting from mission analysis.

3. COURSES OF ACTION.

a. List friendly COAs that were war-gamed.

b. List enemy actions or COAs that were templated that impact the functional area.

c. List the evaluation criteria identified during COA analysis. All staffs use the same criteria.

4. ANALYSIS. Analyze each COA using the evaluation criteria from COA analysis. Review enemy actions that impact the functional area as they relate to COAs. Identify issues, risks, and deficiencies these enemy actions may create with respect to the functional area.

5. COMPARISON. Compare COAs. Rank order COAs for each key consideration. Use a decision matrix to aid the comparison process.

6. RECOMMENDATIONS AND CONCLUSIONS.

a. Recommend the most supportable COAs from the functional area perspective.

b. Prioritize and list issues, deficiencies, and risks and provide recommendations on how to mitigate them.

Figure 2-3. Generic base running estimate format[15]

Commanders should study available best practices to assist their staffs and themselves with maintaining a thorough running estimate. Commanders often fail to establish a running estimate format and running estimate update battle rhythm. Commanders should establish a preferred running estimate format during home-station MDMP training and directly tie that format to their unit's common operational picture (COP) standard. Unit fighting product formats should be established in the unit planning standard operating procedure (PSOP) and integrated for use and production during the MDMP. The use and integration of digital capabilities for planning is essential. Home-station training increases confidence in the system, builds efficiency, and makes planning efforts more agile. Post-training after action reviews (AARs) capture the systems, processes, and refined products (planning and unit fighting products) that can be codified in standard operating procedures (SOPs). In accordance with Training Circular (TC) 6-0.2, *Training the Mission Command Warfighting Function for Battalions, Brigades, And Brigade Combat*

Teams, 15 July 2019, graphic 2-4, page 2-42, it is essential that BDEs and BNs update their SOPs immediately following each staff training table and they should focus those updates on the link between the MDMP, unit fighting products, and the COP.[16] Time constraints are inherent with mission planning. Commanders' use of the rapid decision-making and synchronization process (RDSP) is a way to overcome time challenges. Staffs must train to operate in a time-constrained environment to be effective and efficient (see figure 2-4).

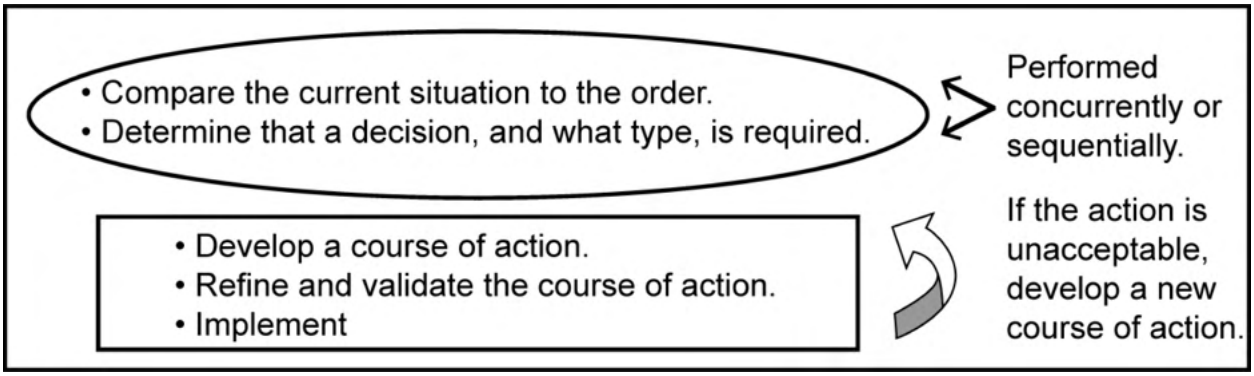

Figure 2-4. Rapid decision-making and synchronization process[17]

Commanders usually begin to leave out important pieces of guidance that would enhance efficient planning actions the longer the operation continues (because of fatigue, sleep deprivation, and compressed timelines). Successful commanders are efficient when they have a system in place, enabled by checklists and planning tools, which promote seamless processes among the staff.

Lesson/best practice. Recommend commanders employ and continuously refine the planning guidance they develop based on the formation/staff they lead and the operational environment (OE) they face. Tailoring checklists that take the heavy mental lifting out of an already fast-paced, stressful environment is critical to issuing effective initial planning guidance that triggers efficient planning actions.

Commanders, physically or virtually present, provide valuable feedback during the MDMP. This leads to a thorough, efficient, and effective planning cycle.

Leader involvement at every echelon is critical to successful planning. Coaching command sergeants major (CSMs), operations sergeants major (OPS SGMs), and even first sergeants (1SGs) to become increasingly involved in the planning process provides just as much tactical and technical wisdom as the commanders can. Having the senior noncommissioned officer (NCO) bring their experience into COA development will pay dividends toward developing a plan that sets the conditions for successful mission accomplishment.

Mid-level staff NCOs (such as staff sergeants) provide a wealth of knowledge and experience to the staff. Battle Staff Noncommissioned Officer Course graduates within the unit possess technical and tactical knowledge relevant to the missions, duties, and responsibilities assigned to battle staff members in battalion- and brigade-level units. Battle Staff Noncommissioned Officer Course provides training that is relevant to the missions, duties, and responsibilities assigned to staff NCOs. Course topics include staff foundations, mission command, MDMP, and CAR modules. The center focus is the MDMP module that has lessons grouped within the seven steps of the process.[18]

LNO TEAMS

LNO teams can enhance commanders' ability to anticipate mission orders and issue initial guidance to their subordinates to initiate planning. It is important to have well-trained, experienced Soldiers as LNOs at the HHQ.

Lesson/best practice. Brigade/battalion commanders successfully employing a liaison officer (LNO) team and having that team embedded with their HHQ enhances information sharing and planning efforts.[19] These efforts result in subordinate command teams being more successful at anticipating and initiating planning than those who are denied an LNO team or that simply choose not to employ one.

LNO teams ought to include an officer and NCO with initiative, capable of understanding the brigade COP and building relationships (if not built already) with critical members of the division or brigade headquarters and staff. Arming this team with shift-work capability (i.e., day and night) and reliable communications provides an invaluable asset to BN commanders as they anticipate what their HHQ will direct next. These team members also serve as executive assistants for BN commanders and their staff when visiting the BDE, further streamlining the time spent away from their own organization (prepping seats, notes, placards, CAR scripts, map boards and overlays, etc.).[20]

BDEs and BNs should employ, when authorized by HHQ, an LNO team with sufficient means to communicate back, at their HHQ. The appropriate personnel for this team may hurt the organization's internal planning capability but pays dividends when the operating environment becomes actual combat operations. Another effort relates to equipping the LNO team. The LNO team must be self-sustaining and possess the bare minimum communications platforms to communicate to the command teams on upcoming operations or potential friction points. At a minimum, the LNO team must have access to a vehicle and communications platforms.[21]

CONCLUSION

Commanders must train staffs on the MDMP. All the best practices and lessons are a moot point if not integrated and applied during focused and challenging training regimens. Training builds commander-and-staff cohesion, instills confidence, and assists commanders with recognizing which staff sections need more guidance. Appendix A provides staff training guidance and assistance.

Remember, commanders drive the operations process and focus planning—period.[22]

ENDNOTES

1. Center for Army Lessons Learned (CALL) 20-16, *Defense of the Cajun Bayou, The Joint Readiness Training Center Operations Group*, April 2020, page 13.

2. Army Doctrine Publication (ADP) 5-0, *The Operations Process*, 31 July 2019, pages 1-8 and 2-22.

3. FM 5-0, *Planning and Orders Production*, 4 November 2022, page 1-16, paragraph 1-75.

4. Ibid, paragraph 1-76.

5. Ibid, page 1-17.

6. Ibid, page 5-3, figure 5-1.

7. Ibid, page 5-59, paragraph 5-221.

8. Ibid, page 5-60, paragraph 5-222.

9. Ibid, paragraph 5-9, page 5-2.

10. Ibid, table 5-3, page 5-22.

11. Commander's guidance worksheet example provided by the Scorpion Team, Operations Group, National Training Center (NTC), Fort Irwin, CA, December 2022.

12. Ibid.

13. FM 5-0, page 5-3, figure 5-1.

14. Ibid, appendix C, paragraph C-4, page C-1.

15. FM 5-0, figure C-1, page C-2.

16. TC 6-0.2, graphic 2-4, page 2-42 crosswalks the inputs, tasks, and outputs for tables I through V for the brigade staff. Each staff section refines the inputs and outputs in their section SOP.

17. ADP 5-0, figure 4-3, page 4-9.

18. FM 6-0, *Commander and Staff Organization and Operations*, 16 May 2022, chapter 3, pages 3-1 to 3-12.

19. Information regarding the U.S. Army Battle Staff Noncommissioned Officer Course was retrieved from https://www.ncoworldwide.army.mil/Academics/Battle-Staff/. The other NCO courses are found at https://www.ncoworldwide.army.mil/.

20. Ibid, page 3-3.

21. Ibid, pages 3-3 to 3-10.

22. ADP 5-0, pages 1-8 and 2-22.

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CHAPTER 3

The Staff's Role in the Military Decision-Making Process: Challenges, Best Practices, and Lessons Learned

"First on Gator since I visited them earlier, you should be tracking that Gator had not been able to take their objectives on their own. We are pushing some of the Razorbacks up there as well as more sappers from Nutria. Let me know what that means. We can't wait on this."

Cajun 5 scribbled notes down, squeezed the hand mike, "Roger, sir." He thought, "I hope the staff has relooked the planning assumptions again."

And so, they had.[1]

CHALLENGES

Staffs have challenges conducting the MDMP. Most staffs lack MDMP repetitions during home-station training, which leads to staff challenges during a combat training center (CTC) rotation. Lack of repetitions degrades proficiency over time. CTC observations reinforce the fact that staffs are not fully proficient in their duties, responsibilities, and key outputs during each step of the MDMP. Lack of training causes staffs to trudge through the MDMP rather than focusing on generating and refining the unit's fighting products that are synchronized with the other staff sections. Staffs are constantly expending effort on products and running estimates that will not inform decisions or translate into unit actions.

Staffs, specifically executive officers (XOs) and operations officers (S-3s), understand they must manage the staffs' time, but fail because they focus on MDMP briefs rather than producing fighting products. Effective staffs have XOs who effectively manage time and keep the staff in sync. The following two vignettes highlight these differences:

Vignette 1

XO A gives guidance to the staff about mission analysis (MA). "Team, it is now 0900. We'll do the MA brief at 1800, so get your slides to the assistant S-3 (AS3) no later than (NLT) 1700. Remember that we have a targeting working group at 1300."

In this example, the staff presents an incomplete MA brief with no analysis completed between warfighting functions (WfFs). The staff lacks clear, concise direction to drive the process. The timeline is broad and lacks specificity. Running estimates may or may not be updated. Planning and battle rhythm events conflict. The staff lacks collaboration/ synchronization.

Vignette 2

XO B gives specified tasks to the staff about MA. "Team, it is now 0900. You have one hour to read the division annex B and update your running estimates in our standard format. At 1000, we'll convene for reverse WfF analysis so come prepared to brief how you see the enemy fighting. From 1030-1200, everyone will help the S-2 draft an enemy courses of action. You'll have 1200-1300 to update your running estimates in preparation for 1300 information collection synchronization build. Please delegate the 1300 targeting working group to one of your assistants or noncommissioned officers (NCOs) and have them report back to the plans section at 1500 to receive the outputs of our information collection synchronization planning. Anticipate a 1600 MA brief rehearsal and 1800 MA brief."

In this example, the staff is fully synchronized during the process and generates important details throughout. The commander is physically present throughout and confident in the staffs' outputs. The commander specifies a condensed MA brief targeted solely at the subordinate battalion commanders and briefed off the MA products rather than a standalone slide deck.

Quality unit fighting product output should be the goal during the MDMP (see the introduction). Untrained staffs tend to conduct the MDMP with an operation order (OPORD) as the end state and not effectively conduct problem solving and determine solutions that lead to better operational outcomes. Most importantly, the staff's efforts assist the commander in making timely and informed tactical decisions—hence the name "military *decision-making* process."

CTC observer coach/trainers (OC/Ts) note that most staffs conduct the MDMP focused on making it to the next MDMP brief. To combat this tendency, commanders should focus the staff on producing unit fighting products that are deliberately built during each step of the MDMP. These products should sync with each other and support a suitable, feasible, acceptable, and complete plan. The unit fighting products must create a complete unit common operational picture (COP) that enables commanders to make decisions on whether to issue fragmentary orders (FRAGORDs) or conduct the rapid decision-making and synchronization process (RDSP) to issue adjustment orders.

BEST PRACTICES

CTCs observed the following best practices that, when applied, improved MDMP execution and effectiveness:

- Commanders provide clear guidance to their staff section leaders on their duties and responsibilities during home-station training or when attached to the headquarters.

- Commanders are physically present and directly involved in each step of the MDMP.
- Staffs read, follow, and update their critical standard operating procedures (SOPs) (planning, command post [CP], and tactical command post [TAC]) during and immediately after planning and field training exercises.
- Staffs conduct deliberate individual and collective training at home station starting NLT 180 days before deployment.
- Staffs do not skip steps of the MDMP, and instead they ensure the key unit fighting products are generated during each step to enable the next step of the MDMP. Planning is not complete until unit fighting products are sufficient to enable quality rehearsals.
- Units read and understand the most current Center for Army Lessons Learned (CALL) CTC Trends publication for observations and best practices.

LESSONS LEARNED

The following are lessons for staffs conducting the MDMP:

Staffs adhere to the MDMP. The primary steps and substeps of the process ensure effective planning. Unit fighting products and a solid OPORD are by-products of an effective MDMP.

> **Lesson/best practice.** CTCs observe units delaying issue of an OPORD to generate a "better product" which, in turn, degrades subordinate unit planning time. OC/Ts recommend commanders and staffs adhere to strict planning timelines and establish/enforce priorities of work to ensure MDMP efforts align for production of required planning outputs.

Having the right information, gathering the right tools and the right staff, and receiving proper guidance enables effective and efficient MDMP execution. Consider the following during the MDMP:

- **Expect the unexpected.** Challenges occur during problem-solving endeavors such as the MDMP. Expect challenges and work solutions quickly, but thoroughly as possible.
- **Complicated versus complex tasks.**[2] Time is the enemy. Delegate complicated tasks (those tasks easily solved through experience and capability) to subordinate staff members so maximum time and energy is spent on complex tasks (those that require intensive, experienced handling).
- **Timelines are crucial.** Adhering to the timeline is as crucial as staying on course. Understanding challenges arise and managing/delegating tasks assists with staying "on time."

You should understand where you are at (status/COP), where you are going (objective or defensive position), how you plan to get there (maneuver or defense concept), what obstacles are known or perceived (terrain, weather, required assets, capabilities, or personnel), and what options should be planned (refuels-on-the-move [ROMs], sustainment, transitions, or decisions). Finally, at the appropriate juncture in an operation, prepare for follow-on orders and missions.

Communication is vital to conducting the MDMP. Commanders' planning guidance at the outset of an anticipated or received mission is the trigger for MDMP execution. Staffs must "communicate" internally and externally. Staffs must update the current status (running estimates from all WfFs);

develop and submit requests for information (RFIs) to higher headquarters (HHQ) to clarify tasks; develop and request assets, capabilities, or personnel; issue warning orders (WARNORDs) to maneuver units; collaborate within the staff and with adjacent units; communicate timeline adjustments; and maintain communication with the commander to ensure guidance is still within intent. Additionally, staffs need to confirm/deny any planning assumptions. Questions to ask:

- What is next?
- Who needs to know?
- What do we need to know?
- What do we have and what do we need?
- How are we on time?
- Who can assist within the staff? Who can assist outside the staff?

Disconnect from distractions and use your people. Distractions can divert focus from more critical items or tasks. Do everything possible to minimize distractions from every source. Use all members of the staff, including NCOs and Soldiers to assist with managing and completing tasks.

Prepare, plan, and practice. Executing the MDMP requires focused staff effort. Understand there may be guidance adjustments, lost time, and challenges that arise. Each planning iteration is a chance to hone planning skills and improve. Remember the following:

- **Prepare.** Understanding the MDMP steps and substeps helps achieve efficiency and effectiveness in planning evolutions. Doctrine and CALL products (informed by observations and lessons from CTC rotations and real-world operations) help staffs prepare for MDMP's labor-intensive actions. Getting comfortable with the process will help increase staff proficiency and efficiency, which will also help decrease and manage stress.
- **Plan.** During the MDMP, it is crucial that staffs understand how the commander visualizes the operation (see the fight unfold). Staffs are able to build an effective task organization; develop a clear, concise maneuver plan; understand decision points and transitions and within this plan, and understand how the enemy may adapt throughout the operation.
- **Practice.** War gaming assists staffs with meeting commanders' visualization, intent, and end state. War-gaming courses of action (COAs) confirms or denies unit fighting products to ensure successful mission accomplishment. War gaming assists with developing a clear and succinct OPORD for subordinate units.

Staffs should be proficient in executing the MDMP to effectively minimize planning challenges and apply lessons and best practices to enhance efficient planning capabilities, develop planning effectiveness, and support successful mission management.

Note. MDMP steps, substeps, briefings, and products are located in Army Techniques Publication (ATP) 5-0.2-1, *Staff Reference Guide, Volume I, Unclassified Resource*s, 7 December 2020. See table 3-1.[3]

Table 3-1. Steps of the MDMP[4]

	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7
	Mission Receipt	**Mission Analysis**	**COA Development**	**COA Analysis**	**COA Comparison**	**COA Approval**	**Orders Production, Dissemination, Transition**
Sub-steps	1. Alert staff 2. Gather tools 3. Update running estimates 4. Conduct initial assessment 5. Prepare CDR's initial guidance 6. Prepare initial WARNORD	1. Analyze higher headquarters' plan or order 2. Perform initial IPB 2.1. Define the battlefield 2.2. Describe the battlefield's effects 2.3. Evaluate the threat 2.4. Develop threat COAs 3. Specified, implied, and essential tasks 4. Review available assets and ID shortfalls 5. Determine constraints 6. Identify critical facts and assumptions 7. Begin risk management 8. Develop initial CCIRs and EEFIs 9. Develop initial information collection plan 10. Update plan for use of available time 11. Develop proposed problem statement 12. Develop proposed mission statement 13. Present a mission analysis briefing 14. Develop and issue initial CDR's intent 15. Develop and issue initial planning guidance 16. Develop COA evaluation criteria 17. Issue warning order #2	1. Assess situation 1.1. Begin sketch 1.2. Evaluate combat power/effect 2. Generate options 2.1. Determine focus (ENY or terrain) 2.2. Determine decisive operation 2.3. Determine shaping operations 2.4. Determine sustainment feasibility 2.5. Determine form of maneuver 2.6. Add graphic control measures 3. Array forces 3.1. Refine combat power for each action 3.2. Allocate combat power to decisive operation 3.3. Assign forces to other efforts 3.4. Refine sequence and phase as required 3.5. Determine sustainment actions 3.6. Add graphic control measures 4. Refine concept 4.1. Determine scheme of intelligence 4.2. Determine scheme of fire 4.3. Determine scheme of protection 4.4. Determine scheme of MC 4.5. Add graphic control measures 4.6. ID potential decision points 5. Assign headquarters 6. Prepare sketch and create statement 6.1 Make sketch presentable 6.2 Prepare statement 7. Conduct COA briefing 8. Select or modify COAs for analysis	1. Provide COA analysis guidance 2. Gather tools 3. Execution 4. COA analysis brief (optional)	1. Conduct advantages and disadvantages analysis 2. Compare COAs 3. Develop COA decision brief	1. Commander approves a COA 2. Commander issues the final planning guidance	1. Complete the plan 2. Develop the order 3. Ensure understanding 4. Transition to preparation OPORD format **1. SITUATION** a. Area of interest b. Area of operations c. Enemy forces d. Friendly forces e. Civil considerations f. Attachments and detachments g. Assumptions **2. MISSION** **3. EXECUTION** a. CDR's intent b. Concept of operations c. Scheme of maneuver d. Scheme of intelligence e. Scheme of fires f. Scheme of protection g. Task to subordinate units h. Coordinating instructions **4. SUSTAINMENT** a. Logistics b. Personnel c. Health service support **COMMAND and SIGNAL** a. Command b. Control c. Signal

Table 3-1. Steps of the MDMP (continued)

	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7
	Mission Receipt	Mission analysis	COA Development	COA Analysis	COA Comparison	COA Approval	Orders Production, Dissemination, Transition
Briefing		1. Introduction agenda 2. Mission intent, HQ 2-levels up 3. Mission, CDR's intent, concept of Operation of HQ 1-level up 4. Review of CDR's initial guidance 5. Initial IPB 6. Specified, implied, essential tasks 7. Pertinent facts assumptions 8. Constraints 9. Forces available and resource shortfalls 10. Proposed problem statement 11. Proposed mission statement 12. Proposed CDR's intent or issuance 13. Proposed CCIRs EEFIs 14. Initial information collection plan 15. Initial risk to mission assessment 16. Review evaluation criteria 17. Issue commander's planning guidance 18. Timeline review	1. Introduction, agenda 2. Updated IPB, facts, assumptions 3. Staff responses to CDR's RFIs 4. Quick Review of- - Approved problem statement - Mission statement - CDR's higher CDR's intent - Threat COA - Results from combat power analysis 5. For each COA statement sketch - Task organization - Concept of operations - Scheme of maneuver - Concept of intelligence - Concept of fires - Concept of protection - Concept of sustainment - Concept of command control, - Risk 6. Refined COA evaluation criteria 7. CDR's comments, decision, guidance	1 Introduction and agenda 2. Updated IPB, facts, assumptions 3. Quick review of- - Approved problem statement - Mission statement - CDR's higher CDR's intent - Threat COA(s) used for analysis - War-game technique (if used) 4. For each friendly COA analyzed: - Assumptions used - Quick review of concept of operation - COA analysis results - Modifications made 5. CDR's comments guidance	1. Updated IPB, facts, assumptions 2. Staff responses to CDR's RFIs 3. Quick review of- - Approved problem statement - Mission statement - CDR's higher CDR's intent - Threat COA(s) used for analysis 4. Friendly COAs analyzed - Assumptions used - Quick review of the concept of operations - COA analysis results - Modifications made to friendly COA - Evaluation criteria results 5. COA comparison with recommended staff COA		ANNEXES A-Task organization B-Intelligence C-Operations D-Fires E-Protection F-Sustainment G-Engineer H-Signal I-Not used J-Public affairs K-Civil affairs L-Information collection M-Assessment N-Space operations O-Not used P-Host-nation support Q-Knowledge management R-Reports S-Special technical operations T-Spare U-Inspector general V-Interagency coordination
Products	1.Initial planning guidance 2. Initial allocation of time 3.Warning order #1	1. Approved problem and mission statement 2. Initial CDR's intent 3. CDR's planning guidance 4. Current IPB products 5. Initial information collection plan 6. Initial CCIRs and EEFIs 7. Specified, implied, essential tasks 8. Facts, assumptions, constraints 9. Updated timeline 10. Identification: resource shortfalls 11. COA evaluation criteria 12. Warning order #2	1. CDR's selected COA(s) with COA statement sketch 2. CDR's refined planning guidance 3. Updated running estimates and IPB 4. Updated assumptions	1. Refined COA(s) 2. Draft DST DSM 3. COA synchronization matrix or set of sketch notes 4. Refined task organization 5. Potential branches and sequels 6. Updated running estimates and IPB 7. Updated assumptions	1. Staff recommended COA 2. Cost and benefits between COAs 3. COA selection rationale 4.Updated running estimates and IPB 5.Updated assumptions	1. Approved COA with any modifications 2. Commander's final planning guidance 3. Refined CDR intent, CCIRs, EEFIs 4. Warning order #3	

ENDNOTES

1. Center for Army Lessons Learned (CALL) 20-16, *Defense of the Cajun Bayou, The Joint Readiness Training Center Operations Group*, April 2020, page 13.

2. Benjamin, David; and David Komlos. "How to Tell if a Problem is Complex or Merely Complicated." Fast Company, 7 May 2019, https://www.fastcompany.com/90344944/complex-vs-complicated-problems.

3. ATP 5-0.2-1, *Staff Reference Guide, Volume I, Unclassified Resources*, 7 December 2020, table 2-1, Steps of the MDMP, chapter 2, page 16.

4. Ibid.

CHAPTER 4

The Military Decision-Making Process: Step 1. Receipt of Mission[1]

Cajun 5 took the receipt-of-mission brief at 1900 hours.

Cajun 3 briefed the new mission, key tasks, and the no later than (NLT) defend time, which was based on the assistant chief of staff (COS) for intelligence's (J-2's) best estimate on when the enemy would commit the main attack. Cajun 2 covered the updated joint task force (JTF) and brigade combat team (BCT) enemy situations.

Cajun 5 reviewed the planning timeline and set the mission analysis (MA) brief at 2200 hours with an emphasis on maximizing the time for the battalions (BNs) to conduct their own planning and engagement area (EA) development.[2]

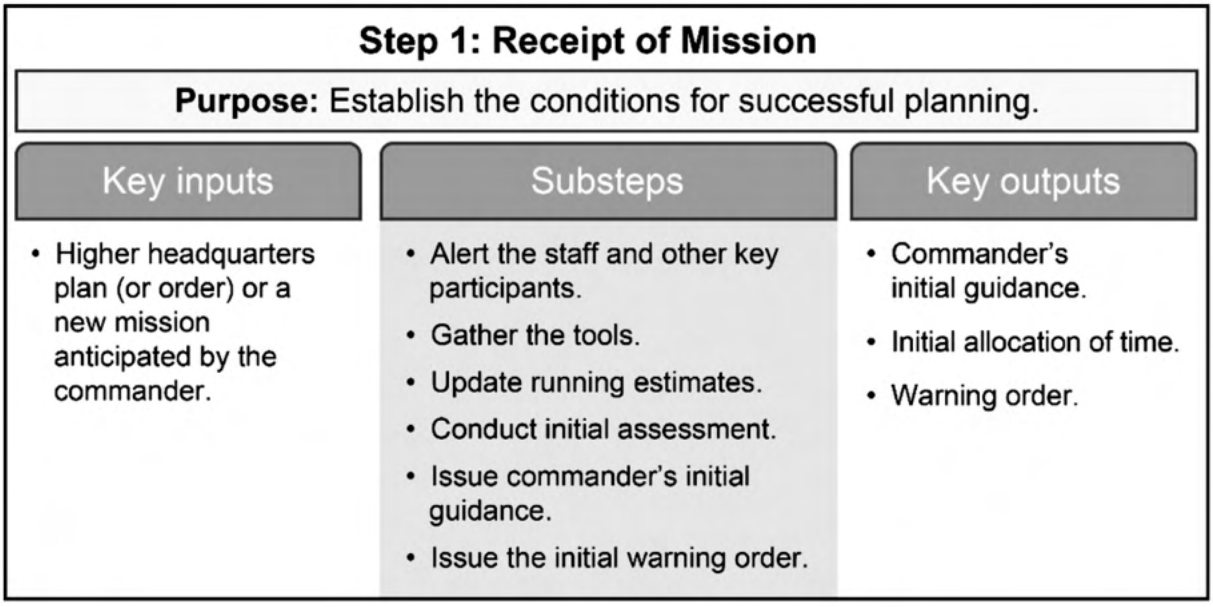

Figure 4-1. Step 1. Receipt of mission[3]

"The MDMP begins upon receipt of a mission from higher echelon headquarters or in anticipation of a new mission. Commanders often initiate a planning effort based on their visualization and changes to the situation without a formal directive from their higher headquarters (HHQ). Even with a higher headquarters' directive, commanders and staffs often begin the MDMP in the absence of a complete higher echelon operation plan (OPLAN) or operation order (OPORD). In these instances, they start planning based on a warning order (WARNORD), a planning order, or an alert order from HHQ. This requires active collaboration with the HHQ and parallel planning among echelons as the plan or order is developed."[4]

"The purpose of this step is to establish conditions for successful planning. This step focuses on alerting the staff, forming the planning team, assessing available time for planning, and deciding on a planning approach." Figure 4-1 lists the key inputs, substeps, and key outputs for receipt of mission.[5]

Lesson/best practice. Determining the time available to plan and prepare is critical when the mission is received. Quickly identifying when a higher unit expects to start and end the operation, and quickly identifying the earliest time of movement are time factors to consider.

Note. "While step 1 (receipt of mission) and step 2 (MA) are listed as two distinct steps of the MDMP, staff members need not wait until all activities of receipt of mission are complete before starting activities associated with MA. Initiating intelligence preparation of the battlefield (IPB), for example, should begin as early as possible."[6]

Step 1 (receipt of mission) has the following six substeps (see figure 4-1):[7]

- Alert the staff and other key participants.
- Gather the tools.
- Update running estimates.
- Conduct initial assessment.
- Issue commander's initial guidance.
- Issue the initial WARNORD.

Receipt of mission. The initial order sets the foundation for operations; therefore, a clear understanding of the higher commander's intent, key tasks, and endstate, is vital.

Receipt of mission (for an OPORD) should be in-person at higher headquarters. Onset of operations requires adjustments for sending and receiving orders. Digital capabilities allow for orders to be sent and received without being physically present. However, situations may occur that require commanders (and other staff) to be physically present. For example, if it is important for a commander to be present, transportation will be resourced (such as rotary wing to support rapid movement to and from higher headquarters). Commanders and their staff must account for challenges presented on today's (and future) battlefields.

The 21st-century battlefield presents challenges to commanders and staffs because of potential degradation of communication capabilities (via electronic means) or use of dispersed command and control (C2) nodes by the force (disaggregate C2). Units must address this in their planning standard operating procedures (SOPs) and have established processes (essentially, a primary, alternate, contingency, and emergency [PACE] plan) for how they achieve this.

Commanders determine who attends the higher headquarters OPORD brief. At minimum, the fire support officer (FSO) should attend with the commander. However, if operational and/or intelligence questions or concerns are apparent, the commander should have the operations (S-3) and intelligence (S-2) officers attend.

Concurrent staff planning efforts. Presumptive/assumptive commander's guidance and initial planning efforts are active. Higher headquarters WARNORDs provide planning clarity and support early subordinate parallel planning actions. This includes setting conditions for reconnaissance, sustainment, targeting, etc. It also includes early movement of forces. Refinement of presumptive/assumptive assertions is a continuous process. Requests for information (RFIs) and higher WARNORDs assist with clarification and/or confirmation/denial of initial planning presumptions/assumptions. This process tightens the planning process and assists with building solid unit fighting products as well as a more succinct operations order.

Post-OPORD commander's guidance. Commanders provide clearer initial guidance via radio or digital means to their unit before departing higher headquarters. It must be stressed that this is initial guidance. The commander's guidance may clarify presumptive planning assumptions such as the unit's actual mission, provide a clearer picture of movement times, provide guidance regarding which units are attached (to begin coordination), and provide guidance for mission analysis. Commanders will continue to refine their guidance as they think about the mission and as the staff executes the MDMP.

ALERT THE STAFF AND OTHER KEY PARTICIPANTS

The staff is alerted and begins necessary preparation when the unit receives a new mission, or when a planning requirement is identified. There are times when the staff will need to alert the commander to an order. When alerted, staffs often conduct a backbrief to share understanding and enable the commander to develop a visualization quickly.[8]

Planning standard operating procedures (PSOPs) establish clear notification procedures and identify standard planning teams. Planning teams must contain the appropriate staff warfighting function (WfF) representatives and additional staff members needed for expertise supporting planning efforts.[9]

GATHER THE TOOLS

Once notified of the new planning requirement, the staff prepares for MA by gathering the planning tools. These tools include, but are not limited to the following:[10]

- Documents related to the mission and area of operations (AO), including the higher headquarters' plans and orders, maps and terrain products, and operational graphics.
- Higher headquarters' and other organizations' intelligence and assessment products.
- Estimates and products of other military and civilian agencies and organizations.
- The unit's and higher headquarters' SOPs which at a minimum includes the PSOP.
- Current running estimates.
- Army design methodology (ADM) products, including products describing the operational environment (OE), problem, and operational approach (if applicable).
- Appropriate doctrinal or Center for Army Lessons Learned (CALL) publications.

UPDATE RUNNING ESTIMATES

"Running estimates assist commanders and staffs with understanding situations, assessing progress, and making effective decisions throughout an operation. Effective plans and successful executions hinge on current and accurate running estimates with relevant information."[11]

Each staff section maintains a running estimate within its specified area of expertise (for example, intelligence, fires, logistics, or personnel). When building and maintaining a running estimate, staff sections monitor current operations, and they continuously consider the following in context of the operations:[12]

- Facts.
- Assumptions.
- Friendly force status, including location, activity, and combat power of subordinate units from two echelons down.
- Friendly force capabilities.
- Enemy activities and capabilities.
- Civil considerations.
- Conclusions and recommendations with associated risk.

"Running estimates cover essential facts and assumptions, including a summary of the current situation. Running estimates always include recommendations for anticipated decisions. During planning, running estimates use these recommendations to select valid (meaning feasible, acceptable, suitable, complete, and distinguishable) courses of action (COAs) for further analysis. During preparation and execution, commanders use recommendations from running estimates to inform their decision making."[13]

"Because a commander may need a running estimate at any time, staffs must develop, update, and continuously revise running estimates. … Staff elements immediately begin updating their running estimates upon receipt of a mission. They continue to build and maintain their running estimates throughout the operations process of planning, preparation, execution, and assessment."[14]

Lesson/best practice. Staff WfF running estimate design should be specified in unit PSOPs and command post standard operating procedures (CPSOPs) to directly tie estimates to specific unit fighting products and battle rhythm events.

CONDUCT INITIAL ASSESSMENT

This initial assessment helps commanders determine—[15]

- Time available from mission receipt to mission execution.
- The time needed to plan and prepare for the mission for both headquarters and subordinate units.
- The staff's experience, cohesiveness, and level of rest or stress.
- Guidance on a planning approach including conducting ADM, abbreviating the MDMP, or using the rapid decision-making and synchronization process (RDSP).
- Planning team composition.
- Time required to position critical elements, including C2 nodes for upcoming operations.
- Which outside agencies and organizations to contact and incorporate into the planning process.
- Other preparations the commander, staff, or subordinate units need to conduct before beginning planning.

Lesson/best practice. Time management: Managing time against detailed planning efforts is critical.[16] Observer coach/trainers (OC/Ts) recommend commanders provide initial guidance to subordinate units as soon as possible so they can begin movement and planning efforts. Commanders and staffs create an initial timeline that is adjustable as they gain a better understanding of time available during planning.

The HOPES-W (higher headquarters, operational, planning, enemy, subordinate, and weather) technique includes timelines, which assist with keeping the formation synchronized across every echelon.

The brigade (BDE)/battalion (BN) executive officer (XO) must keep the unit honest by setting and maintaining a comprehensive and achievable timeline. The timeline should not go on a whiteboard where only a few people will view it. Incorporate the HOPES-W timeline into your planning drill. Keep the formation informed and synchronized.

Each HOPES-W timeline identifies several key events. By holistically evaluating unit planning timelines with key events identified in a HOPES-W format, units can synchronize their planning timelines with the key events. HOPES-W also ensures a plan is developed in sufficient time before execution.[17]

Table 4-1 provides a guideline for MDMP planning timelines.

Table 4-1. Rule of thumb for the MDMP timelines[18]

The MDMP step	*Overall time allocation*	*Refined time allocation*
Receipt of mission	50%	30-35%
Mission analysis		
COA development		15-20%
COA analysis	50%	30-35%
COA comparison		
COA approval		
Orders production		15-20%

ISSUE COMMANDER'S INITIAL PLANNING GUIDANCE

Although brief, the initial guidance includes—[19]

- Initial time allocations.
- Guidance on the planning approach (initiate ADM, conduct the full MDMP, abbreviate the MDMP, or conduct RDSP).
- Necessary coordination to perform, including liaison officers (LNOs) to exchange.
- Authorized movements to initiate.
- Information collection (IC) guidance, including reconnaissance and surveillance instructions.
- Initial information requirements (IRs).
- Additional staff tasks.

ISSUE THE INITIAL WARNING ORDER

- The last task in receipt of mission is to issue a WARNORD to subordinate and supporting units. This order includes as much relevant information as the staff knows. At a minimum it includes the type of operation, the general location of the operation, the initial timeline, and any movement or IC to initiate (see Field Manual [FM] 5-0, *Planning and Orders Production*, 4 November 2022, appendix D, page D-22, for the WARNORD format). This WARNORD generally contains—[20]
- The type of operation.
- The general location of the operation.
- The initial operational timeline.
- Any movements necessary to initiate.
- Any collaborative planning sessions directed by the commander.
- Initial IRs or commander's critical information requirements (CCIRs).
- Initial IC tasks.

The staff published and disseminated their initial estimates in WARNORD (1). Within 15 minutes, each BN acknowledged receipt of the WARNORD.[21]

ENDNOTES

1. FM 5-0, pages 5-4 to 5-8.

2. CALL 20-16, *Defense of the Cajun Bayou, The Joint Readiness Training Center Operations Group*, April 2020, pages 13 and 14.

3. FM 5-0, page 5-4.

4. Ibid, paragraph 5-14.

5. Ibid, 5-15.

6. Ibid, page 5-5.

7. Ibid, pages 5-5 to 5-8.

8. Ibid, page 5-5, paragraph 5-16.

9. Ibid.

10. Ibid, paragraph 5-17.

11. Ibid, page C-1, paragraph C-1.

12. Ibid, paragraph C-2.

13. Ibid. paragraph C-3.

14. Ibid, paragraph C-5.

15. Ibid, page 5-6, paragraph 5-20.

16. Ibid.

17. Army Techniques Publication (ATP) 5-0.2-1, *Staff Reference Guide, Volume I, Unclassified Resources*, 7 December 2020, chapter 2, page 19. This reference uses the acronym HOPE(L); however, it is the same as HOPES-W.

18. Ibid.

19. FM 5-0, page 5-7, paragraph 5-27.

20. Ibid, page 5-8.

21. CALL 20-16, page 14.

CHAPTER 5

The Military Decision-Making Process: Step 2. Mission Analysis[1]

Immediately following the warning order (WARNORD) publication, the staff began working on mission analysis (MA), following the substeps outlined in Field Manual (FM) 5-0.

It had seemed cumbersome when they first used the checklists, but by now, the staff was used to the process and had worked a few shortcuts into their planning standard operating procedure (PSOP). Key to the process had been getting the staff to execute intelligence preparation of the battlefield (IPB) as a staff integrating process.[2]

"The military decision-making process (MDMP) continues with an assessment of the situation called mission analysis. The commander and staff conduct MA to better understand the situation and problem, and identify what the command must accomplish, *when* and *where* it must be done, and most importantly *why*—the purpose of the operation. Based on this understanding, commanders issue their initial commander's intent and planning guidance to guide the staff in course of action (COA) development."[3] Figure 5-1 lists the key inputs, activities, and key outputs for this step.

Lesson/best practice. A successful MA (and later, operation order [OPORD] should answer the following questions to instill understanding in your audience:

- Where and when am I fighting?
- What is the nature of the enemy I am fighting?
- What am I being told to do?
- What am I being given to do it?
- What is my higher headquarters (HHQ) doing for me?
- What are adjacent units doing and how does it fit together in the plan?
- What must I do, or I cannot do (constraints)?

Step 2: Mission Analysis		
Purpose: Enhances commander's understanding to develop intent and COA development guidance.		
Key inputs	**Substeps**	**Key outputs**
• Commander's initial guidance. • Higher headquarters' plan or order. • Higher headquarters' intelligence and knowledge products. • Knowledge products from other organizations. • Running estimates. • ADM products (if applicable).	• Analyze the higher headquarters' plan or order. • Perform the initial IPB. • Determine specified, implied, and essential tasks. • Review available assets and identify resource startfalls. • Determine constraints. • Identify facts and develop assumptions. • Begin risk assessment and management. • Develop initial CCIRs and EEFIs. • Develop the initial information collection plan. • Update planning timeline. • Develop a proposed problem statement. • Develop a proposed mission statement. • Develop and issue initial commander's intent. • Present the mission analysis briefing. • Develop COA evaluation criteria. • Develop warning order. • Develop and issue planning guidance. • Issue a warning order.	• Updated IPB and running estimates. • Problem statement. • Mission statement. • Initial commander's intent. • Initial CCIRs and EEFIs. • Initial planning guidance. • Initial commander's intent. • Assumptions. • Evaluation criteria for COAs.

ADM	Army design methodology
CCIR	commander's critical information requirement
COA	course of action
EEFI	essential element of friendly information
IPB	intelligence preparation of the battlefield

Figure 5-1. Mission analysis[4]

ANALYZE THE HIGHER HEADQUARTERS' PLAN OR ORDER

Lesson/best practice. There are many outputs from mission analysis—the most important being the commander's COA guidance. Mission analysis' purpose is to give commanders understanding so they can visualize the fight (the problem) and then describe a method to address it with effective COA development guidance.

Commanders must provide clear, concise guidance at the start of MA to answer specific "gaps of understanding or information" pertaining to the mission and tasks given in the HHQ order. Clear, concise commander's guidance will focus the efforts of each staff section, therefore providing commander's valuable information that supports initial commander's intent, commander's critical information requirements (CCIRs) and essential elements of friendly information (EEFIs), and planning guidance.

Commanders and staffs thoroughly analyze the higher headquarters' plan or order. They determine how their unit—by task and purpose—contributes to the mission, commander's intent, and concept of operations of the HHQ. The commander and staff seek to completely understand—[5]

- The commander's intent and mission of the higher headquarters' two echelons above the unit.
- The higher headquarters'—
  - Commander's intent.
  - Mission.
  - Concept of operations.
  - Available assets.
  - Timeline.
- Their assigned area of operations (AO).
- The missions of adjacent, supporting, and supported units and their relationships to the higher headquarters' plan.
- The missions or goals of unified action partners who work in the operational areas.

Commanders ensure their concept of operations is nested with their HHQ by developing a nesting diagram (see figure 5-2). Nesting diagrams assist staffs with visualizing the horizontal and vertical relationships of units within the higher echelon commander's concept. A nesting diagram provides a snapshot of the relationship of shaping operations to the decisive operation. The staff may choose to use this technique as a possible way to help analyze the higher headquarters' order and understand its mission, the commander's intent, and concept of operations.[6]

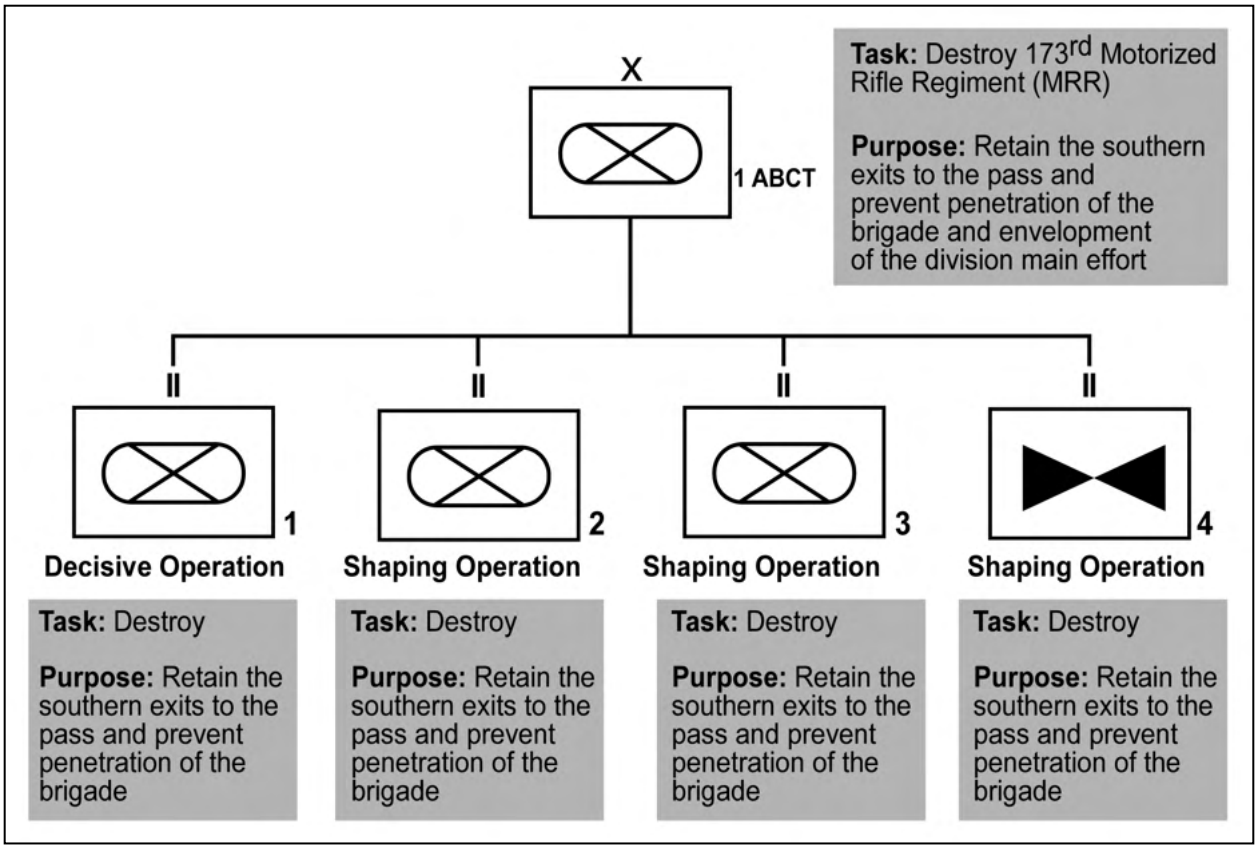

Figure 5-2. Example nesting diagram[7]

PERFORM INITIAL INTELLIGENCE PREPARATION OF THE BATTLEFIELD

IPB is the systematic process of analyzing the mission variables of enemy, terrain, weather, civil considerations, and informational considerations in each of the other factors, in an area of interest (AOI) to determine their effect on operations (Army Techniques Publication [ATP] 2-01.3, Change One, *Intelligence Preparation of the Battlefield*, 6 January 2021). The IPB process provides numerous outputs used throughout the MDMP and consists of four steps[8] (see figure 5-3, which shows the IPB and the MDMP steps):

- Define the operational environment (OE).
- Describe environmental effects on operations.
- Evaluate the threat.
- Determine threat COAs.

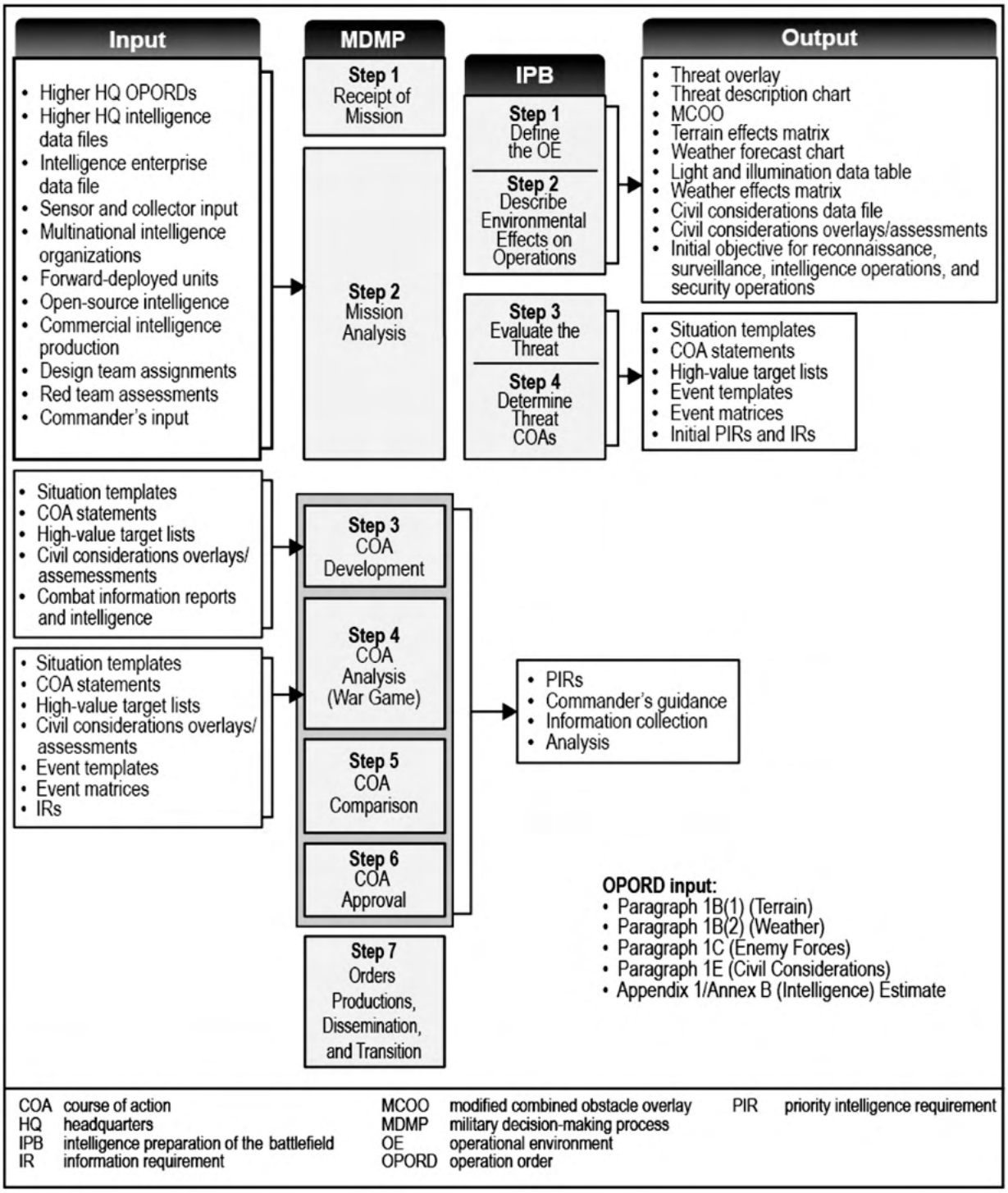

Figure 5-3. IPB and the MDMP steps[9]

"IPB is a collaborative staff effort led by the S-2 and the intelligence staff. IPB products developed and continuously updated facilitate situational understanding and assist commanders and staffs in identifying relevant aspects within the AO and AOI that can affect mission accomplishment."[10]

Each step of the IPB process consists of several principal judgment decisions and evaluations that together form the basic *how to* of IPB. Table 5-1 outlines the *how to* of IPB as a checklist for the S-2 (and all staff sections/warfighting functions [WfFs]).[11]

Table 5-1. Intelligence staff officer IPB checklist[12]

Step 1—Define the operational environment
☐ Identify the limits of the commander's area of operations ☐ Generally identified by higher headquarters
☐ Identify the limits of the commander's area of interest: ☐ S-2 recommends any changes ☐ Commander approves/disapproves ☐ higher headquarters approves/disapproves
☐ Identify significant characteristics within the area of operations and area of interest for further analysis: ☐ Enemy ☐ Terrain ☐ Weather ☐ Civil considerations
☐ Evaluate current operations and intelligence holdings to determine additional information needed to complete IPB: ☐ Staff identifies information gaps ☐ Staff develops assumptions for information gaps
☐ Initiate process necessary to acquire the information needed to complete IPB: ☐ Staff sections submit requests for information and information collection.
Note. An operational environment encompasses the air, land, maritime, space, and cyberspace domains, the information environment (which includes cyberspace), the electromagnetic spectrum, and other factors. IPB applies to the full range of Army operations. When defining the operational environment, it is important to consider all domains in which Army and threat operations occur.
Step 2—Describe environmental effects on operations
☐ Describe how the threat can affect friendly operations (IPB products—threat overlay, threat description table): ☐ Regular ☐ Irregular ☐ Hybrid
☐ Describe how terrain (OAKOC) can affect friendly and threat operations (IPB products—MCOO, terrain effects matrix) ☐ Observation and fields of fire ☐ Avenue of approach ☐ Key terrain ☐ Obstacles ☐ Cover and concealment
☐ Describe how weather can affect friendly and threat operations (IPB products—operational climatology, light and illumination data table, weather effects matrix): ☐ Visibility ☐ Precipitation ☐ Temperature ☐ Atmospheric pressure ☐ Wind ☐ Cloud cover ☐ Humidity
☐ Describe how civil considerations (ASCOPE and PMESII-PT) can affect friendly and threat operations (IPB products—civil considerations data file, civil considerations overlay, civil considerations assessment): ☐ Areas ☐ Structures ☐ Capabilities ☐ Organizations ☐ People ☐ Events ☐ Political ☐ Military ☐ Economic ☐ Social ☐ Information ☐ Infrastructure ☐ Physical environment ☐ Time
Step 3—Evaluate the threat
☐ Identify threat characteristics (IPB products—threat characteristics files)
☐ Create or refine threat models (IPB products—threat template, high-value target list): ☐ Convert threat doctrine or patterns of operation to graphics ☐ Describe the threat's tactics, options, and peculiarities ☐ Identify high-value targets
☐ Identify threat capabilities (IPB products—threat capability statement): ☐ Identify threat capabilities by using statements ☐ Identify other threat capabilities
Step 4—Determine threat COAs
☐ Develop threat COAs (IPB products—situation template, threat COA statement)
☐ Develop the event template and matrix (IPB products—event template, event matrix)
COA course of action MCOO modified combined obstacle overlay G-3 assistant chief of staff, operations S-2 battalion or brigade intelligence staff officer IPB intelligence preparation of the battlefield S-3 battalion or brigade operations staff officer

Lesson/best practice. Precise intelligence is critical to targeting threat capabilities at the appropriate time and place to open windows of opportunity across domains. Commanders and staffs receive effective intelligence when they direct and participate in intelligence WfF activities. Close interaction between the commander, S-2, S-3, and the rest of the staff is essential, as the entire staff supports unit planning and preparation through the integrating processes. ATP 2-01.3[13] discusses IPB staff collaboration in depth.

To be effective, IPB must—[14]

- Be a continuous process with all staff members providing input.
- Account for all domains, the information environment, and the electromagnetic spectrum (EMS).
- Define the commander's area of interest (AOI) by its geographic boundaries to focus collection and analysis within the AOI.
- Describe how the enemy, terrain and weather, and civil considerations will affect friendly and threat operations.
- Include relevant aspects of the OE for decisive, shaping, and sustaining operations.
- Support each step of the MDMP with IPB products.
- Determine how the interactions of friendly forces, threat forces, and local populations affect each other to continually create outcomes that positively affect friendly operations. This aspect of IPB is not the sole responsibility of the intelligence staff. It requires the collaboration of the commander and the entire staff to determine these effects.
- Support the operational framework considerations—physical, temporal, cognitive, and virtual.
- Facilitate the commander's ability to visualize the desired end state and a broad concept of how to shape current conditions into that end state.
- Support the commander in directing the intelligence effort.
- Facilitate understanding threat characteristics and the threat's goals, objectives, and COAs.

TECHNIQUE: STAFF COLLABORATION AND REVERSE IPB[15]

CTC observer coach/trainer (OC/T) teams recommend reverse IPB to increase staff collaboration (see technique in the following box). "Total staff integration reduces the initial time required for IPB development, assists the commander in timely decision making, improves the quality and accuracy of IPB products, and creates a better understanding of how threats may execute certain COAs and how friendly forces can counter threat actions."[16]

Technique.[17] A technique for total staff integration is known as reverse IPB. Generally, the intelligence officer (with the executive officer [XO] identifies areas of emphasis among the staff that need coverage during IPB steps 1-3. Before starting IPB, the intelligence officer provides the staff with a general scheme the enemy is likely to employ, based on analysis from HHQ and initial discussions with the operations officer and the commander. This initial "IPB guidance" does not need to be provided immediately but should be given as soon as possible. This guidance includes the following factors:

- Terrain (observation and fields of fire, avenues of approach, key terrain, obstacles, and cover and concealment [OAKOC]), including in the modified combined obstacle overlay (MCOO).
- Population (political, military, economic, social, information, infrastructure, physical environment, and time [PMESII-PT]), including culture and history.
- Enemy (task, purpose, and capabilities by WfF and nesting diagram).
- Neutral forces, such as task and purpose, capabilities, and disposition. **Note.** "Neutrality describes the formal position taken by a State which is not participating in an armed conflict, or which does not want to become involved. This status entails specific rights and duties."[18] "To obtain neutral status, the State does not have to make a formal declaration, nor do other States or parties formally have to recognize such status. A formal declaration will only have the effect of making neutral status better known. The armed forces of the neutral State also require clear instructions on how they are to operate in relation to the defense of their territory and in dealing with incursions. For isolated and accidental violations of neutral space, the instructions might include the need to issue warnings or give a demonstration of force. For increasingly numerous and serious violations, a general warning might be called for and the use of force stepped up."[19]
- Multinational or coalition forces including task and purpose, capabilities, and disposition.

The operations section concurrently begins substeps 3 to 6 of MA to examine friendly disposition; specified, implied, and essential tasks; constraints; facts; and assumptions. After a designated period, the IPB guidance is briefed to the commander in the following format (unless noted, the agenda below is briefed by the intelligence section):

- Orientation to AO and terrain (briefed by the terrain team or intelligence section).
- Orientation to neutral and friendly forces.
- Enemy higher headquarters' two levels up task and purpose.
- Enemy higher headquarters' task and purpose.

—**continued on next page**

- Enemy general scheme of maneuver.
- Subject matter experts brief the enemy's main capabilities (strengths) and vulnerabilities. They also provide their analysis of how enemy capabilities will get incorporated into the enemy COA. Subject matter experts brief in the following order:
  - Movement and maneuver.
  - Fires.
  - Air (rotary and fixed wing).
  - Intelligence.
  - Protection.
  - Sustainment.
  - Command and control (C2).
  - Integration with irregular forces.
  - Information and messaging.
- Enemy event matrix and template.

Following the brief, the intelligence section develops the enemy commander's decision support matrix (DSM), confirms the task and purpose nesting diagram, and synthesizes the enemy COA. The intelligence section then finalizes MA briefing products while the rest of the staff shifts to "blue" planning. The XO ensures that the staff's collaborative IPB becomes part of the unit standard operating procedure (SOP) and is included during MA of the MDMP. Table 5-2 depicts example staff sections' input to IPB products (staff input is mission dependent and not all-inclusive).

Table 5-2. Example staff input to IPB products[20]

Staff section	Intelligence preparation of the battlefield input
All staff sections. Provide subject matter expertise to assist in determining (but not limited to) the following:	Enemy objectives and desired end state. Named areas of interest. High-value targets. High-payoff targets. Decision points
Intelligence officer. Leads the IPB effort and has staff responsibility for analyzing the mission variables of enemy, terrain and weather, and civil considerations.	Threat doctrine, tactics, equipment, capabilities, vulnerabilities, and intent. Threat systems. Identification of areas of interest and areas of influence. Terrain analysis. Determination of threat courses of action.
Operations officer. Provides subject matter expertise on the art and science of military operations. Evaluates IPB products to ensure they support friendly COA development and analysis.	Operational experience. Assistance in determining— Target areas of interest. Engagement areas. Time phase lines. Relative combat power matrices for friendly and enemy forces.
Chief of fires (division and above) **Fires support officer** (brigade and below). Provides subject matter expertise on fires.	Threat fires doctrine, tactics, equipment, capabilities, vulnerabilities, and intent. Assistance in selecting— Target areas of interest. Electromagnetic attack. Decision points. Time phase lines
Engineer officer. Provides subject matter expertise on mobility and countermobility and assists the intelligence section in developing enemy obstacle plans for the enemy SITEMP.	Threat engineer doctrine, tactics, equipment, capabilities, vulnerabilities, and intent. Terrain analysis. Mobility corridors. OAKOC (observation and fields of fire, avenues of approach, key terrain, obstacles, and cover and concealment) factors. Obstacle locations.
Logistics officer. Provides subject matter expertise on sustainment operations.	Threat logistics doctrine, tactics, equipment, capabilities, vulnerabilities, and intent. Threat supply and resupply routes and points
Signal officer. Provides subject matter expertise on friendly communications systems and assists the intelligence section in identifying and evaluating friendly communications systems' vulnerabilities to cyberspace and electromagnetic attack. Threat employment of communications systems.	Threat communications networks and nodes. Threat communications vulnerabilities. Line of sight analysis.
Civil affairs officer. Provides subject matter expertise on civil affairs operations.	Evaluation of civil considerations on military operations. ASCOPE (areas, structures, capabilities, organizations, people, and events) analysis. PMESII-PT (political, military, economic, social, information, infrastructure, physical environment, and time) analysis. Civil considerations overlays.

IPB FUNDAMENTAL TASK TECHNIQUES (SUBSTEPS AND OUTPUTS OF IPB)[21]

Step 1. Define the Operational Environment Substeps and Outputs

Figures 5-4 through 5-7 highlight the substeps and outputs of the four steps of IPB.

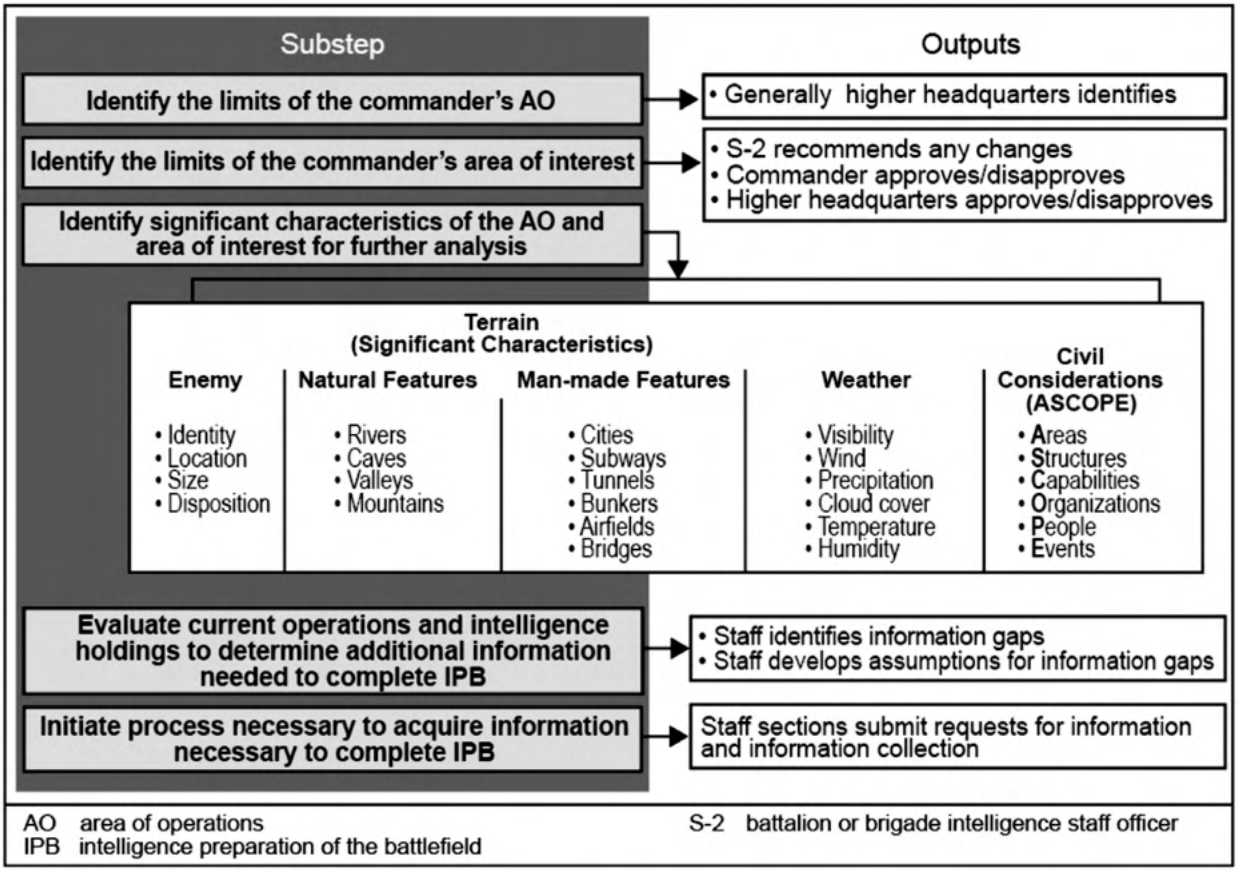

Figure 5-4. Substeps and outputs of step 1 of the IPB process[22]

Step 2. Describe Environmental Effects on Operations

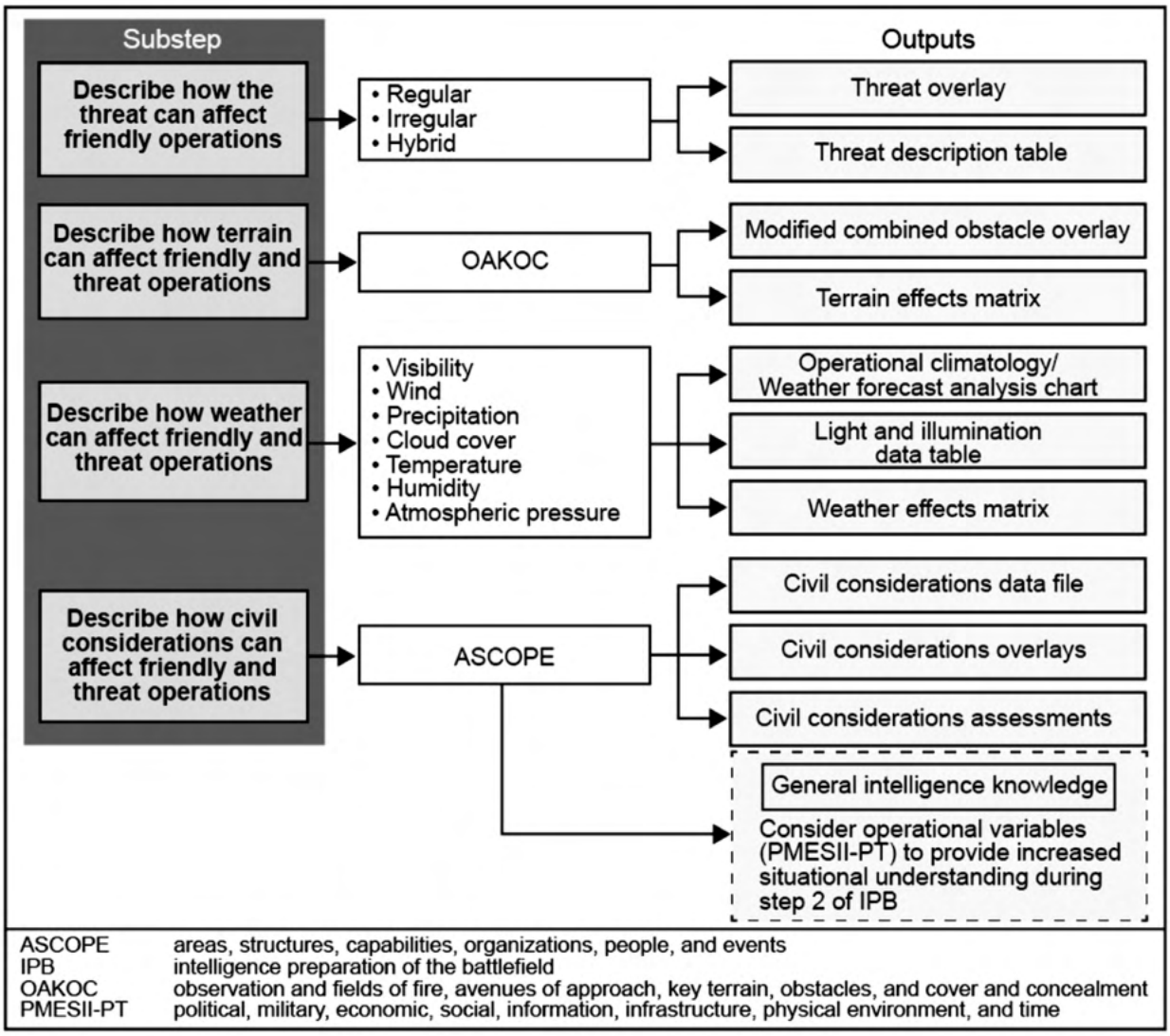

Figure 5-5. Substeps and outputs of step 2 of the IBP process[23]

Step 3. Evaluate the Threat

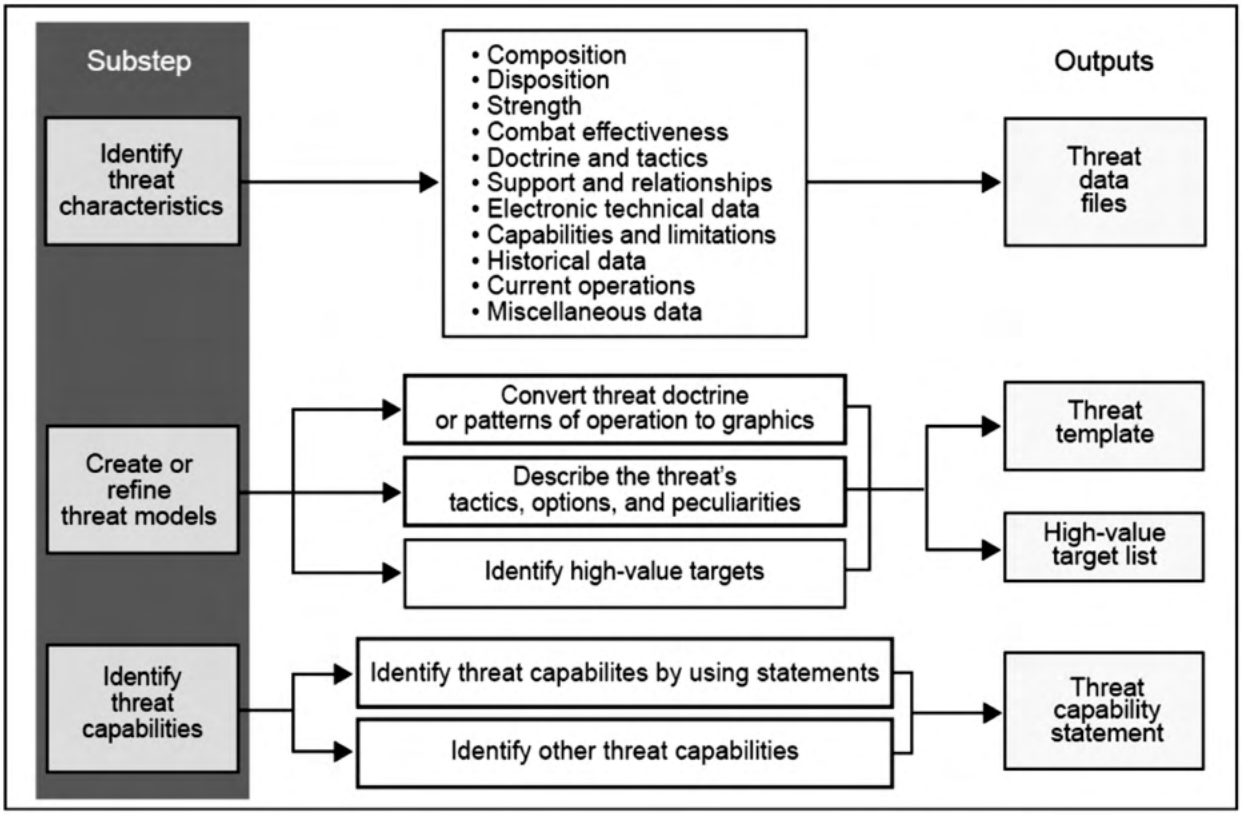

Figure 5-6. Substeps and outputs of step 3 of the IPB process[24]

Step 4. Determine Threat Course of Action

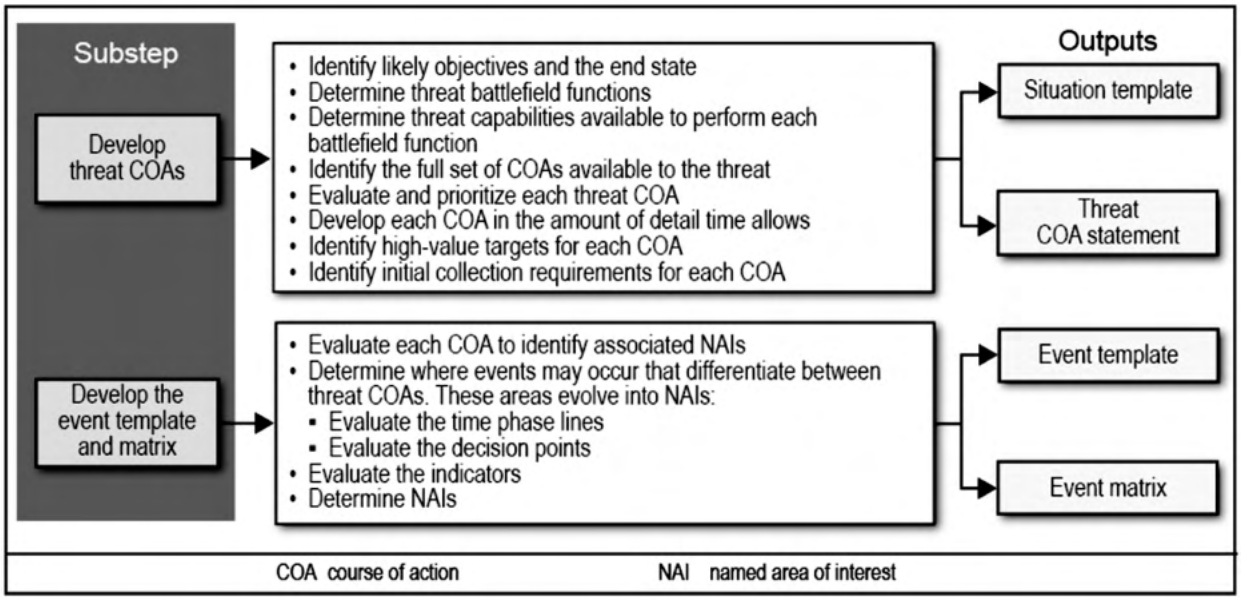

Figure 5-7. Substeps and outputs of step 4 of the IPB process[25]

"IPB results in intelligence products that are used during the MDMP to assist in developing friendly COAs and decision points for the commander. Additionally, the conclusions reached and the products (which are included in the intelligence estimate) developed during IPB are critical to planning information collection (IC) and targeting operations. IPB products include"[26] (see figure 5-8 for IPB products breakdown)—

- Threat situation templates with associated COA statements and high-value target (HVT) lists.
- Event templates and associated event matrixes.
- MCOOs, terrain effects matrixes, and terrain assessments.
- Weather effects work aids—weather forecast charts, weather effects matrixes, light and illumination tables, and weather estimates.
- Civil considerations overlays and assessments.

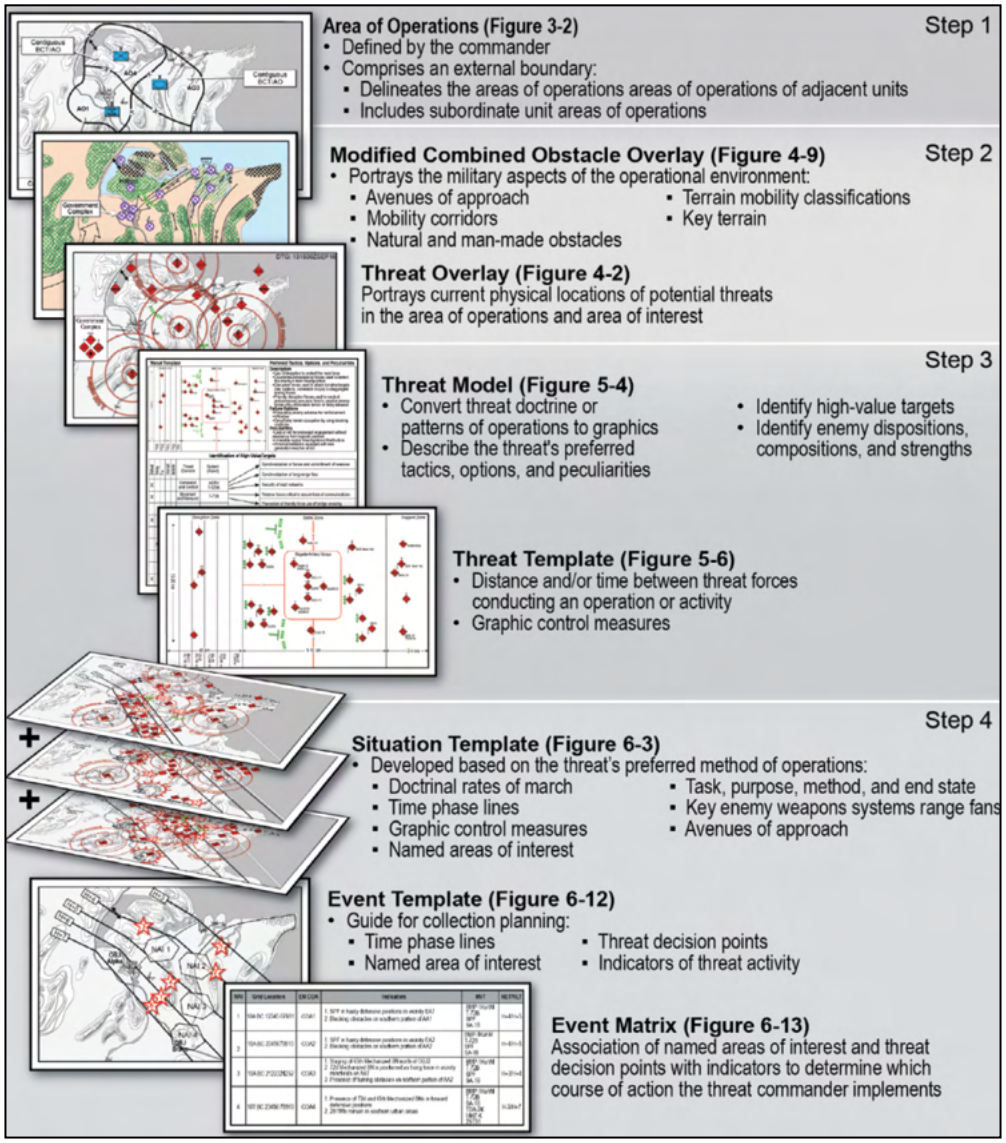

Figure 5-8. Products of the IPB process[27]

DETERMINE SPECIFIED, IMPLIED, AND ESSENTIAL TASKS

"The staff members analyze their higher echelon headquarters' order and their higher commander's guidance to determine their specified and implied tasks. In the context of operations, a *task* is a clearly defined action or activity specifically assigned to an individual or organization that must be done as it is imposed by an appropriate authority (Joint Publication [JP]1). The "what" of a mission statement is always a task. From the list of specified and implied tasks, the staff determines which ones are essential tasks for inclusion in the recommended mission statement. ...When analyzing the higher echelon order for specified and implied tasks, the staff also identifies any on-order or be-prepared missions."[28]

TASKS[29]
A *specified task* is a task specifically assigned to a unit by its HHQ.
An *implied task* is a task that must be performed to accomplish a specified task or mission but is not stated in the higher headquarters' order.
An *essential task* is a specified or implied task that must be executed to accomplish the mission. Essential tasks are always included in the unit's mission statement and reviewed after COA development, as they help define mission success.
MISSIONS[30]
An *on-order mission* is a mission to be executed at an unspecified time. A unit with an on-order mission is a committed force.
A *be-prepared mission* is a mission assigned to a unit that might be executed. Generally, a contingency mission, commanders execute it because something planned has or has not been successful. In planning priorities, commanders plan a be-prepared mission after any on-order mission.

Lesson/best practice. Specified tasks are easy to comply with and plan against because they are given to you. Identifying the implied tasks, the little things, and the things you must do to get the specified tasks accomplished can determine success or failure of the mission.

REVIEW AVAILABLE ASSETS AND IDENTIFY RESOURCE SHORTFALLS

Staffs update the task organization and analyze tasks against available assets and capabilities to determine shortfalls. If a capability is unavailable or needed to support a task or tasks, then discussion with HHQ must take place to either change the mission or allocate additional resources.[31]

Determine Constraints

"A *constraint* is a restriction placed on the command by a higher command. A constraint dictates an action or inaction, thus restricting the freedom of action of a subordinate commander."[32]

Constraints can also be based on *limitations* in the command, graphic control measure limitations, resource limitations, or rules of engagement that prevent freedom of action.[33]

Lesson/best practice. Approved constraints are a key output of MA. Staffs struggle with the definition of *constraints* and *limitations*. Understanding the difference is vital for moving through this step quickly, yet concisely.

IDENTIFY FACTS AND DEVELOP ASSUMPTIONS

Facts are statements of truth, or statements thought to be true, while assumptions are essentially gaps in knowledge or information that need to be confirmed or denied. Transitioning assumptions to facts is the goal during planning, as it builds situational understanding and validates planning efforts. According to OC/Ts, presumptive planning is acceptable. Planners should continue to plan with assumptions to not hinder planning efforts or degrade timelines.[34]

Lesson/best practice. Commanders provide staffs with clear COA guidance when solid fact analysis transforms into useful information. For example, maximum effective ranges of types of artillery are fact; however, after analysis, displaying the ranges on a map and how the unit can be impacted is useful, analyzed information for COA guidance. This also applies to anticipated refueling/resupply requirements, the reach of medical evacuation support, the distance frequency modulation communications can support, and many others.

BEGIN RISK ASSESSMENT AND MANAGEMENT

"Planners conducting a preliminary risk assessment must identify the obstacles or actions that may preclude mission accomplishment and then assess the impact of these impediments to the upcoming mission. Determining military risk is more an art than an exact science. Planners use historical data, intuitive analysis, and judgment to determine risk. Based on judgment, military risk assessment is an integration of probability and consequence of an identified impediment."[35] See table 5-3.

Table 5-3. Risk management process, typically done by the operations officer, planner, or safety officer[36]

Risk management	Step management
1. Identify hazards	These steps are completed during the MDMP.
2. Assess hazards	
3. Develop controls and make risk decisions	
4. Implement controls	
5. Supervise and evaluate	This step is ongoing during operations.

DEVELOP INITIAL COMMANDER'S CRITICAL INFORMATION REQUIREMENTS AND ESSENTIAL ELEMENTS OF FRIENDLY INFORMATION

"Mission analysis, including IPB, identifies gaps in information required for further planning and decision making. During MA, the staff develops information requirements (IRs). Certain IRs are of such importance to the commander that staffs nominate them to the commander to become a CCIR."[37] Additional IRs are priority intelligence requirements (PIRs), friendly forces information requirements (FFIRs), and EEFIs.

Table 5-4. Information requirements[38]

CCIR	A CCIR is an information requirement the commander identifies as being critical to facilitating timely decision making. CCIRs are situation-dependent and specified by the commander for each operation. Commanders continuously review CCIRs and adjust them as the situation changes. A CCIR directly influences decision-making and facilitates the successful execution of military operations. A CCIR is— • Specified by a commander for a specific operation. • Applicable only to the commander who specifies it. • Situation dependent and directly linked to a current or future mission. • Time sensitive.
PIR	PIR is an intelligence requirement, stated as a priority for intelligence support, which the commander and staff need to understand about the threat or the OE. The intelligence officer, in coordination with the staff, manages PIRs for the commander. PIRs serve as the framework for the IC plans.
FFIR	An FFIR is information the commander and staff need to understand regarding the status of friendly forces and supporting capabilities. FFIRs identify the information about the mission, troops, support, and time available for friendly forces that the commander considers most important. In coordination with the staff, the operations officer manages FFIRs for the commander.
EEIR	In addition to recommending CCIRs to the commander, the staff also identifies and recommends EEFIs. An EEFI establishes an element of information to protect rather than one to collect. EEFIs identify those elements of friendly force information that, if compromised, would jeopardize mission success. Commanders and planners consider those operations security (OPSEC) measures necessary to protect this information. The OPSEC process is used to develop measures to protect EEFI from compromise. Although EEFIs are not CCIRs, they have the same priority as CCIRs and require approval by the commander. Like CCIRs, EEFIs change as an operation progresses.

DEVELOP THE INITIAL INFORMATION COLLECTION PLAN

"***Information collection (IC)*** **is an activity that synchronizes and integrates the planning and employment of sensors and assets as well as the processing, exploitation, and dissemination systems in direct support of current and future operations.** This activity implies a function, mission, or action and identifies the organization that performs it. IC activities are a synergistic whole with emphasis on synchronizing and integrating all components and systems (see figure 5-9). IC integrates the intelligence and operations staff functions focused on answering the CCIRs. IC replaces intelligence, surveillance, and reconnaissance (ISR) synchronization and ISR integration."[39]

Lesson/best practice. "FM 3-55, *Information Collection*, provides the tactics and procedures for information collection and the associated activities of planning requirements and assessing collection, tasking, and directing information collection assets. It also contains the actions taken by the commanders and staffs in planning, preparing, executing, and assessing information collection activities."[40]

Lesson/best practice. FM 3-55 provides guidance on information collection assets available at the brigade level by warfighting function. Operations/intelligence linkage for information collection activities is an important point for staffs:[41]

The brigade combat team (BCT) operations section—

- Develops the information collection points.
- Tasks subordinate units.
- Ensures the information collection plan supports the overall scheme of maneuver.

The BCT intelligence section—

- Assesses information received to derive intelligence.
- Performs requirements planning and assessment of information collection.

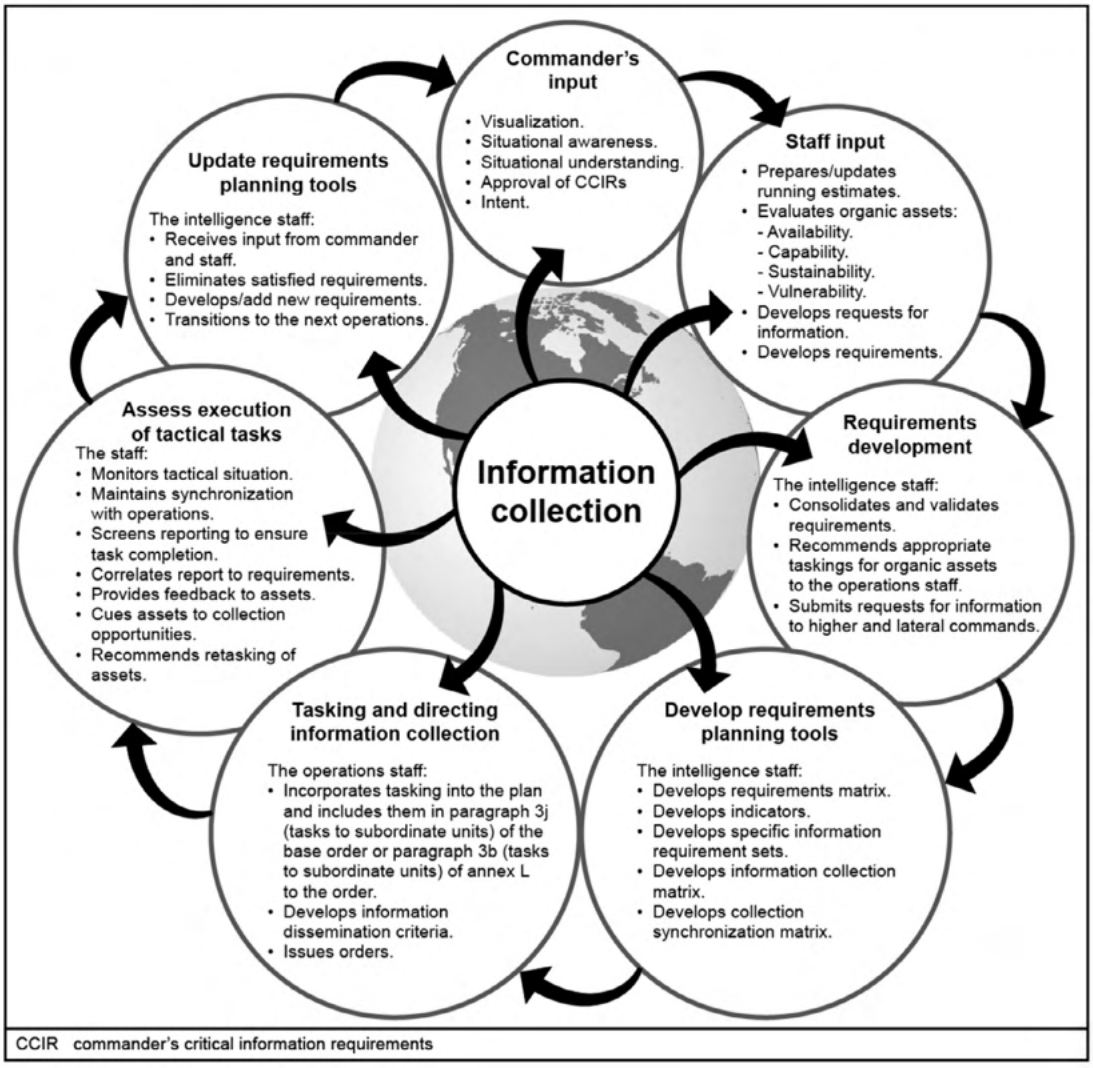

Figure 5-9. Information collection activities[42]

UPDATE PLANNING TIMELINE

Update planning and mission timelines as information (friendly and enemy) is received, analyzed, and verified. Commanders and staffs should make time adjustments and ensure subordinate units are informed.

Lesson/best practice. Commanders and staffs must give subordinate units sufficient time to conduct parallel planning activities. Shifts in time can drastically affect subordinate-unit planning efforts, so time adjustments must be articulated quickly and clearly.

DEVELOP A PROPOSED PROBLEM STATEMENT

The problem statement is the description of the primary issue or issues that may impede commanders from achieving their desired end states. Problem statements may be unnecessary if HHQ tasks (or missions) are clearly defined. How the problem is formulated leads to particular solutions.[43] It is important that commanders dedicate the time to identify the right problem to solve and describe it clearly in a problem statement. Ideally, the commander and staff meet to share their analysis of the situation. "They talk with each other, synthesize the results of the current MA, and determine the problem. If the commander is not available, the planning staff members discuss the problem among themselves."[44] "As part of the discussion to help identify and understand the problem, the staff—"[45]

- Compares the current situation to the desired end state.
- Brainstorms and lists issues that impede the commander from achieving the desired end state.
- Analyzes and provides proposed or revised problem statement.

The Problem Statement

"Solving a problem is the driving reason for Army planning processes. ... Problem statement development begins with identifying the problem. ... To identify the problem, ATP 5-0.1, *Army Design Methodology*, calls on commanders and staffs to ask two questions: 'What is the difference between the current state of the [operational environment] and desired state?' and 'What is preventing the force from reaching the desired end state?'"[46]

"The problem statement is a concise statement of the obstacles preventing an organization from achieving a desired end state. ... The problem statement should include only the significant elements of the problem framing. In this way, the problem statement becomes concise, yet remains relevant to the rest of the problem-solving process."[47]

"The nature or level of a problem might suggest following an accepted operational framework in drafting the problem statement. A tactical problem might follow the mission, enemy, terrain and weather, troops and support available, time available, civil considerations [mission variables] (Army) (METT-TC) structure beginning with, 'The organization must …' to address the mission element. Subsequent portions of the statement then follow with specific aspects of the other variables that make accomplishing the task difficult."[48]

"The danger of adopting a specific framework at the outset of problem statement development is a potential limitation to creative and critical thinking in stating the problem – and the potential solutions that will follow. ... Nonetheless, leaders might opt to use one or more Army frameworks to guide an inexperienced staff, meet time constraints, or ensure the problem statement accounts for all variables within the operational environment based on an assessment of the type of problem being studied. The problem statement should be comprehensive even as it strives for conciseness."[49]

Problem Statement Examples

An example tactical problem statement might be—[50]

How does 2/1 AD seize crossing sites along the Cottonwood River to support 18th Field Artillery (FA) Brigade fires when wooded and rolling terrain favor the enemy's defense and security operations. The terrain frequently constricts unit movement to platoon-sized mobility corridors. A hybrid threat enemy composed of fully manned conventional forces with anti-tank systems and shoulder-fired surface-to-air missiles as well as effective guerilla forces operate in territory familiar to them. Civilians are intimidated toward working with coalition forces. Enemy weapons threaten the ABCT's armored and limited aviation capabilities. 2/1 AD must not only seize crossings, but also secure those crossings and 18th FA Brigade's units during fire missions. The ABCT must have no less than 85 percent combat power remaining and complete operations within 24 hours before the enemy can reinforce its security zone.

This statement is around 130 words and includes all elements of METT-TC.

Another format begins with a short statement of the organization's task followed by critical factors that will affect solutions:[51]

How does 1/1 AD stabilize Calico City within the next 60 days while considering—

- *An insurgent force with local civilian support operates freely within the city.*
- *Local police are untrained and ill-equipped to secure the population; civilian leaders support 1/1 AD forces but are intimidated by insurgents.*
- *1/1 AD units with no additional police or engineer support must operate within the populated area.*
- *Narrow streets and densely populated areas prevent vehicle movement in most of the city; extreme daytime temperatures will favor acclimated enemy forces.*
- *Civilians casualties will likely result from direct and indirect fire engagements during daylight hours.*

"This example is shorter by emphasizing the tensions as well as the obstacles but without complete sentences. Either of the formats could be used effectively to describe the conditions that constrain or prevent the unit from achieving its goals within a timeframe. The next challenge to leaders is what to do with the problem statement besides admiring their handiwork through the rest of the problem-solving process – or worse, shelving the problem statement as a task completed in their problem-solving process."[52]

DEVELOP A PROPOSED MISSION STATEMENT

"A *mission statement* is a short sentence or paragraph that describes the organization's essential task(s), purpose, and action containing the elements of who, what, when, where, and why (JP 5-0). The five elements of a mission statement answer these questions:"[53]

- Who will execute the operation (unit or organization)?
- What is the unit's essential task (tactical mission task)?

- When will the operation begin (by time or event) or what is the duration of the operation?
- Where will the operation occur (AO, objective, or grid coordinates)?
- Why will the force conduct the operations (for what purpose)?

The following are examples of mission statements:[54]

> ***Example 1.*** Not later than 220400 August 19 (**when**), 1st Brigade (**who**) **s**ecures ROUTE SOUTH DAKOTA (**what or task**) in AO JACKRABBIT (**where**) to enable the movement of humanitarian assistance materials (**why or purpose**).
>
> ***Example 2.*** 1-505th Parachute Infantry Regiment (**who**) seizes (**what or task**) AREA NOTIONAL INTERNATIONAL AIRPORT (**where**) not later than D-day, H+3 (**when**) to allow follow-on forces to air-land into AO SPARTAN (**why or purpose**).

"The mission statement may have more than one essential task. The following example shows a mission statement for a phased operation with a different essential task for each phase."[55]

> ***Example.*** 1-509th Parachute Infantry Regiment (**who**) seizes (**what or task**) AREA INTERNATIONAL AIRPORT (**where**) not later than D-day, H+3 (**when**) to allow follow-on forces to air-land into AO SPARTAN (**why or purpose**). On order (**when**), secures (**what or task**) OBJECTIVE GOLD (**where**) to prevent the 2nd Guards Brigade from crossing the BLUE RIVER and disrupting operations in AO SPARTAN (**why or purpose**).

DEVELOP AND ISSUE INITIAL COMMANDER'S INTENT

"The initial commander's intent … is a short and concise statement that describes the purpose of the operation, initial key tasks, and the desired end state, which in planning guides COA development."[56]

"The higher echelon commander's intent provides the basis for unity of effort throughout the force. Each commander's intent nests within the higher echelon commander's intent. The commander's intent explains the broader purpose of the operation beyond that of the mission statement. This explanation allows subordinate commanders and Soldiers to gain insight into what is expected of them, what constraints apply, and most importantly, why the mission is being conducted."[57]

"Based on their situational understanding, commanders summarize their visualization in their initial commander's intent statement. The initial commander's intent links the operation's purpose with conditions that define the desired end state. Commanders may change their intent statement as planning progresses and more information becomes available. The commander's intent must be easy to remember and clearly understood by leaders two echelons lower in the chain of command. The shorter the commander's intent, the better it serves these purposes."[58]

Commanders Focus on the Decisions, Intent, Risk, and Triggers (DIRT)

Decisions:

- Initiate the reconnaissance in the south.
- **Sequel:** transition to the flank screen.

Risk: I see three major risks to the squadron in the operation:

- We must avoid becoming stationary targets in open areas (easy to attack). We maintain the advantage while on the offensive. We must maximize our optics first and weapons range second.
- **Tempo/timing:** We must balance speed and audacity (offense) against the BFB capability.
- A BFB attack on 1-21 Infantry (IN) results in direct-fire control measures with 2-14 Cavalry (CAV) and 1-27 IN.

Triggers:

- Set a battle position south of Razish before containing it and pushing to Ugen.
- Contain Ugen—if we have not culminated.

Example Squadron Commander's Intent (as part of DIRT)

Expanded purpose: 2nd Infantry Brigade Combat Team (IBCT) must secure key terrain in the central corridor to pass 2nd Brigade, 52nd Division forward. To do this, we must destroy the enemy forces in our AO.

Key tasks:

- Based on time, I intend to conduct a rapid and forceful reconnaissance of our AO. This will show strength south and support the BCT's main attack in the north (decisive).
- We must not get pulled into urban areas, where the enemy has an asymmetrical advantage, and the rules of engagement limits our fire power. This is key to our containment mission.
- Protect the southern flank of the BCT attack to prevent the enemy from enveloping 1-21 IN on Objective (OBJ) Cardinals.

End state (friendly, enemy, civilian, and terrain):

- **Friendly:** 2-14 CAV remains at or above 70 percent combat power and is oriented in a squadron screen to the south.
- **Enemy:** All division tactical group/ battalion tactical group reconnaissance forces found are destroyed and the BFB are unable to mass combat power above a platoon sized force.
- **Civilian:** Atropian forces control urban centers and ground lines of communication.
- **Terrain:** The east—west mobility corridor remains open for the 2/52.

PRESENT THE MISSION ANALYSIS BRIEFING

"The MA briefing informs the commander and staff of the results of the planning staff's analysis of the situation."[59]

"A comprehensive MA briefing, with discussion and feedback, helps the commander, staff, subordinates, and other partners develop a shared understanding of the requirements of the upcoming operation. To ensure a common understanding, the staff briefs the commander on the results of its MA, which can be modified based on preferences of the commander. The MA briefing may include—"[60]

- Mission and commander's intent of the headquarters two echelons higher than the unit.
- Mission, commander's intent, and concept of operations of the headquarters one echelon higher than the unit.
- Review of the commander's initial guidance.
- Initial IPB products that impact the conduct of operations.
- Specified, implied, and essential tasks.
- Pertinent facts and assumptions.
- Constraints.
- Forces available, including known command and support relationships and resource shortfalls.
- A proposed problem statement.
- A proposed mission statement.
- Initial proposed commander's intent for approval or commander's intent issuance.
- Proposed CCIRs and EEFIs.
- Initial IC plan.
- Initial risk assessment.
- Recommended collaborative planning sessions.
- Proposed COA evaluation criteria.
- Updated timeline.
- Review or issue commander's planning guidance.

"Evaluation criteria addresses factors that affect success and those that can cause failure. Criteria change from mission to mission, and they must be clearly defined and understood by all staff members before starting COA analysis (or war gaming)."[61]

"To adopt into a plan, a COA is evaluated against two sets of criteria. The first set of criteria requires that a COA is feasible, acceptable, suitable, complete, and distinguishable. … This second set is intended to identify which COA among those that passed the first test is best based on an analysis of the criteria developed. This second set of criteria may include"—[62]

- Limitations on casualties.
- Defeat of enemy forces or adversary COAs.
- Speed.
- Opportunity to maneuver.
- Risk.
- Logistic supportability.
- Force protection.
- Time available and timing of the operation.
- Political considerations.

"Normally, the chief of staff (COS) or executive officer (XO) initially determines each proposed criterion with weights based on the assessment of its relative importance and the commander's guidance. Commanders adjust criteria selection and weighting according to their own experience and vision. Higher weights are assigned to more important criteria. The staff member responsible for a functional area ranks each COA using those criteria. The staff presents the proposed evaluation criteria to the commander at the MA brief for approval. Evaluation criteria must be measurable and easily and clearly defined. Well-defined evaluation criteria have five elements:"[63]

- Short title—the criterion name.
- Definition—a clear description of the feature being evaluated.
- Unit of measure—a standard element used to quantify the criterion.
- Benchmark—a value that defines the desired state, or "good" for a solution in terms of a particular criterion.
- Formula—an expression of how changes in the value of the criterion affect the desirability of the possible solution. Planners state the formula in comparative terms (for example, more is better) or absolute terms (for example, a night movement is better than a day movement).

DEVELOP AND ISSUE CONTINUED PLANNING GUIDANCE

"Commanders issue additional planning guidance after MA, which guides COA development. This is not the only time the commander issues guidance during the MDMP. The commander issues guidance throughout the MDMP including, but not limited, to the following:"[64]

- Upon receipt of or in anticipation of a mission (initial planning guidance).
- Following MA (planning guidance for COA development).
- Following COA development (revised planning guidance for COA refinements).
- COA approval (revised planning guidance to complete the plan).
- Receipt of new information that invalidates assumptions or changes understanding of the OE.

Table 5-5 lists example commander's planning guidance by warfighting function.

Table 5-5. Examples of commander's planning guidance by WfF[65]

Command and Control	Commander's intent Course of action development guidance Number of courses of action to consider or not consider Phasing considerations Operational framework considerations Commanders critical information requirements Critical events Task organization Rules of engagement	Risk acceptance guidance Planning and operational guidance timeline Type of order and rehearsal Branches and sequels Commander's location Succession of command Command post positioning, survivability, and displacement Liaison officer guidance Communications guidance Civil affairs operations Emission control and status Requests for information
Intelligence	Information collection guidance Information gaps Most likely and most dangerous enemy courses of action	Scheme of intelligence Critical terrain and weather factors Critical local environment and civil considerations Intelligence focus during phased operations
Movement and Maneuver	Task and purpose of maneuver units Scheme of maneuver including forms of maneuver Reserve composition, priorities, and control measures Passage of lines Reconnaissance and surveillance	Tactical deception Friendly decision points Information collection direction Collateral damage or civilian casualties Any condition that affects achievement of end state Mobility and countermobility
Fires	Priority of fires Synchronization and focus of fires with maneuver High-value targets High-payoff targets Special munitions guidance Target acquisition zones Observer plan Air and missile defense positioning Task and purpose of fires	Scheme of fires Suppression of enemy air defenses Fire support coordination measures Attack guidance No strike list Restricted target list Information operations Cyberspace electromagnetic activities and electromagnetic warfare Desired enemy perception of friendly forces Initial themes and messages
Protection	Protection priorities Scheme of protection development Priorities for survivability assets Air and missile defense positioning Operations security Terrain and weather factors Intelligence focus and limitations for security Protected persons and places Anti-fratricide measures and friendly force recognition Personnel recovery Detention operations	Protection and control of civilians Vehicle and equipment safety or security constraints Environmental considerations Unexploded ordnance Acceptable risk and risk management Escalation of force and nonlethal weapons Counterintelligence Chemical, biological, radiological, nuclear, and explosives guidance Force health protection measures Cyberspace network protection measures
Sustainment	Sustainment priorities Health service support Sustainment of detention and dislocated civilian operations Controlled supply rates	Construction and provision of facilities and installations Detainee movement Anticipated requirements of Classes III, IV, and V

ISSUE A WARNING ORDER

Immediately after the commander gives the planning guidance, the staff sends subordinate and supporting units a WARNORD in the form of unit fighting products. WARNORDs should not be a large, written document. Fighting products are clear, concise tools. The WARNORD informationally contains—[66]

- Updated situation.
- The approved mission statement.
- The commander's intent.
- Changes to task organization.
- The unit AO (using a sketch, overlay, or some other description).
- Tasks to subordinate units as applicable.
- CCIRs and EEFIs.
- Risk guidance.
- Priorities by WfF.
- Deception guidance. (If for military deception, it is sent separately as need to know information.)
- Essential stability tasks as appropriate.
- IPB results.
- Initial IC plan.
- Specific priorities.
- Updated planning and operational timelines.
- Movements.

ENDNOTES

1. FM 5-0, *Planning and Orders Production*, 4 November 2022, pages 5-8 to 5-23.

2. Center for Army Lessons Learned (CALL) 20-16, *Defense of the Cajun Bayou, The Joint Readiness Training Center Operations Group*, April 2020, page 14.

3. FM 5-0, page 5-8, paragraph 5-29.

4. Ibid, page 5-9.

5. Ibid, page 5-10, paragraph 5-30.

6. Ibid, paragraph 5-31.

7. Ibid, figure 5-4, page 5-10. This is a replication depicting a brigade versus a division nesting diagram. However, the figure was used as a guide to build the replication.

8. Ibid, page 5-11, paragraph 5-32.

9. ATP 2-01.3, page 2-2.

10. Ibid, page xi.

11. Ibid, page A-1.

12. Ibid.

13. Ibid, page 1-5.

14. Ibid, page 1-2, paragraph 1-9.

15. ATP 5-0.2-1, *Staff Reference Guide Volume I Unclassified Resources*, 7 December 2020, page 76.

16. Ibid, paragraph 2-242.

17. Ibid, page 77.

18. *The Law of Armed Conflict: Neutrality*. The following is this source's introduction: "The sources of the international law of neutrality are customary international law and, for certain questions, international treaties, in particular the Paris Declaration of 1856, the 1907 Hague Convention No. V respecting the Rights and Duties of Neutral Powers and Persons in Case of War on Land, the 1907 Hague Convention No. XIII concerning the Rights and Duties of Neutral Powers in Naval War, the four 1949 Geneva Conventions and Additional Protocol I of 1977. The United Nations Charter of 1945 and Security Council decisions based on the Charter may in certain circumstances modify the law of neutrality. For example, Article 2(5) of the Charter requires UN Member States to give the UN every assistance in any action it takes, and Article 25 requires UN members to accept and comply with the decisions of the Security Council; the enforcement measures spelled out in Chapter VII can also have an impact, as they are **governed by particular rules which differ from those of the law of neutrality**." Retrieved from https://www.icrc.org/en/doc/assets/files/other/law8_final.pdf. See page 3-8.

19. Ibid, page 5-8.

20. ATP 5-0.2-1, page 78.

21. ATP 2-01.3, page 3-1.

22. Ibid, page 3-2.

23. Ibid, page 4-2.

24. Ibid, page 5-4.

25. Ibid, page 6-2.

26. Ibid, page 1-1, paragraph 1-2.

27. Ibid, introductory figure, page xi.

28. FM 5-0, page 5-12, paragraphs 5-39 and 5-42.

29. Ibid, paragraphs 5-40, 5-41, and 5-43.

30. Ibid, paragraph 5-42.

31. ATP 5-0.2-1, page 25.

32. FM 5-0, page 5-13.

33. Ibid.

34. Ibid.

35. Ibid, pages 5-13 and 5-14.

36. Ibid, page 5-14.

37. ATP 5-0.2-1, page 27, paragraph 2-75.

38. FM 5-0, pages 5-14 and 5-15.

39. FM 3-55, *Information Collection*, 3 May 2013, page 1-1, paragraph 1-4.

40. Ibid, page iii.

41. Ibid, chapter 5, pages 5-7 to 5-11.

42. Ibid, page 1-4.

43. FM 5-0, pages 5-16, paragraphs 5-68 and 5-69.

44. Ibid, paragraph 5-69.

45. Ibid, page 5-17.

46. Spurlin, Dale F., "The Problem Statement – What's the Problem?," *Small Wars Journal*, 8 August 2017. **Note.** The content of this article is the opinion of the author as an independent writer and is not necessarily the position of the U.S. Army Command and General Staff College, U.S. Department of the Army, or the U.S. Department of Defense.

47. Ibid.

48. Ibid.

49. Ibid.

50. Ibid.

51. Ibid.

52. Ibid.

53. FM 5-0, paragraph 5-71.

54. Ibid.

55. Ibid, paragraph 5-72.

56. Ibid, page 5-18, paragraph 5-75.

57. Ibid, paragraph 5-76.

58. Ibid, paragraph 5-77.

59. Ibid, paragraph 5-78.

60. Ibid, pages 5-18 and 5-19, paragraph 5-80.

61. Ibid, page 5-19, paragraph 5-82.

62. Ibid, paragraph 5-83.

63. Ibid, pages 5-19 and 5-20, paragraph 5-84.

64. Ibid, pages 5-20 and 5-21, paragraph 5-88.

65. Ibid, page 5-22.

66. Ibid, page 5-23, paragraph 5-90.

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CHAPTER 6

The Military Decision-Making Process: Step 3. Course of Action Development[1]

"S-2, I need you to do another turn on those enemy courses of action (COAs)," Cajun 6 began. "How many possible enemy COAs are there?"

"Sir, there are unlimited courses of action," the S-2 replied. They had this conversation before. Cajun 6, early in his command, dissuaded him of the schoolhouse idea that they should only think about most dangerous or most likely. "We are limited only by our imagination of what the enemy might do."

"Exactly, so we need to look at this with the same level of detail. Ensure you're templating every specialty unit. Think in terms, as we look at our targeting, of not only their formations, but their functions as well. As it comes to maneuver, I need you to think at the platoon level for the battalions (BNs) to be able to figure it out so we can achieve a 3:1 ratio. If you can template platoons, then we have an idea about the enemy's companies and the armor rolling within those companies."

"Will do sir," Cajun 2 nodded. "We're almost there."

"I know you are," Cajun 6 conceded. "Let's not forget our fight though, the brigade (BDE) fight, which is not just beyond the coordinated fire line (CFL). Sure, where are their long-range indirect fire (IDF) assets? You showed me the battalion tactical group (BTG) and division tactical group (DTG) fires 1713 Battalion-Sized Detachment (BDET) has available, now show me where they will be so we can either shoot them directly or coordinate with the joint task force (JTF) to kill them before they kill us. There's also the aspect of the BDE fight in how we synchronize BNs and our assets."

Cajun 2 looked at the map as did the fire support officer (FSO). Cajun 6 watched before he continued, "Mud Bug 6 is going to be waist deep in a counter-fire fight, and we need to take out those guns. I need to know if those mechanized forces in Oberlin change their rate-of-march. Those indicators are critical because the FSO needs to know in case they start to bypass obstacles and we need to emplace a family of scatterable mines (FASCAM) minefield. What counter-mobility assets do enemy forces have that will enable their movement here? I'm not comfortable with the initial reconnaissance plan as you have it here. The cavalry (CAV) has fires, but what about logistics and medical support? The named areas of interest (NAIs) and draft reconnaissance guidance are good, but you've got work to do on the science before this goes out in my name."[2]

"A COA is a broad potential solution to an identified problem. After receiving the restated mission, commander's intent, and updated commander's planning guidance, the staff develops COAs for the commander's approval. The COA development step generates options for subsequent analysis and comparison that satisfy the commander's intent and planning guidance. During COA development, planners use the problem statement, mission statement, commander's intent, planning guidance, and products developed during MA. The COA begins conceptually, but by the end of the step the COA develops many of the details necessary for subordinates to act."[3] See figure 6-1 for a depiction of COA development.

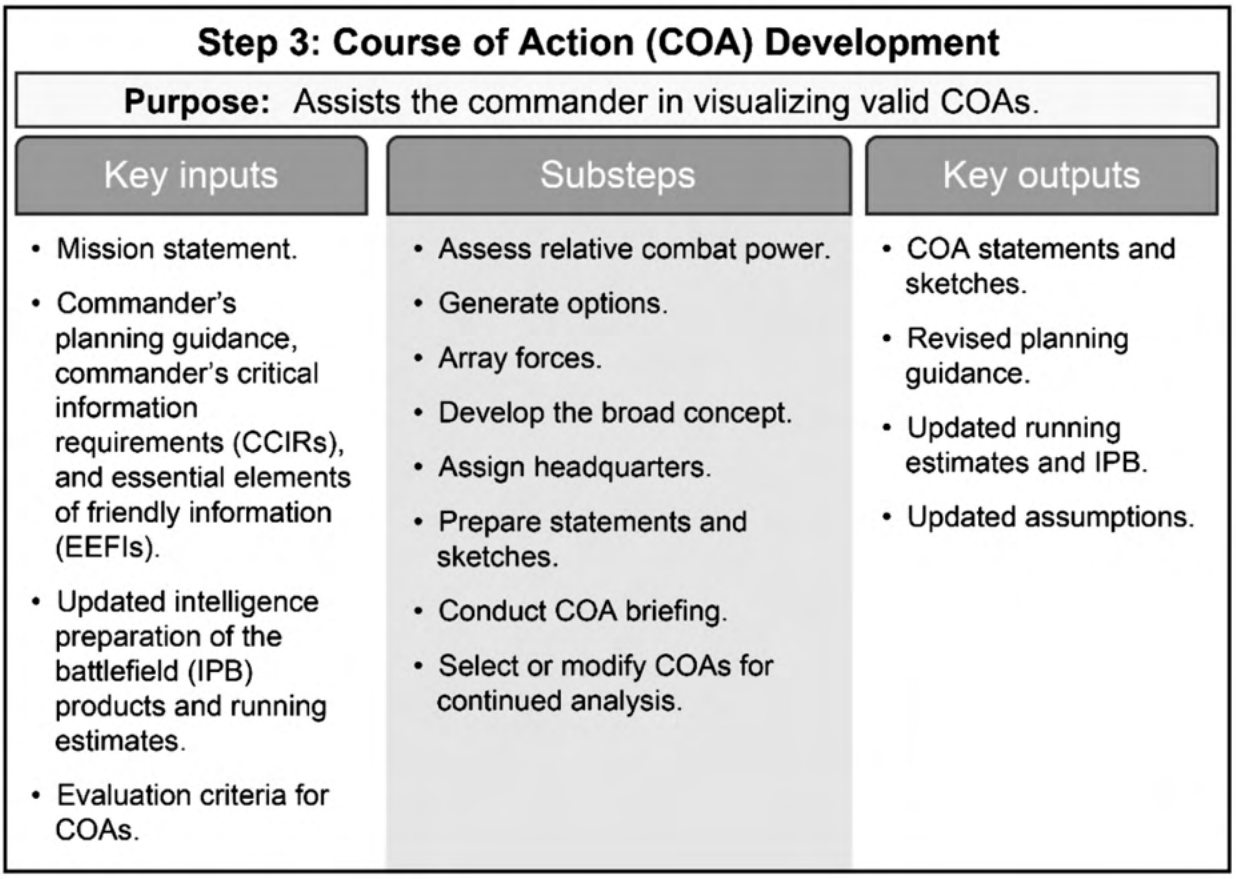

Figure 6-1. Step 3-COA development[4]

Lesson/best practice. Always go through every step of COA development, even if given a directed COA from the commander. This ensures all the factors developed in the mission analysis (MA) have been accounted for in the COA and helps the commander's directed COA become fully developed.

"The commander's direct involvement in COA development greatly aids in producing comprehensive and flexible COAs in the time available. To save time, the commander may also limit the number of COAs staffs develop or specify particular COAs not to explore."[5]

Lesson/best practice. In a time-constrained environment, a brigade or battalion commander gives guidance for developing a single COA. Commanders decide how they want to conduct the fight versus operational parameters. Staff members take this guidance and turn it into a complete COA, then backbrief the COA to the commander with a sketch and statement of concept to ensure they captured the commander's intent. The staff members must also integrate those elements commanders did not address in guidance to their satisfaction. Once the commander approves the plan in concept, the staff must complete the plan before the war game. This means developing the fighting products (operation graphic, situation template, synchronization matrix (SYNCMAT), fires matrix, information collection matrix, and decision support matrix [DSM]) to an 80 to 90 percent solution. These are the primary tools gathered for the war game.

Planners examine each prospective COA (or single, directed COA) for validity and meeting the following screening criteria throughout the process, but should review it again at this step:[6]

- **Feasible.** The COA can accomplish the mission within the established time, space, and resources available.
- **Acceptable.** The COA must balance cost and risk with the advantage gained.
- **Suitable.** The COA can accomplish the mission within the commander's intent and planning guidance.
- **Distinguishable.** Each COA must differ significantly from the others (such as scheme of maneuver, lines of effort, phasing, use of the reserve, or task organization).
- **Complete.** A COA incorporates—
  - How the decisive operation leads to mission accomplishment.
  - How shaping operations create and preserve conditions for success of the decisive operation or effort.
  - How sustaining operations enable shaping and decisive operations or efforts.
  - How to account for offensive, defensive, stability, or defense support of civil authorities tasks.
  - How it describes transforming current conditions to the desired end state.

Lesson/best practice. If staffs are not directed to develop a single COA, there is an option to quickly, yet thoroughly, develop multiple COAs. Assign a team leader for each COA to assemble products and brief the commander. This saves time and ensures all COAs are given equal time consideration. Have a small group (S-2, S-3, COA team leads) brainstorm a basic outline that distinguishes COAs before bringing the entire staff together. Simultaneously, low-density specialties can prepare products that will support all COAs (fires, engineers, chemical, signal, medical, etc.).

See table 6-1 for steps and substeps of COA development.

Table 6-1. Steps and substeps of COA development[7]

Apply Screening Criteria: Feasible, Acceptable, Suitable, Distinguishable, and Complete	Steps of COA Development	Substeps of COA Development					
	Step 3.1 Assess Relative Combat Power	Begin sketch	Add higher graphics	Draw terrain	Add threat COA	Add current friendly situation	Evaluate combat power and effectiveness
	Step 3.2 Generate Options	Determine focus (enemy or terrain)	Determine purpose, then tasks, of the decisive operations	Determine the shaping purpose, then tasks, of shaping operations	Determine sustainment feasibility	Determine form of maneuver to connect the COA together	Add graphic control measures as required
	Step 3.3 Array Forces	Refine combat power analysis for each action	Allocate combat power at the decisive operation	Work backwards and assign forces to other efforts	Refine sequence, phase, ME/SE as required	Determine sustainment actions to support COA	Add graphic control measures as required
	Step 3.4 Develop the Broad Concept	Determine intelligence actions to support COA	Determine fire actions to support COA	Determine protection actions to support COA	Determine command and control actions to support COA	Add graphic control measures as required	Identify potential decision points
	Step 3.5 Assign Headquarters	Assign headquarters	Add final graphic control measures				
	Step 3.6 Prepare Statements and Sketches	Make sketch presentable	Create statement with task organization				
	Step 3.7 Conduct COA Briefing						
	Step 3.8 Select of Modify COAs for Continued Analysis	Commander approves a COA	Commander modifies COA and staff conducts additional analysis	Commander rejects all COA and staff begins COA Development again			

ASSESS RELATIVE COMBAT POWER

Lesson/best practice. Brigade and battalion staffs often fail to assess relative combat power and array the forces as needed during COA development. This is often because of a lack of understanding of how the enemy fights or units' unwillingness to task-organize their units differently than their habitual unit configurations. Overcome these shortfalls by conducting a thorough reverse intelligence preparation of the battlefield (IPB) and developing an updated threat template with the executive officer (XO) or S-3 serving as an honest broker and review the correlation of forces.

"Combat power includes the total means of destructive, constructive, and information capabilities that a formation or unit can apply at a given time. It is a command's ability to fight and win in large-scale combat or accomplish the mission in stability operations or defense support of civil authorities. Commanders combine the elements of intelligence, movement and maneuver, fires, sustainment, protection, command and control (C2), information, and leadership to meet constantly changing situations and defeat the enemy. The goal is to generate overwhelming combat power at the decisive point to accomplish the mission at the least cost."[8]

"Several variables can stand between a unit and mission accomplishment, such as enemy forces, restrictive terrain, or unit limitations. A way to visualize the interaction of the variables is to create a sketch. … When using a sketch, it normally includes the area to cover, easily identified physical terrain, key known higher headquarters' graphics, significant obstacles, dense urban areas, and other population areas that would impact the COA. Based on output of IPB, a sketch also includes the known threat COA. The sketch then aides the planning team in understanding and visualizing the assessment of relative combat power and COAs."[9]

"Relative combat power analysis involves assessing tangible factors (such as equipment, weapons systems, and units) and intangible factors (such as morale and training levels). It also considers the mission variables of mission, enemy, terrain and weather, troops and support available, time available, civil considerations [mission variables] (Army) (METT-TC) (I), that directly or indirectly affect the potential outcome of an operation. … Comparing the significant strengths and weaknesses of each force in terms of combat power gives planners insight into"—[10]

- Friendly capabilities that pertain to the operation.
- The types of operations possible from both friendly and enemy perspectives.
- How and where enemy forces may be vulnerable.
- How and where friendly forces may be vulnerable.
- Additional resources not previously identified that may be required to execute the mission.
- How to recommend the allocation of existing resources.

Planners initially make a rough estimate of force ratios of combat maneuver units two levels below their echelon. Other types of units such as field artillery (FA), air defense, aviation, enablers, and sustainment may be broken down further. … After computing force ratios, the staff analyzes the intangible aspects of combat power. A technique for this analysis is comparing friendly strengths against enemy weaknesses, and vice versa for each element of combat power. A relative combat power assessment identifies exploitable enemy weaknesses, identifies unprotected friendly weaknesses, and determines the combat power necessary to conduct tasks.[11]

GENERATE OPTIONS

Lesson/best practice. If you are fighting a near-peer force that possesses tactical agility and fighting on terrain that is familiar to it, develop a COA that contains several primary options that will allow the commander to "out decision" the enemy. This is distinctively different than just branches and sequels. Reference Center for Army Lessons Learned (CALL) Combat Training Center (CTC) Quarterly Bulletin No. 97-4, (1st Quarter, fiscal year [FY] 1997, January 1997), *DECISION-POINT TACTICS: Fighting the Enemy, Not the Plan!*, to gain understanding of COAs, options, and decision points, which allow rapid decision making, rapid maneuver (or defense), and effective mission accomplishment. CALL No. 97-4 can be accessed via common access card (CAC) at https://armyeitaas.sharepoint-mil.us/teams/lessonslearned/CALL%20Publications/Forms/AllItems.aspx?id=%2Fteams%2Flessonslearned%2FCALL%20Publications%2F97%2D04%5FCTC%20Quarterly%20Bulletin%201Q%20FY97%20%28Jan%2097%29%2Epdf&parent=%2Fteams%2Flessonslearned%2FCALL%20Publications.

"Planning requires creative application of doctrine, units, and resources. It requires a thorough knowledge and application of the fundamentals of unified land operations (see Army Doctrine Publication [ADP] 3-0, *Operations*, 31 July 2019) and the fundamentals of tactics (see ADP 3-90). The art of planning involves developing plans within the commander's intent and planning guidance by choosing from interrelated options, including"—[12]

- Arrangement of activities in time, space, and purpose.
- Assignment of tactical mission tasks and tactical enabling tasks.
- Task organization of available forces and resource allocation.
- Choice and arrangement of control measures.
- Tempo.
- The risk the commander is willing to take.

"The *operational framework* is a cognitive tool used to assist commanders and staffs in clearly visualizing and describing the application of combat power in time, space, purpose, and resources in the concept of operations (Army Doctrine Publication [ADP] 1-01). … They may create new models to fit the circumstances, but they generally apply a combination of common models according to doctrine. The three models commonly used to build an operational framework are"—[13]

- Assigned areas.
- Deep, close, and rear operations.
- Main effort, supporting effort, and reserve.

To develop options, planners begin with the decisive operation, determines the decisive operation's purpose (if not stated by the commander) and considers ways to mass the effects of combat power to achieve it. "The decisive operation's purpose directly relates to accomplishing the unit mission. When executed, the unit with the primary responsibility for the decisive operation becomes the main effort."[14]

After determining tasks and purposes, the planning team sequences separate actions together to ensure the decisive operation is successful. The goal during COA analysis (war gaming) will be to synchronize these tasks to maximize the effects, during COA development identify the conditions required for a successful decisive operation and plan backwards.[15]

Lesson/best practice. It is often more efficient and effective for the brigade support battalion (BSB) to develop one COA for sustainment that has multiple options within it than to develop multiple distinct COAs that are then decided between when planning brigade-level sustainment. This helps keep the BSB synchronized with the developing brigade plan as it develops. The staff (support officer, primarily) should collaboratively develop this single support COA with the brigade, and then the BSB staff can analyze (war-game) that single COA to start deciding on the best of each option based on requirements for each type to support the brigade plan. Ensure the COA has multiple options and considers the many challenges that may occur (route closed, planned link-up does not occur, higher-level push delayed, unexpected chemical use, unexpected shortage, brigade combat team [BCT] main effort goes in an unexpected direction, operation is faster or slower than planned, etc.).

ARRAY FORCES

"Arraying forces allows planners to see combat power currently available to plan with and ensures all available units and capabilities are used as part of COA development. When arraying forces, planners should first list all available units two levels below their echelon along with any key equipment or capabilities ..."[16]

"Planners determine the relative combat power necessary to accomplish each task. Often, planners use planning ratios as a starting point. For example, historically, defenders have a much higher probability of defeating an attacking force approximately three times their equivalent strength when established in a prepared defense. Therefore, as a starting point, commanders assess and determine acceptable risk when defending an avenue of approach (AA) with less than roughly a one-to-three force ratio."[17]

See table 6-2 for a list of recommended planning ratios.

Table 6-2. Recommended planning ratios[18]

Friendly Mission	*Position*	*Friendly to Enemy Ratios*
Delay	Hasty	1 to 6
Defend	Prepared or fortified	1 to 3
Defend	Hasty	1 to 2.5
Attack	Prepared or fortified	3 to 1
Attack	Hasty	2.5 to 1
Counterattack	Flank	1 to1
Penetration (lead element)	Prepared or fortified	18 to 1

"The initial array identifies the total number of units needed, and it identifies possible methods of dealing with enemy forces and stability tasks. If the number arrayed is less than the number available, planners place additional units in a pool for use when they develop the initial concept of operations. If the number of units arrayed exceeds the number available, and the difference cannot be compensated for with intangible factors, the staff determines whether the COA is feasible or not. Ways to make up shortfalls include requesting additional resources, accepting risk in that portion of the area of operations (AO), or executing tasks required for the COA sequentially rather than simultaneously."[19]

Lesson/best practice. Staffs may split into two planning teams to develop separate COAs. Before refining the concept or concepts, both teams should brief their initial scheme of maneuver to the planning staff. This ensures that COAs are clear and distinguishable to enable supporting staff sections to allocate resources and develop their concepts of support. During the refinement step, the individual(s) depicting the enemy should not only be able to describe disposition and enemy COAs, but task and purpose down to the same echelon that friendly forces will plan. The reverse warfighting function (WfF) analysis submitted during MA should provide an excellent starting point for assessing relative advantages for threat and friendly forces. Planning ratios often reflects the likelihood a unit will be successful more than half of the time; exceeding these is preferable.

DEVELOP THE BROAD CONCEPT

Lesson/best practice. The broad concept is not a checklist of what must be in the concept of operations but will vary depending on mission and echelon. For example, a battalion attacking to seize an objective likely does not have any themes/messages it is concerned about delivering. Planners ensure the concept is concise and relevant to the mission.

In developing the broad concept of operations, the staff describes how arrayed forces will accomplish the mission within the commander's intent. The broad concept concisely expresses the how of the commander's visualization, and it will eventually provide the framework for the concept of operations. The staff develops the initial concept of operations for each COA and expresses it in both narrative (COA statement) and graphic forms (COA sketch). Planners include graphic control measures necessary to enhance understanding of the COA. A sound COA should present an overall combined arms approach to accomplish the mission and is flexible enough to support sequels or unforeseen events during execution. The initial concept of operations includes, but is not limited to, the following (**Note.** Some are mission dependent):[20]

- The purpose of the operation.
- A statement of where the commander will accept operational or tactical risk.
- Identification of critical friendly events and transitions between phases (if the operation is phased).
- Designation of the decisive operation, along with its task and purpose, linked to how it supports the higher echelon headquarters' concept.
- Designation of the operational framework for this operation: deep-close-rear, main and supporting effort, or decisive-shaping-sustaining.

- Designation of the reserve, including its location and composition.
- Reconnaissance and security activities.
- Identification of maneuver options that may develop during an operation.
- Location of engagement areas (EAs), attack objectives, or counterattack objectives.
- Assignment of subordinate AOs.
- Scheme of fires.
- Concept of sustainment.
- Scheme of protection.
- Integration of obstacle effects with maneuver and fires.
- Priorities for each warfighting function (WfF).
- Themes, messages, and means of delivery (These are mission dependent and not a requirement if unnecessary).
- Military deception operations (on a need-to-know basis, not briefed to the entire staff).
- Key control measures.
- Essential stability tasks as necessary.

"Planners select control measures, including graphics, only as necessary to control subordinate units during an operation. Control measures establish responsibilities and limits that prevent subordinate units' actions from impeding one another. These measures also foster coordination and cooperation between forces without unnecessarily restricting freedom of action. Good control measures enhance decision making and individual initiative."[21]

Lesson/best practice. Develop concepts of intelligence, fires, sustainment, protection, as well as C2 to support the maneuver plan; some aspects of a support concept may work for multiple COAs, and others may require significant changes (such as the shift between air and ground movement). Additionally, identify potential decision points and indicate likely time/space to implement them. The staff only needs to identify what/where/when at this stage and will complete decision products during war gaming.

ASSIGN HEADQUARTERS

"After refinement of the concept, planners create a task organization by assigning headquarters to groupings of forces. They consider the types of units to be assigned to a headquarters and the ability of that headquarters to control those units. Generally, a headquarters controls at least two subordinate maneuver units and generally no more than five (commanders and planners must also carefully consider the maximum number, ensuring they do not overextend their span of control) …. If planners need additional headquarters, they note the shortfall and resolve it later."[22] "Planners ensure all headquarters are accounted for and that all headquarters are either commanding and controlling troops or, if a headquarters does not have any assigned troops, it is given a mission appropriate to its organization."[23] During this step, you can also review command relationships or special requirements for operations, such as a passage of lines or air assault.[24]

PREPARE STATEMENT AND SKETCH

Lesson/best practice. A COA consists of a statement and a sketch describing the concept of operations. It is not a plan. Although all WfFs may be included, it should be centered around the friendly scheme of maneuver, based on the situation template; and it should include the concept of fires. The COA must be supportable using the other WfFs, but the staff should guard against slowing down the process by articulating those in detail at this point.

In the absence of a COA team lead, the S-3 prepares a COA statement and supporting sketch for each COA. The COA statement clearly portrays how the unit accomplishes the mission. The COA sketch provides a picture of the combined arms aspects of the concept, including the positioning of forces. Together, the statement and sketch covers the *who* (generic task organization), *what* (tasks), *when*, *where*, and *why* (purpose) for all subordinate units and synchronizes their actions. The COA sketch depicts the array of forces and control measures and includes the following (see figures 6-2 and 6-3):[25]

- The unit and subordinate unit boundaries, including deep, close, rear, and support areas by phase, as necessary.
- Unit movement formations (but not subordinate unit formations).
- The line of departure (LD) or line of contact and phase lines (PLs), if used.
- Reconnaissance and security graphics.
- Ground and air axes of advance.

- Assembly areas, battle positions, strong points, EAs, and objectives.
- Obstacle control measures and tactical mission graphics.
- Fire support coordination and airspace coordinating measures.
- Main effort.
- Location of command posts (CPs) and critical communications nodes.
- Known or templated enemy locations.
- Population concentrations.

A finalized COA statement describes the selected COA in detail. It generally includes—[26]

- Mission.
- Commander's intent.
- Concept of operations.
- If the operation is phased, main and supporting efforts, as appropriate, by phase.
- Scheme of maneuver.
- Scheme of intelligence.
- Scheme of fires.
- Scheme of protection.
- Scheme of engineer operations.
- Scheme of information.
- Concept of sustainment.
- Task and purpose of subordinate units, including priorities for employment of the reserve.
- Concept of C2.
- Initial decision support matrix (DSM) and decision support template (DST).
- Operational risk with identified mitigation.

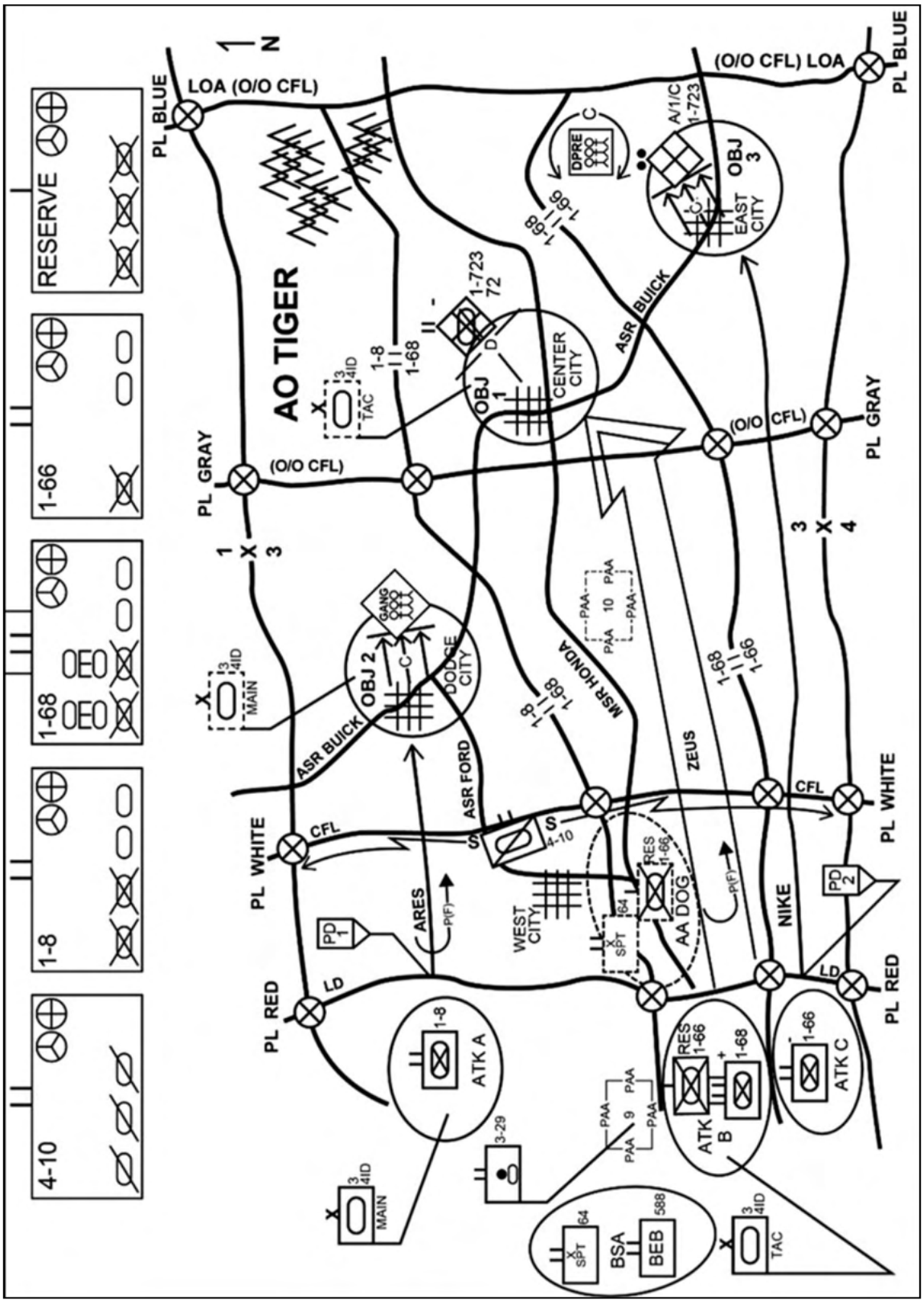

Figure 6-2. Example brigade COA sketch[27]

MISSION: On order, 3rd ABCT destroys remnants of the 72nd BDE in AO TIGER to establish security and enable the host-nation in reestablishing civil control in the region.

COMMANDER'S INTENT: The **purpose** of this operation is to provide a safe and secure environment in AO TIGER to enable the host-nation and other civilian organizations to reestablish civil control, restore essential services, and reestablish local governance within the area. The **key tasks** are: 1) destroy remnants of the 72nd BDE; 2) secure population centers vic OBJs 1, 2, and 3; 3) transition authority to the host nation. At **end state**, the BCT has destroyed remnant enemy forces in AO TIGER, secured population centers, and is prepared to transition responsibility for security to host nation authority.

INFORMATION COLLECTION: Priority of reconnaissance initially to locate enemy forces between PL RED (LD) and PL WHITE. Information collection operations subsequently focus on: 1) identifying the location and disposition of enemy forces vic OBJ 1; 2) observation of MSR HONDA between PL WHITE and PL BLUE; 3) observation of dislocated civilian traffic from CENTER CITY to EAST CITY.

SHAPING OPERATIONS:

4-10 CAV (ME) initially screens along PL WHITE IOT deny enemy reconnaissance and provide freedom of maneuver for follow on operations. On order, conducts FPOL at PL WHITE IOT move 1-8 CAB and 1-66 CAB(-) forward to conduct operations while maintaining contact with enemy.

O/O, **1-8 CAB** (SE) in the north moves from ATK A , crosses LD at PD1 on DIRECTION OF ATTACK ARES, conducts FPOL, and clears hostile gang vic OBJ 2 IOT enable NGO delivery of humanitarian assistance to WEST CITY and DODGE CITY.

TF 1-68 (SE) in the center occupies ATK B IOT prepare for follow on operations.

On order, **1-66 CAB(-)** (SE) in the south moves from ATK C, crosses LD at PD 2, attacks along DIRECTION OF ATTACK NIKE, and clears enemy vic OBJ 3 IOT prevent disruption of DO vic OBJ 1.

588 BEB (SE) occupies BSA IOT set conditions for follow on operations.

RESERVE initially establishes vic ATK B. On order, displace to AA DOG (east). Priority of commitment to DO vic OBJ 1.

DECISIVE OPERATION:

4-10 CAV (SE) conducts FPOL vic PL WHITE IOT move 1-68 CAB (ME) forward to conduct operations while maintaining enemy contact. On order, occupy AA DOG (south) IOT prepare for future operations. BPT conduct security operations in northeastern portion of AO TIGER IOT provide early and accurate warning of enemy or hostile threats to the security of population centers.

1-8 CAB (SE) controls ASRs BUICK and FORD in assigned AO IOT facilitate sustaining operations and prevent civilians interference with DO vic OBJ 1.

O/O, **TF 1-68 (ME)** moves from ATK B along AXIS ZEUS, conducts FPOL, and attacks to destroy elements of 72nd BDE vic OBJ 1 IOT provide a secure environment for the CENTER CITY population. Bypass criteria is platoon-size or smaller.

1-66 CAB(-) (SE) controls DPRE camp vic EAST CITY IOT provide a secure environment and controls ASR BUICK in assigned AO IOT facilitate sustaining operations and prevent civilian interference with DO vic OBJ 1.

588 BEB (SE) conducts operations as required IOT support DO.

RESERVE establishes in AA DOG (east). Priority of commitment is to reinforce DO vic OBJ 1.

FIRES:

(Shaping Operations): Priority of fires to 4-10 CAV, 1-8 CAB, 1-66 CAB, and TF 1-68 initially from PAA 9. O/O displace to PAA 10. HPTs are enemy reconnaissance forces, indirect fire systems, and mechanized Infantry forces.

(Decisive Operations): Priority of fires to TF 1-68 (ME), 1-66 CAB, 1-8 CAB, and 4-10 CAV from PAA 10. HPTs are enemy armor, mechanized infantry forces, and indirect fire systems.

FSCM: CFL initially PL WHITE, O/O PL GRAY, O/O PL BLUE (LOA).

SUSTAINING OPERATIONS:

(Shaping Operations): 64 BSB will initially establish operations in BSA. O/O, establish BSA in AA DOG vic WEST CITY using MSR HONDA, ASR FORD, and ASR BUICK as primary routes IOT sustain operations. Establish FLEs as required to support operations. Priority of support to 4-10 CAV (ME) will be class III, V, maintenance, and medical.

(Decisive Operations): Priority of support to TF 1-68 (ME) will be class III, V, maintenance, and medical. Coordinate with humanitarian relief agencies IOT facilitate rapid restoration of essential services in AO TIGER.

MISSION COMMAND:

(Command): 3rd ABCT commander located with TAC CP and executive officer located with MAIN CP throughout mission.

(Control/Signal): 3rd ABCT **MAIN CP** initially located vic ATK A. O/O, displaces vic OBJ 2. 3rd ABCT **TAC CP** initially located vic ATK B. O/O, displaces vic OBJ 1.

RISK: Based on intelligence reports of negative enemy activity in the northeast mountainous portion of AO TIGER, risk is assumed with no ground maneuver forces initially allocated to conduct reconnaissance or surveillance operations. Mitigation will be accomplished by assigning a BPT mission to 4-10 CAV to conduct security operations IOT provide early and accurate warning of enemy or hostile threats to the security of population centers.

AA	assembly area	BSA	brigade support area	FSCM	fire support coordination measures	ME	main effort	SE	supporting effort
ABCT	armored brigade combat team	BSB	brigade support battalion			MSR	main supply route	SPT	support
AO	area of operations	CAB	combat aviation brigade	FLE	forward logistics element	NGO	nongovermental organization	TAC	tactical
ASR	alternate supply route	CAV	cavalry	FPOL	forward passage of lines	O/O	on order	TF	task force
ATK	attack position	CFL	coordinated fire line	HPT	high payoff targets	OBJ	objective	vic	vicinity
BCT	brigade combat team	CP	command post	ID	infantry division	PAA	position area of artillery		
BDE	brigade	DO	decisive operations	IOT	in order to	PD	point of departure		
BEB	brigade engineer battalion	DPRE	displaced persons, refugees, and evacuees	LD	line of departure	PL	phase line		
BPT	be prepared to			LOA	limit of advance	RES	reserve		

Figure 6-3. Example brigade COA sketch (continued)[28]

CONDUCT A COURSE OF ACTION BRIEFING

Lesson/best practice. Refrain from presenting a COA brief that is more indicative of an operation order (OPORD) brief. Staffs may potentially squander valuable time by overdeveloping a COA, especially if a particular COA is not in adherence with the commander's intent.

"After developing COAs, the staff briefs them to the commander. A collaborative session may facilitate subordinate planning. The COA briefing includes—"[29]

- An updated IPB (highlights from MA or if there are significant changes).
- As many threat COAs as necessary (or specified by the commander). Ideally, it includes the most likely and most dangerous threat COAs.
- The approved problem statement and mission statement (review from MA).
- The commander's and higher echelon's commander's intents (review from MA).
- Deductions resulting from the relative combat power analysis.
- Each COA statement and sketch, including lines of operations and lines of effort, if used. Each COA sketch includes—
  - Assumptions used.
  - Task organization.
  - Concept of operations briefed chronologically, geographically using deep-close-rear-support areas with main and supporting efforts.
  - Scheme of maneuver.
  - Scheme of intelligence.
  - Scheme of fires.
  - Scheme of protection.
  - Scheme of sustainment.
  - Scheme of information.
  - Scheme of C2.
  - Risk.
- COA evaluation criteria (review from MA).
- Commander's comments, decisions, or guidance.
- If required, the staff should be prepared to provide the rationale for each COA, including—
  - Considerations that might affect enemy COAs.
  - Critical events for each COA.

- The reason units are arrayed as shown on the sketch (see Field Manual [FM] 1-02.2, *Military Symbols*, 18 May 2022, for doctrine on COA sketches.)
- The reason the staff used the selected control measures.
- The impact on civilians.
- How the COA accounts for minimum essential stability tasks, as required.
- New facts and new or updated assumptions (briefed by exception, up front).
- Refined COA evaluation criteria.

Lesson/best practice. The initial part of the brief only serves to allow the commander to review the inputs the staff used to develop the COA. The S-2 should focus on reviewing updates that impact enemy COAs and S-3 should focus on higher mission, intent, and reviewing the commander's guidance for developing the COAs.

Other staff sections should only brief by exception, focused on new facts that impact the feasibility of a COA or answer questions the commander had at the end of MA. All other updates should be recorded within running estimates to support COA analysis and order production later.

The majority of a COA development brief should be spent briefing COAs to ensure staff members are addressing commanders' concerns and meeting their intent before going forward.

Although the team lead for a COA briefs the statement directly to the commander, have a second person highlight the unit and tasks being described on the sketch.

SELECT OR MODIFY COURSES OF ACTION FOR CONTINUED ANALYSIS

After the COA briefing, the commander selects or modifies those COAs for continued analysis and issues planning guidance:[30]

- If a commander accepts one or more of the COAs, staff members begin COA analysis.
- The commander may create a new COA by incorporating elements of one or more COAs developed by the staff. The staff then prepares to war-game this new COA. The staff must incorporate those modifications and ensure all staff members understand the changed COA.
- If all COAs are rejected, the staff begins again.

Cajun 6 continued with guidance for the rest of the WfFs. "For protection and sustainment, we need a detailed protection asset synchronization plan and preparedness against a credible chemical, biological, radiological, and nuclear (CBRN) threat. I'm concerned about our ability to support operational decontamination operations. That's a lot of water."

He approved the initial concept for employment of the CAV squadron and movement of the artillery BN tactical command post (TAC) and the brigade's (BDE's) 155 mm battery (C/1-36 FA) into forward positions. He directed the staff focus on COA 1.

He emphasized their primary, alternate, contingency, and emergency (PACE) plan by report type and unit, specifically in retaining communications with the CAV once it moves forward.

"Important," Cajun 6 said with a note of finality, "we are not in position to defend yet. Copperheads and Gators have to fight into position. We need to track their progress. Anything that delays them or if we get a whiff that they won't make it at all, that's a commander's critical information requirement (CCIR), because we'll need to react. So, it is an assumption that we'll get to the terrain we want until we're on it."

The XO directed all staff members to update their running estimates and include the commander's guidance in their concepts of support.

Following the briefing, the Cajun staff made the necessary changes to the initial reconnaissance plan and submitted their finalized products to the S-3 section. The S-3 approved the order and his assistant S-3 (AS3) published warning order (WARNORD) 2 on both upper and lower tactical internet (TI).

Again, the BNs confirmed receipt within 15 minutes.[31]

ENDNOTES

1. FM 5-0, *Planning and Orders Production*, 4 November 2022, pages 5-23 to 5-35.

2. CALL 20-16, *Defense of the Cajun Bayou, The Joint Readiness Training Center Operations Group*, April 2020, page 18.

3. FM 5-0, page 5-23, paragraph 5-91.

4. Ibid, page 5-24.

5. Ibid, paragraph 5-92.

6. Ibid.

7. The steps and substeps of COA development were derived from Army Techniques Publication (ATP) 5-0.2-1, *Staff Reference Guide, Volume 1, Unclassified Resources*, 7 December 2020, page 38, and FM 5-0, pages 5-24 to 5-5-35. The original table is found in ATP 5-0.2-1. It was modified to align doctrinal information from ATP 5-0.2-1 and FM 5-0.

8. FM 5-0, page 5-25, paragraph 5-98.

9. Ibid, pages 5-25 and 5-26, paragraph 5-99.

10. Ibid, page 5-26, paragraph 5-101.

11. Ibid, pages 5-26 and 27, paragraphs 5-102, 5-105, and 5-106.

12. ADP 5-0, page 2-2, paragraph 2-12.

13. FM 3-0, Operations, 1 October 2022, chapter 3, page 3-23, paragraph 3-127.

14. FM 5-0, page 5-27, paragraph 5-112.

15. Ibid, page 5-28, paragraph 5-115.

16. Ibid, paragraph 5-118.

17. Ibid, paragraph 5-119.

18. Ibid, page 5-29.

19. Ibid, paragraph 5-124.

20. Ibid, pages 5-29 and 5-30, paragraph 5-125.

21. Ibid, page 5-30, paragraph 5-126.

22. Ibid, page 5-31, paragraph 5-130.

23. Ibid.

24. Ibid.

25. Ibid.

26. Ibid, pages 5-31 and 5-32.

27. Ibid, page 5-34.

28. Ibid, page 5-35.

29. Ibid, pages 5-32 and 5-33.

30. Ibid, page 5-33.

31. CALL 20-16, page 19.

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CHAPTER 7

The Military Decision-Making Process: Step 4. Course of Action Analysis and War Gaming[1]

Once the group started to address killing the enemy tanks and fighting vehicles, the S-3 took a more active role.

The S-2 identified two main avenues of approach that 1713 Battalion-Sized Detachment (BDET) would use in the attack. Based on the speed of movement, the brigade would only get one real chance to shape those columns using close air support (CAS) and attack aviation.

Cajun 3 picked two locations where, based on the terrain, CAS and attack would have the advantage in temporarily stopping the formations.

The fire support officer (FSO) templated cratering or family of scatterable mines (FASCAM) minefield targets on each route and calculated the time it would take to emplace them. The S-2 backed up the enemy by that same amount of time and noted the time phase line (PL) at which he would have to identify which route the enemy main effort was using.

The collection manager added named areas of interest (NAIs) at those locations and noted the latest time information of value for each in case the brigade combat team (BCT) collection plan had not already identified the enemy main effort per the event template.[2]

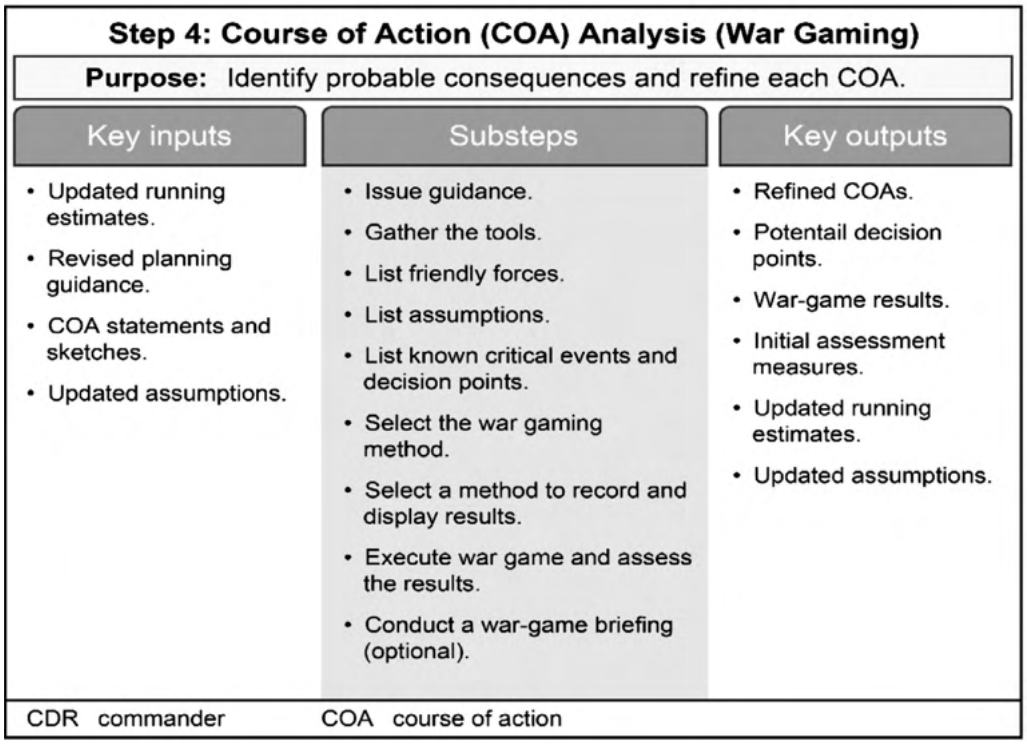

Figure 7-1. Step 4-COA analysis and war gaming[3]

Lesson/best practice. Leverage time during course of action (COA) analysis to further develop COAs and add details and decision points. Refrain from conducting incidental war-gaming discussions during COA development or mission analysis (MA). Incorporate sufficient time in the military decision-making process (MDMP) timeline to conduct a thorough war gaming so staffs can adequately capture friction points or potential adjustments to the COA. This facilitates developing COA-specific commander's critical information requirements (CCIRs) and corresponding decision points. From there, the staff can produce a more refined decision support matrix (DSM).

"COA analysis (or war gaming) enables commanders and staffs to identify difficulties, coordination problems, and probable consequences of planned actions for each COA being considered. It helps them to synchronize combat power and resources, identify and mitigate risk, exploit opportunities, reduce friction, and improve COAs. COA analysis may require commanders and staffs to revisit parts of a COA as discrepancies arise. COA analysis not only appraises the quality of each COA, but it also uncovers potential execution problems, decisions, and contingencies. In addition, COA analysis influences how commanders and staffs understand a problem, how they understand enemy strengths and weaknesses, and how they determine what may require the planning process to restart when the desired end state is not achieved."[4]

"War gaming further allows the staff to synchronize the six warfighting functions (WfFs) for each COA. It also enables the commander and staff to"—[5]

- Determine how to maximize the effects of combat power while protecting friendly forces and minimizing collateral damage.
- Refine the visualization of the operation.
- Anticipate operational events.
- Determine conditions and resources required for success.
- Determine when and where to apply force capabilities.
- Identify coordination needed to produce synchronized results.
- Determine the most flexible COA.

Lesson/best practice. War gaming is a technique to compare various COAs against criteria defined for that purpose. In a time-constrained, tactical environment, a single, directed COA is developed. In this case, do not war-game to complete the COA. Rather, staffs should complete the COA first by articulating and recording all WfF actions across time on the synchronization matrix (SYNCMAT). Once done, war-game action-reaction-counteraction can proceed at a reasonable pace and time (led by the S-3 [operations officer] and S-2 [intelligence officer], and adjudicated by the executive officer [XO]). Since the plan is already complete, the remainder of the staff listens and only provides input if refinements to the plan are needed.

COA analysis is a disciplined process, with rules and steps that attempt to visualize the flow of an operation. The process considers the friendly force strength and disposition, the enemy's capabilities, and how those will play out when executing possible COAs. It attempts to understand the impact and requirements of civilians in the area of operations (AO), and other aspects of the situation. "The simplest form of COA analysis (or war gaming) is the manual method, often using a tabletop approach with blowups of matrixes and templates. The most sophisticated form of COA analysis (or war gaming) is computer-aided modeling and simulation. Typically, most Army units and planning teams use the war-gaming method, and it is the primary method discussed."[6]

This basic war-gaming method (modified to fit the specific mission and environment) applies to offensive, defensive, and stability or defense support of civil authorities operations. When conducting any COA analysis, commanders and staffs perform the process and produce the outputs shown in figure 7-1. At the end of war gaming, the staff should have refined the COAs, refined their understanding of the operating environment, and synchronized activities across the organization. COA analysis will allow the staff to make a recommendation about which COA best supports the commander's visualization.[7]

Lesson/best practice. Going into the war game with a single COA that is complete (meaning all warfighting products are filled out to an 80 to 90 percent solution) allows staffs to focus on war-gaming the COA instead of completing the plan (during the war game). During the action-reaction-counteraction drill, staffs validate the following:

- Do the subordinate elements have the right task/purpose?
- Do subordinate elements have the necessary strength and capabilities to achieve their task/purpose?
- Is there anything that must be resynchronized?
- Are all the necessary graphics to command and control (C2) the possible enemy options produced?
- Are all the right decisions in the right place?

Lesson/best practice. If you do not have a complete COA (for example, the fighting products are not done in draft), then your war game will be a synchronization drill to complete those products instead of a war game. This will likely prevent you from doing the war game in depth (a complete war game from beginning to end) because you are building the fighting products. Starting the war game with a complete plan (or COA) allows war gaming using the box or critical event methods.

Helpful COA Analysis Techniques:[8]

The following techniques can reduce the friction of the COA analysis process:

- During COA development, designate a lead for COA analysis and have that individual, with personnel from across the staff, prepare the location and visual representation. As soon as all staffs complete COA development, they can break and immediately begin COA analysis without losing momentum.
- Prepare written notes for the recorder. Task, purpose, actions, orders, and reports are verbally presented, but a briefer also should handwrite notes to the recorder with all information, including unit, turn number, and step (action, reaction, or counteraction). Written notes speed the COA process because the recorder has all information in front of them. A note stating "no change" ensures information is not accidently omitted.
- To avoid surprises, and if time allows, the intelligence officer should brief the leader on the threat's plan before beginning the war game. Optimally, they brief the event matrix to ensure the threat uses the same matrix when war gaming multiple COAs.
- Avoid pre-filling the SYNCMAT. Pre-filling saves time, but a change in the COA requires that all related cells be updated; if this does not occur because cells are pre-filled, the error is compounded. An alternative is to pre-fill only the initial set and the action portion.
- To synchronize the operation in time, space, and purpose, tie turns to a date-time group. Stating that a turn lasts from a certain h-hour to another, or lasts an entire phase, creates confusion. Remove confusion by stating a turn period in time only. For example, turn 1 lasts from 0601 hours to 1000 hours.
- Have a facilitator in charge of the war game so the leader can remain objective. A facilitator ensures the war-game process runs smoothly while the leader focuses on the problem.
- The best person to brief actions of a unit or capability is either a liaison officer (LNO) or a planner for that unit or capability.
- During COA development, COA analysis, and COA rehearsal—and given alternative threat COAs—spend one-third of available time on the base plan and two-thirds of available time on branches and sequels. A battle never progresses according to plan, therefore additional time spent on branches and sequels is value added.
- Although a properly executed war game resembles a rehearsal, with a counteraction step included, do not wait until the rehearsal to identify and reduce friction points.
- If time allows, take a friendly COA (or all friendly COAs) and analyze it against several different threat COAs.

ISSUE GUIDANCE

The staff begins by disseminating guidance provided by the commander following COA development. The XO should review and adjust the planning timeline to ensure the war gaming is detailed enough to develop required outputs and allows timely production of an order for subordinates before the rehearsal. Other guidance that may be provided includes—[9]

- Technique used to conduct COA analysis and expected participants.
- Number of COAs to analyze.
- Objective of the analysis, such as synchronize action at the decisive point, decisive operation, critical event, decision point, phase of the operation, or as time allows the entire operation.
- Type of visual representation and responsible staff to develop it.
- Method used for analysis.
- Recording technique.
- Units or capabilities used.
- Roles and responsibilities of participants.
- Initial problem set.
- COA and COA analysis assumptions.
- Time period covered.
- Any other specific guidance necessary for staff members to prepare.

GATHER TOOLS

After the commander issues guidance, the next task for COA analysis is for the staff to gather the necessary tools to conduct the war game. The chief of staff (COS) or XO directs the staff to gather tools, materials, and data for the war game. The battalion (BN) or brigade XO, intelligence staff officer (S-2), operations officer (S-3), and the fires cell decide on each event (turn) to be war-gamed and the start and end date or time. Staff members bring an updated running estimate including facts, assumptions, constraints, limitations, specified tasks, implied tasks, and the status of key capabilities. Staffs should also include additional relevant information for their warfighting function to support the war-game method. War gaming is done with maps, sand tables, computer simulations, C2 information systems, or other tools that accurately reflect the terrain and enemy forces. The staff posts the COA on a map displaying the AO. As with each step of the MDMP, having effective planning standard operating procedures (PSOPs) should expedite this process.[10]

The tools required include, but are not limited to—[11]

- Running estimates.
- Threat templated COAs and models.
- Civil considerations overlays, databases, and data files.
- Modified combined obstacle overlays (MCOOs) and terrain effects matrixes.

- A recording method.
- Completed COAs, including graphics.
- SYNCMATs and decision support templates (DST) and matrixes.
- A means to post or display enemy and friendly unit symbols and other organizations.
- A map or sketch of the AO.

Beyond the products that will assist the entire team in conducting the war game, each staff section should bring those items it will refine in anticipation of moving to orders production.

LIST FRIENDLY FORCES

"The planning team lists all units two levels below its echelon and any critical or key assets and

capabilities that can be committed to the operation, paying special attention to support relationships and constraints. This list includes assets from all participants operating in the AO. The friendly forces list remains constant for all COAs."[12]

LIST ASSUMPTIONS

"The commander and staff review previous assumptions for continued validity and necessity for each COA. Any changes resulting from this review are captured."[13]

LIST KNOWN CRITICAL EVENTS AND DECISION POINTS

"**A *critical event* is an event that directly influences mission accomplishment**. Critical events include events that trigger significant actions or decisions (such as commitment of an enemy reserve), complicated actions requiring detailed study (such as a passage of lines), and essential tasks. The list of critical events includes major events from the unit's current position through mission accomplishment. It includes reactions by civilians that potentially affect operations or require allocation of significant assets to account for essential stability tasks."[14]

"A decision point is a point in time and space when the commander or staff anticipates making a key decision concerning a specific COA. Key decisions are decisions that commanders make. During large-scale combat there may be circumstances, based on the tempo and anticipated operational environment (OE), where a commander delegates specific decisions with a set of criteria as directed by the commander, to a second in command. Decision points may be associated with the status of the friendly force or ongoing operations, and they may be associated with CCIRs that describe what information the commander needs to make the anticipated decision. Decision points do not dictate what the decision is, only that the commander must make one, and when and where it should be made to maximize impact on friendly or enemy COAs or to accomplish stability tasks."[15]

SELECT THE WAR-GAMING METHOD

"When war-gaming, there are three recommended war-gaming methods: belt, avenue-in-depth, and box. Each considers the area of interest (AOI) and all enemy forces that can affect the outcome of the operation. Planners can use these methods separately or in combination and modify them as appropriate for long-term operations dominated by stability."[16]

"The belt method divides the AO into belts (areas) running the width of the AO. The shape of each belt is based on the factors of mission, enemy, terrain and weather, troops and support available,

time available, civil considerations [mission variables] (Army) (METT-TC) (I). The belt method works best when conducting offensive and defensive tasks on terrain divided into well-defined cross-compartments, during phased operations (such as gap crossings, air assaults, or airborne operations), or when the enemy is deployed in clearly defined belts or echelons. Belts can be adjacent to or overlap each other."[17]

"This war-gaming method is based on a sequential analysis of events in each belt. Commanders prefer it because it focuses simultaneously on all forces affecting a particular belt. A belt might include more than one critical event. Under time-constrained conditions, the commander can use a modified belt method. The modified belt method divides the AO into not more than three sequential belts. These belts are not necessarily adjacent or overlapping, but they focus on critical actions throughout the depth of the AO."[18] See figure 7-2 for a depiction of the belt method.

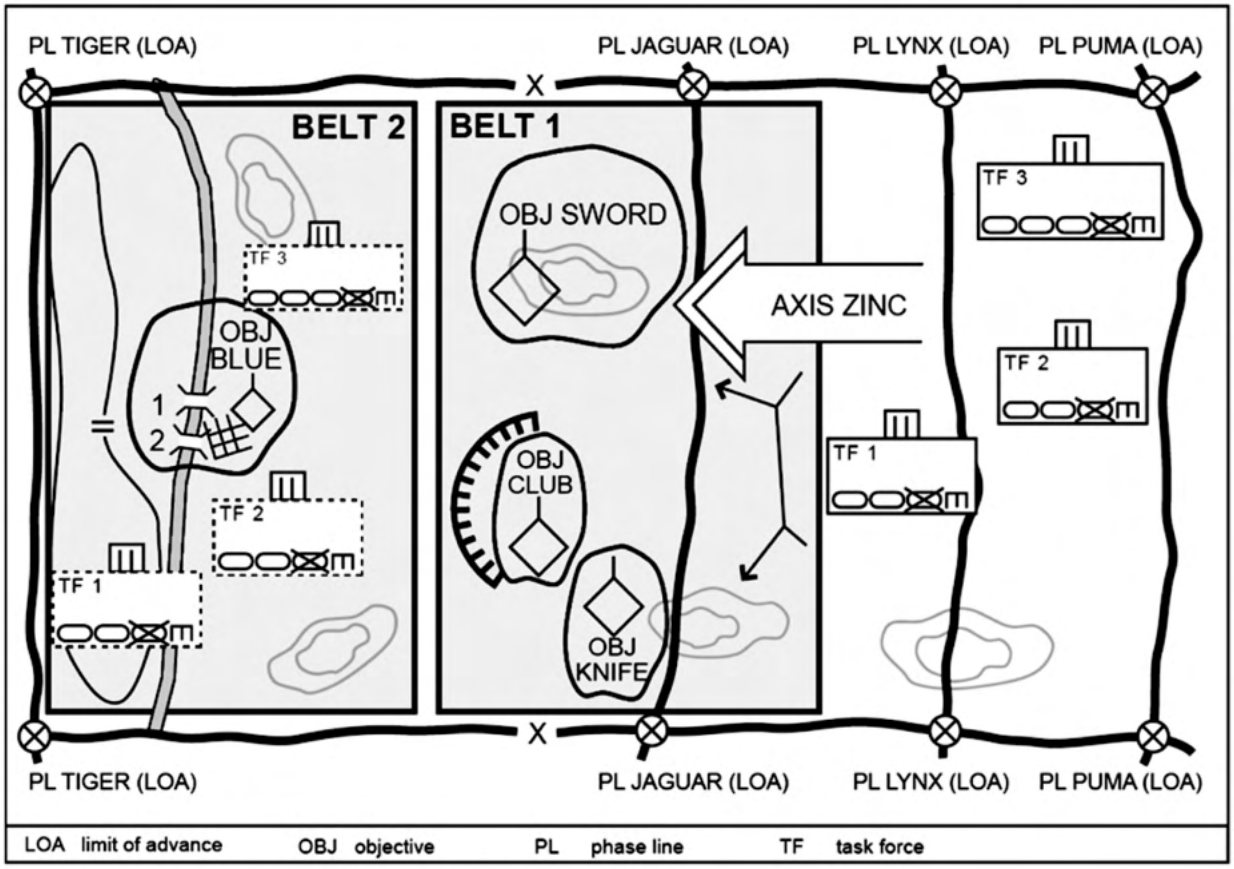

Figure 7-2. Sample belt method[19]

Lesson/best practice. The belt method is effective when the enemy is in clearly defined areas such as disruption, battle, and support zones. The belt method also clearly distinguishes boundaries for rear-, deep-, and close- area activities among friendly forces. Staffs may focus on critical events or the decisive operation in a time-constrained environment.

"The avenue-in-depth method focuses on one avenue of approach (AA) at a time, beginning with the decisive operation. This method is good for offensive COAs or in the defense when canalizing terrain inhibits mutual support."[20] See figure 7-3 for a depiction of the avenue-in-depth method.

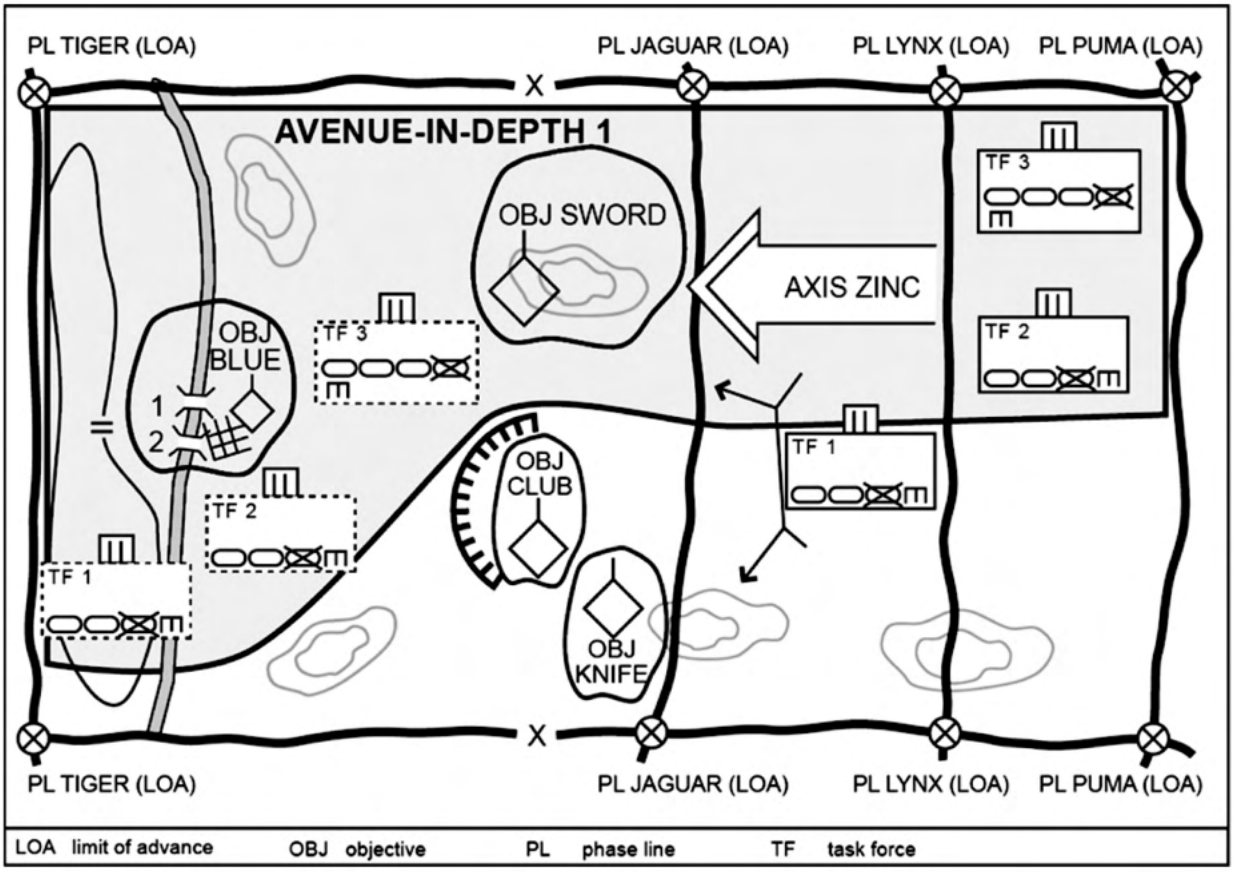

Figure 7-3. Sample avenue-in-depth method[21]

Lesson/best practice. The avenue-in-depth method is effective when friendly forces can maneuver along a single AA throughout the depth of an AO (because of canalizing terrain). This technique looks at all subordinate units' activities from start to finish within an AO. This technique does not seek to tie activities to those of adjacent units.

"The box method is a detailed analysis of a critical event, such as an engagement area (EA), a wet gap crossing site, or a landing zone. It works best in a time-constrained environment, such as a hasty attack. The box method is particularly useful when planning operations in noncontiguous AOs. When using this method, the staff isolates an area and focuses on critical events in it. Staff members assume that friendly units can handle most situations in the AO and focus their attention on the critical event or events."[22] See figure 7-4 for a depiction of the box method.

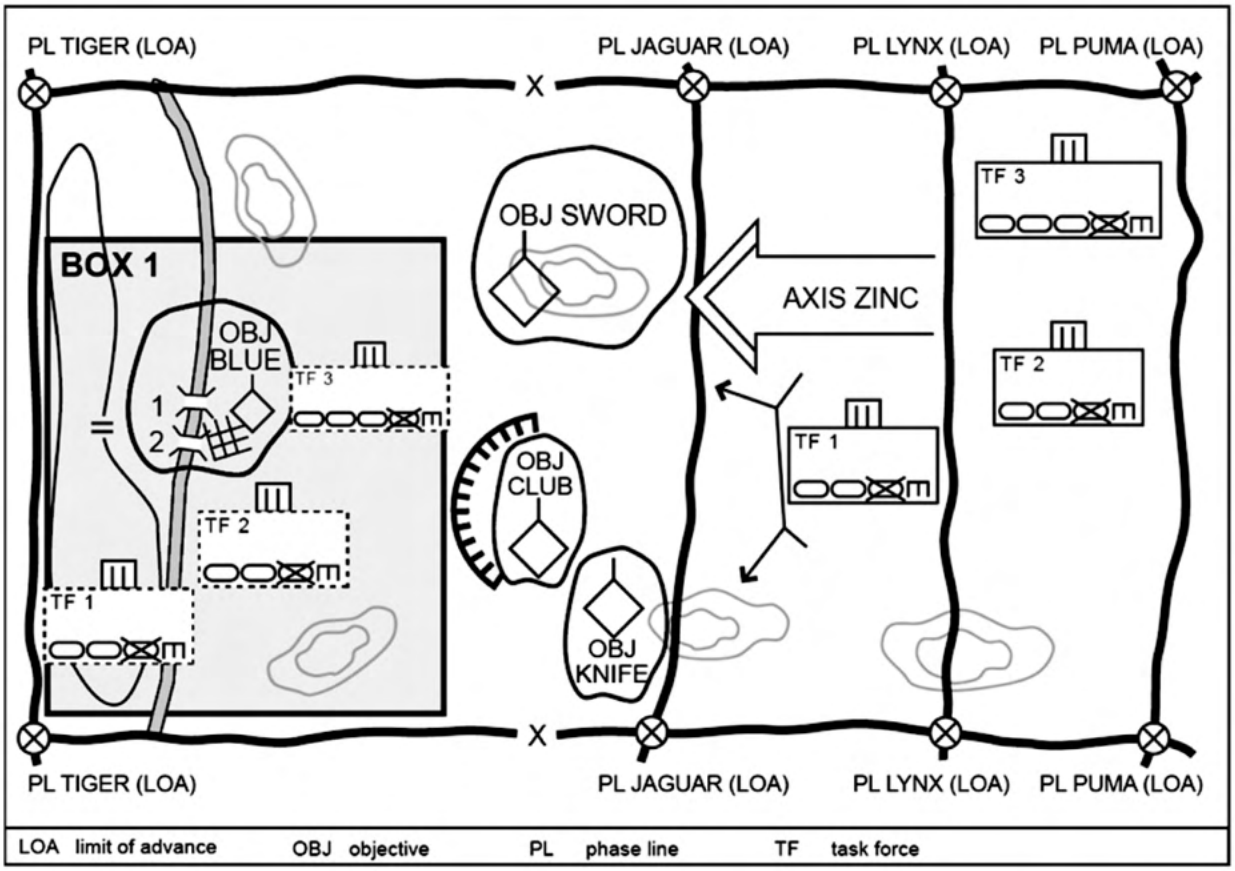

Figure 7-4. Sample box method[23]

Lesson/best practice. The box method is effective when time limitations only allow staffs to conduct detailed synchronization of a few crucial areas. This technique relies on staffs to independently fill in all activities that are not war gamed, risks lack of cross function discussion, and relies on expertise of those staff officers to understand implications of their recommendations on other WfF activities.

SELECT METHOD TO RECORD AND DISPLAY RESULTS

"Two methods commonly used to record and display results are the SYNCMAT method and the sketch note method (see figure 7-5 and table 7-1). … The amount of detail depends on the time available. Unit standard operating procedures (SOPs) should address details and methods of recording and displaying war-game results."[24]

Lesson/best practice. Some units use a combination of a SYNCMAT and sketch note, where briefers write down the details for their action and turn it into a recorder after briefing the group to allow the staff to move forward while details are typed into the synchronization matrix. Assign an operator and Command Post Computing Environment (CPCE) system in the war-gaming area to input additional graphics and retain in a folder for distribution, pending approval. Having a map in addition to the war-gaming table that has operations, fires, and sustainment overlays for recording adjustments to/additional graphic control measures, allows staff to work away from the-war game table to record grids and discuss topics not related to the current turn.

"The SYNCMAT is a tool the staff uses to record the results of war gaming. It helps them synchronize a COA across time, space, and purpose in relationship to potential enemy and civil actions."[25]

"The SYNCMAT typically identifies those pieces of critical information necessary to guide, record, and synchronize the war game, such as"—[26]

- Weather and light data.
- Area of influence critical information.
- Enemy actions.
- Population or civilian action when expected to impact operation.
- Decision points.
- Control measures.
- Friendly actions.
- Risk.
- Other organizations or partners potentially impacting a COA when appropriate.

See figure 7-5 for an example of a COA synchronization matrix.

	Turn:	Initial set	Turn 1			Turn 2		
	H-hour:	H-hour	H+0 – H+6			H+6 – H+12		
	DTG:	18 0400 JUN 18	18 0401–1000 JUN 18			18 1001–1600 JUN 18		
	Step:	Initial set	Action	Reaction	Counteraction	Action	Reaction	Counteraction
Area of influence	Weather and light							
	Division fires							
	USAF							
	Adjacent units							
	Enemy decision points							
Enemy	9-63 BN							
	3-641 BDET							
	1-63 BDET							
	2-63 BDET							
	3-63 BDET							
	5-63 BDET							
	640 AR BN							
	Fires							
	55 EN BN							
Civilian reaction								
Decision points								
Risk to mission identified								
Movement and maneuver	1-16 IN (DO)							
	2-34 AR (SO1)							
	3-66 AR (SO2)							
	1-4 CAV (SO3)							
	A/1-6 CAB							
	C/3-66 AR (Reserve)							
Intel	Shadow #1							
	HUMINT Team #124							
	SIGINT Asset #1							
Fires	1-5 FA							
	CAS							
	360 POG							
	A/407 CA							
Protection	1 EN BN							
	62 EN Co							
	287 MP Co							
	63 CM							
	704 EOD Tm							
	A/1-188 AD							
Sustain-ment	101 BSB							
	Brigade Support Area (BSA)							
Command and control	MAIN							
	TAC							
	RETRANS #1							
	IDP							

Figure 7-5. Example brigade COA synchronization matrix[27]

"The sketch note method uses brief notes concerning critical locations or tasks and purposes. These notes refer to specific locations or relate to general considerations covering broad areas. The commander and staff mark locations on the map and on a separate war-game worksheet. Staff members use sequential numbers to link the notes to the corresponding locations on the map or overlay. Staff members also identify actions by placing them in sequential action groups, giving each subtask a separate number. They use the war-game worksheet to identify all pertinent data for a critical event."[28] See table 7-1 for an example of the sketch note method.

"They (staff members) assign each event a number and title and use the columns on the worksheet to identify and list in sequence"—[29]

- Sequence of events.
- Units and assigned tasks.
- Expected enemy actions and counteractions or reactions.
- Friendly reactions or actions and counteractions.
- Total assets needed for the task.
- Estimated time to accomplish the task.
- Decision point tied to executing the task.
- CCIRs.
- Control measures.
- Remarks.

Table 7-1. Sample sketch note method[30]

Critical Event	***Seize OBJ Sword***
Sequence number	1
Action	TF 3 attacks to destroy enemy company on OBJ SWORD
Reaction	Enemy company on OBJ CLUB counterattacks
Counteraction	TF 1 suppresses enemy company on OBJ CLUB
Assets	TF 3, TF 1, and TF 2
Time	H+1 to H+4
Decision point	DP 3a and 3b
Commander's critical information requirements	Location of enemy armor reserve west of PL JAGUAR
Control measures	AXIS ZINC and support by fire position 1
Remarks	none
DP: decision point OBJ: objective PL: phase line TF: task force	

EXECUTE WAR GAME AND ASSESS THE RESULTS

"War gaming is a conscious attempt to visualize the flow of operations, given the friendly force's strengths and dispositions, the enemy's capabilities and possible COAs, and civilian locations and activities. During the war game, the commander and staff try to foresee the actions, reactions, and counteractions of all participants, including civilians. The staff analyzes each selected event. It identifies tasks that the force one echelon below it must accomplish, using assets two echelons below the staff. Identifying strengths and weaknesses of each COA allows the staff to adjust COAs, as necessary."[31]

"The war game focuses on actors rather than the tools used. Staff members who participate in war gaming should be the individuals deeply involved in developing COAs. Red team members (who can provide alternative points of view) provide insight on each COA. In stability tasks, subject matter experts in areas such as economic or local governance can also help assess the probable results of planned actions, including analytically identifying possible unintended effects."[32]

"The war game follows an action-reaction-counteraction cycle. Actions are those events initiated by the side with the initiative. Reactions are the opposing side's actions in response. With regard to stability tasks, the war game tests the effects of actions, including intended and unintended effects, as they stimulate anticipated responses from civilians and civil institutions. Counteractions are how the first side improves its action from the expected responses to reactions. This sequence of action-reaction-counteraction continues until the event to be covered is completed or until the commander decides to use another COA to accomplish the mission."[33]

"The staff considers all possible forces, including templated enemy forces outside the AO that can influence the operation. The staff also considers the actions of civilians in the AO, especially when fighting in dense urban environments or when conducting consolidation of gains. The staff evaluates each friendly move to determine the assets and actions required to defeat the enemy at that point or to accomplish stability tasks. The staff continually considers branches to the plan that promote success against likely enemy counteractions or unexpected civilian reactions. Lastly, the staff lists assets used in the appropriate columns of the worksheet or sketch note."[34]

"The planning team examines many areas during the war game. These include, but are not limited to"—[35]

- All friendly capabilities.
- All enemy capabilities and critical civil considerations that impact operations.
- Movement considerations.
- Closure rates.
- Lengths of columns.
- Formation depths.

- Ranges and capabilities of weapons systems.
- Desired effects of fires.
- Templated enemy forces outside the AO.
- Sustainment.
- Time and space, including sequencing, phasing, and boundaries.
- Branches and sequels.

"The commander and staff consider how to create conditions for success, protect the force, and shape an OE. Experience, historical data, SOPs, and doctrinal literature provide much of the necessary information. During the war game, staff officers continuously assess and mitigate risk for their functional areas for each COA whenever possible. They then propose appropriate control measures. They continually assess the risk of adverse reactions from population and media resulting from actions taken by all sides in the operation. Staff officers develop ways to mitigate those risks."[36]

"The staff identifies the required assets of the WfFs to support the concept of operations, including those needed to synchronize sustaining operations. If requirements exceed available assets, the staff recommends priorities based on the situation, commander's intent, and planning guidance. To maintain flexibility, the commander may decide to create a reserve to maintain assets for unforeseen tasks or opportunities."[37]

"The commander can modify any COA based on how things develop during the war game. When doing this, the commander validates the composition and location of the decisive operation, shaping operations, and reserve forces. Control measures are adjusted, as necessary. The commander may also identify situations, opportunities, or additional critical events that require more analysis. The staff performs this analysis quickly and incorporates the results into the war-gaming record."[38]

"An effective war game results in the commander and staff refining, identifying, analyzing, developing, and determining several effects."[39] See table 7-2 for a sample list of effective war-game results.

Table 7-2. Sample effective war-game results[40]

The commander and staff refine (or modify)—
Each course of action, to include identifying branches and sequels that become on-order or be-prepared missions. The locations and times of decisive points. The enemy event template and matrix. The task organization, including forces retained in general support. Control requirements, including control measures and updated operational graphics. Commander's critical information requirements and other information requirements—including the latest time information is of value—and incorporate them into the information collection plan.
The commander and staff identify—
Key or decisive terrain and determining how to use it. Tasks the unit retains and tasks assigned to subordinates. Likely times and areas for enemy use of weapons of mass destruction and friendly chemical, biological, radiological, and nuclear defense requirements. Potential times or locations for committing the reserve. The most dangerous enemy course of action. The most likely enemy course of action. The most dangerous civilian reaction. Locations for the commander and command posts. Critical events. Requirements for support of each warfighting function. Effects of friendly and enemy actions on civilians and infrastructure and on military operations. Locations of named areas of interest, target areas of interest, decision points, and intelligence requirements needed to support them. Analyzing, and evaluating strengths and weaknesses of each course of action. Hazards, assessing their risk, developing control measures for them, and determining residual risk. The coordination required for integrating and synchronizing interagency, host-nation, and nongovernmental organization involvement.
The commander and staff analyze—
Potential civilian reactions to operations. Potential media reaction to operations. Potential impacts on civil security, civil control, and essential services in the area of operations.
The commander and staff develop—
Decision points. A synchronization matrix. A decision support template and matrix. Solutions to achieving minimum essential stability tasks in the area of operations. The information collection plan and graphics. Themes and messages. Fires, protection, and sustainment plans and graphic control measures.
The commander and staff determine—
The requirements for deception and surprise. The timing for concentrating forces and starting the attack or counterattack. The movement times and tables for critical assets, including information systems nodes. The estimated duration of the entire operation and each critical event. The projected percentage of enemy forces defeated in each critical event and overall. The minimum essential tasks that the unit can or must accomplish. The targeting requirements in the operation, to include identifying or confirming high-payoff targets and establishing attack guidance. The allocation of assets to subordinate commanders to accomplish their missions. The media coverage and impact on key audiences.

CONDUCT A WAR-GAME BRIEFING (OPTIONAL)

"Time permitting, the staff delivers a briefing to ensure everyone understands the results of the war game. Typically, this briefing is not given to the commander. The staff uses the briefing for review and ensures that it captures all relevant points of the war game for presentation to the commander, COS, XO, or deputy or assistant commander. In a collaborative environment, the briefing may include selected subordinate staffs. A war-game brief generally includes"—[41]

- Higher echelon headquarters' mission, commander's intent, and brief overview of scheme of maneuver.
- Updated intelligence preparation of the battlefield (IPB).
- War-gaming method used.
- Friendly and enemy COAs that were war-gamed, including—
  - Assumptions used.
  - Critical events.
  - Concept of operations.
  - Analysis results.
  - Modifications made.
- Additional commander's guidance.
- Additional COA analysis responsibilities by WfF.

GENERAL WAR-GAMING RESPONSIBILITIES

"Paragraphs 5-171 through 5-190 (of FM 5-0) discuss specific individual and staff section responsibilities for war gaming."[42]

Table 7-3 depicts war-gaming responsibilities products. This table was informed by FM 5-0 and Army Techniques Publication (ATP) 5-0.2-1. Unit PSOPs should delineate staff-section duties, responsibilities, products, and outputs.

Table 7-3. Techniques for war-gaming responsibilities[43]

Staff	Common Duties	Products to Update
XO	-Unbiased controller. -Maintains timelines and time allocation for COA analysis.	-Planning and operational timelines
S-3	-Role plays friendly commander (if not available). -Assigns recorder for synchronization matrix. -Identifies branch or sequel planning. -Responsible for positioning subordinate units. -Develops additional GCM to manage terrain.	-Synchronization matrix -Decision points -DSM -DST -FFIR -IC plan (with S-2)
OPS SGM	-Ensures setup of war-game site before execution. -Ensures 1:50k maps and overlays are available. -Ensures MCS is available for recording changes to GCMs.	
FSO	-Develops fire support plan and assigns priorities of fire. -Validates shooter-to-sensor links IAW scheme of maneuver. -Records PAA occupation plan. -Forecasts ammunition consumption by turn. -Develops additional fire support coordination measures. -Records adjustments to radar order.	-FSEM -HPTL -AGM -TSS -Fires overlays
AS3/CBRN/ENG/Air	-Assigns priorities of protection and engineer support. -Adjusts air defense weapon control status. -Updates personal recovery plans. -Establishes decontamination measures. -Identifies new risks and hazards; establishes risk control and mitigation measures. -Records new RFIs and assumptions (for all).	-ACM overlay -MCOO -Obstacle overlay -CAL/DAL -Risk-reduction plan
S-2 “Red” Adversary	-Role plays enemy; provides reactions to friendly actions during war gaming. -Records anticipated enemy battle damage. -Role plays hybrid forces and criminal element.	-Enemy COAs -Enemy event template -Enemy DST
S-2 “Blue” Friendly	Modifies ICP. -Modifies information requirements. -Updates NAIs. -Updates weather impacts.	-ICP (with S-3) -HVT -NAI overlay -PIR
S-4	-Assigns priority of support. -Updates critical logistical requirements and distribution plan. -Records movement tables. -Determines shortfalls and recommends solutions. -Records potential solutions to detainee or civilian activities.	-Sustainment overlay -Movement tables
S-1	-Assesses potential battle losses. -Medical evacuation planning. -Synchronizes execution of Army health services.	-Task organization
S-6	-Recommends communication nodes. -Recommends CP displacements/survivability. -Recommends EMS operations.	-PACE
IA/CA	-Recommends communication of themes and messages. -Recommends mitigation to civilian activities.	
COA Team Leads	-Briefs activities from COA statement and sketch to ensure understanding of each turn. -Records adjustments to COA statement and sketch. -Assesses COFM or troop-to-task throughout.	

HOW TO MASTER WARGAMING

The Center for Army Lessons Learned (CALL) works closely with combat training centers (CTCs) to provide lessons and best practices for the Army. These lessons and best practices are codified in CALL handbooks and other mediums. CALL handbook 20-06 (see figure 7-6), *How to Master Wargaming: Commander and Staff Guide to Improving COA Analysis*, is one tool, in conjunction with Army doctrinal resources, to assist COA analysis and war gaming. Handbook 20-06 can be found on the CALL public website: https://api.army.mil/e2/c/downloads/2023/01/31/bf65892d/20-06-how-to-master-wargaming-public.pdf.

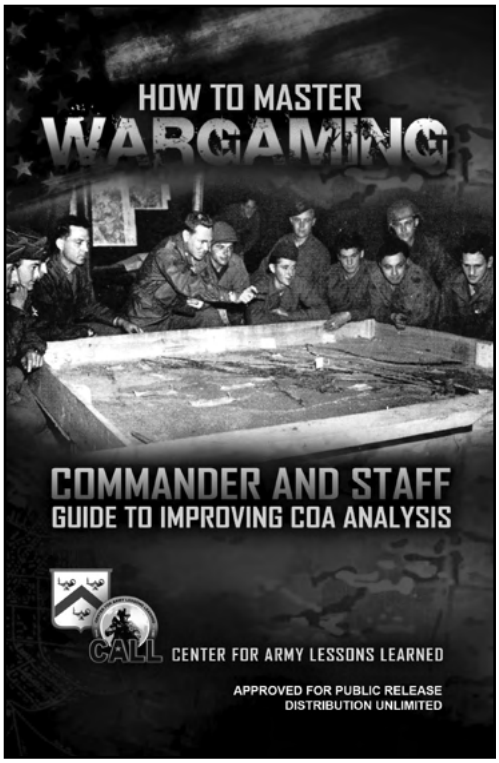

Figure 7-6. CALL handbook 20-06

Chapter 2 of CALL handbook 20-06, Thoughts on Course of Action Analysis Process: Action, Reaction, Counteraction, and Adjudication provides numerous details on what makes a COA analysis successful and articulates challenges with the MDMP. A successful COA analysis—[44]

- Is structured and rules-based
- Is a combination of science and art
- Is honest, introspective, and objective
- Applies critical thinking and avoids bias or mind traps
- Explores second-and third-order effects
- Includes realistic and plausible—
  - Environments
  - Friendly and enemy forces and capabilities
  - Decisions
  - Adjudication of actions
- Has detailed notes recorded
- Updates the products/estimates throughout

The following are tips for a successful COA analysis—[45]

- Have all tools on hand, prepared, and ready.
- Have all the correct participants in the correct places.

- Have an ergonomic set-up. Participants must be able to see, hear, and be free from distractions.
- The facilitator must clearly understand and be able to articulate the time period and what events will be covered in each action-reaction-counteraction segment.
- All participants must understand exactly what is to be war-gamed in time and space.
- Understand the common thinking or psychological traps, biases, and prejudices that can create inaccurate assessments. Examples include being emotionally attached to a COA, confirmation bias, or anchoring. Even a participant's branch, rank, or personal experience can create unconscious bias.
- Be honest and candid when evaluating a COA. Commanders must create an environment where subordinates can freely and professionally voice concerns and disagreements, especially with those who outrank them or have domineering personalities.
- Ensure adjudication outcomes are realistic and probable. Focus on the most probable outcomes. Less probable outcomes should be war-gamed separately as branches.
- Focus on decision points and explore second-and third-order effects and mitigations.
- Each participant should understand their own inputs and outputs to the war game, and how to succinctly present them.
- Participants should provide input into reverse WfFs and specialties to assist intelligence in describing environment and enemy actions/capabilities.
- Identify advantages, disadvantages, risks, and areas requiring further study as the war game progresses.
- As the war game progresses, fill out, develop, and refine additional products such as tasks to subordinates, coordinating instructions, and additional graphic control measures, DSTs, and SYNCMATs.
- Include specialty LNOs in the planning process. These might include attachments that are unfamiliar with the process, such as coalition partners, U.S. Marine Corps attachments, etc.
- Do not have tunnel vision and neglect to incorporate events from adjacent units into the war game. Ensure information operations (IO) and political, military, economic, social, information, infrastructure, physical environment, and time (PMESII-PT) are incorporated. For example, refugees can disrupt movement schedules as surely as a minefield and newspaper headlines can change a campaign outcome.

The following are common issues with COA analysis:[46]

- **Failure to practice.** From practice comes all MDMP understanding and proficiency. The field should not be the first time, or even the second or third, the collective staff is conducting a war game together.
- Participants lack experience and education to provide useful or realistic input that is packaged clearly and succinctly. Participants do not understand WfF's role in relation to other WfFs and "the big picture."

- **Incomplete COAs.** COAs must be complete, or time will be wasted, and confusion will prevail as COA analysis turns into COA development.
- Rarely is there enough time to war-game all COAs thoroughly and incorporate branches and sequels into the analysis. Choices must be made when planning the war game (as in most planning steps) of what the priorities are and where planning risk can be tolerated.
- **Wasting time during execution.** The planning team leader must not be afraid to cut people off, use brief by exception, or shelve issues. It is COA analysis, not COA development or an open-ended brain-storming session. Avoid bogging down in minutia or arguments on battle damage assessment (BDA).
- **War-gaming battle drills instead of COAs.** COA analysis is not the time to rehearse or discuss unit or staff battle drills.
- The opposing force (OPFOR) changes the enemy COA substantially from previous briefings. For example, instead of war-gaming against the most likely COA, which the friendly COA was designed to defeat, the war game is against something the plan was not designed for, and that should be considered a branch.
- The OPFOR is not given the opportunity to fight back as a thinking and adaptive enemy.
- Units often focus planning, war gaming, and rehearsing only on "actions on the objective." However, units often encounter difficulties and culminate before reaching the objective. Ensure actions during contested movements or while forces are otherwise vulnerable, are adequately addressed.

COA analysis does the following:[47]

- Creates shared understanding through visualization and discussion of friendly, enemy, environment, and other domains in time and space. Understanding informs decision making.
- Refines existing decision points and identifies new ones and identifies branches and gaps.
- Facilitates identifying risks and mitigation to those risks, as well as opportunities to exploit.
- Tests friendly COAs against various enemy COAs and variables, illustrates possible outcomes, and facilitates identifying advantages and disadvantages of a COA.
- Synchronizes and refines a COA across all WfFs.
- Enables more detailed planning than in COA development. It allows for refining the plan, improving incorporation of enablers, and creating or updating products like SYNCMATs, situation templates, graphics, tasks, and decision support matrixes (DSMs). Detailed recordkeeping by all participants greatly eases the completion of the final order.
- Challenges assumptions and planning factors.
- Facilitates the determining of information requirements (IRs).
- Validates COAs as feasible, viable, and acceptable.

COA analysis does not do the following:[48]

- **Predict with certainty.** War games can predict plausibility, but there are too many variables to definitively predict probability.
- **Create reproducible results.** Expect neither a real operation nor a repeat of a war game to unfold exactly as predicted.
- Address chance (i.e., black swans[49]),or reveal the enemy's thought process.

Cajun 3 and the brigade (BDE) aviation officer templated the airspace required for the attack aviation at each location with the FSO and air LNO. Cajun 3 identified which route would be the BCT focus as a decision point for the DSM and tasked one of his assistant S-3s (AS3s) to codify the whole plan in the SYNCMAT.

Cajun 3 brought a completed sketch to Cajun 6 at 0230 hours for refined guidance.[50]

ENDNOTES

1. Field Manual (FM) 5-0, *Planning and Orders Production*, 4 November 2022, page 5-36 to 5-53.

2. Center for Army Lessons Learned (CALL) 20-16, *Defense of the Cajun Bayou, The Joint Readiness Training Center Operations Group*, April 2020, page 25.

3. Field Manual (FM) 5-0, *Planning and Orders Production*, 4 November 2022, page 5-36.

4. Ibid, page 5-36, paragraph 5-137.

5. Ibid, page 5-37, paragraph 5-140.

6. Ibid, page 5-36, paragraph 5-138.

7. Ibid.

8. Army Techniques Publication (ATP) 5-0.2-1, *Staff Reference Guide Volume 1 Unclassified Resources*, 7 December 2020, chapter 2, page 62.

9. FM 5-0, page 5-37, paragraph 5-142.

10. Ibid, pages 5-37 and 5-38, paragraph 5-143.

11. Ibid, page 5-38.

12. Ibid, paragraph 5-144.

13. Ibid, paragraph 5-145.

14. Ibid, paragraph 5-146.

15. Ibid, paragraph 5-147.

16. Ibid, paragraph 5-148.

17. Ibid, page 5-39, paragraph 5-149.

18. Ibid, paragraph 5-150.

19. Ibid.

20. Ibid, page 5-40, paragraph 5-152.

21. Ibid.

22. Ibid, page 5-41, paragraph 5-154.

23. Ibid, page 5-42.

24. Ibid, page 5-43, paragraph 5-156.

25. Ibid, paragraph 5-157.

26. Ibid, paragraph 5-158.

27. ATP 5-0.2-1, page 56.

28. FM 5-0, page 5-46, paragraph 5-159.

29. Ibid, pages 5-46 and 5-47, paragraph 5-15.

30. Ibid, page 5-47.

31. Ibid, paragraph 5-160.

32. Ibid, paragraph 5-161.

33. Ibid, paragraph 5-162.

34. Ibid, paragraph 5-163.

35. Ibid, page 5-48, paragraph 5-164.

36. Ibid, paragraph 5-165.

37. Ibid, paragraph 5-166.

38. Ibid, paragraph 5-167.

39. Ibid, paragraph 5-168.

40. Ibid, page 5-49.

41. Ibid, paragraph 5-169.

42. Ibid, page 5-50, paragraph 5-170.

43. This table was manually produced from doctrinal products, primarily ATP 5-0.2-1, chapter 2, and FM 5-0, chapter 5. It was also taken from Mission Command Training Program (MCTP) training briefs provided by Jeremy Stermer, CALL military analyst. It was designed to provide guidance for commanders and staffs to generate a similar table in unit PSOPs.

44. CALL 20-06, *How to Master Wargaming: Commander and Staff Guide to Improving Course of Action Analysis*, 11 July 2019, chapter 2, pages 29 and 30.

45. Ibid, pages 30 and 31.

46. Ibid, pages 31 and 32.

47. Ibid, page 32.

48. Ibid, page 33.

49. Raikar, S. Pai (3 February 2023). *black swan event*. *Encyclopedia Britannica*, https://www.britannica.com/topic/black-swan-event. A black swan event is a high-impact event that is difficult to predict under normal circumstances, but that in retrospect, appears to have been inevitable. A black swan event is unexpected, and therefore difficult to prepare for, but is often rationalized with the benefit of hindsight as having been unavoidable.

50. CALL 20-16, pages 25-26.

CHAPTER 8

The Military Decision-Making Process: Step 5. Course of Action Comparison[1]

Cajun 6 walked into the main command post (CP) and started to fill his canteen cup from a battle-hardened coffee urn on the back table.

The executive officer (XO) noticed him. "Course of Action (COA) decision brief in five minutes!" he called out to the staff.

The rest of the staff was ready for the COA decision brief. They had worked effectively and efficiently to analyze and compare COAs. Working together, they produced a solid decision brief.

Cajun 6 looked down at his notes for a few seconds and took a long sip from his cup. "Let's get going, I appreciate everyone's effort."

The XO acknowledged Cajun 6.[2]

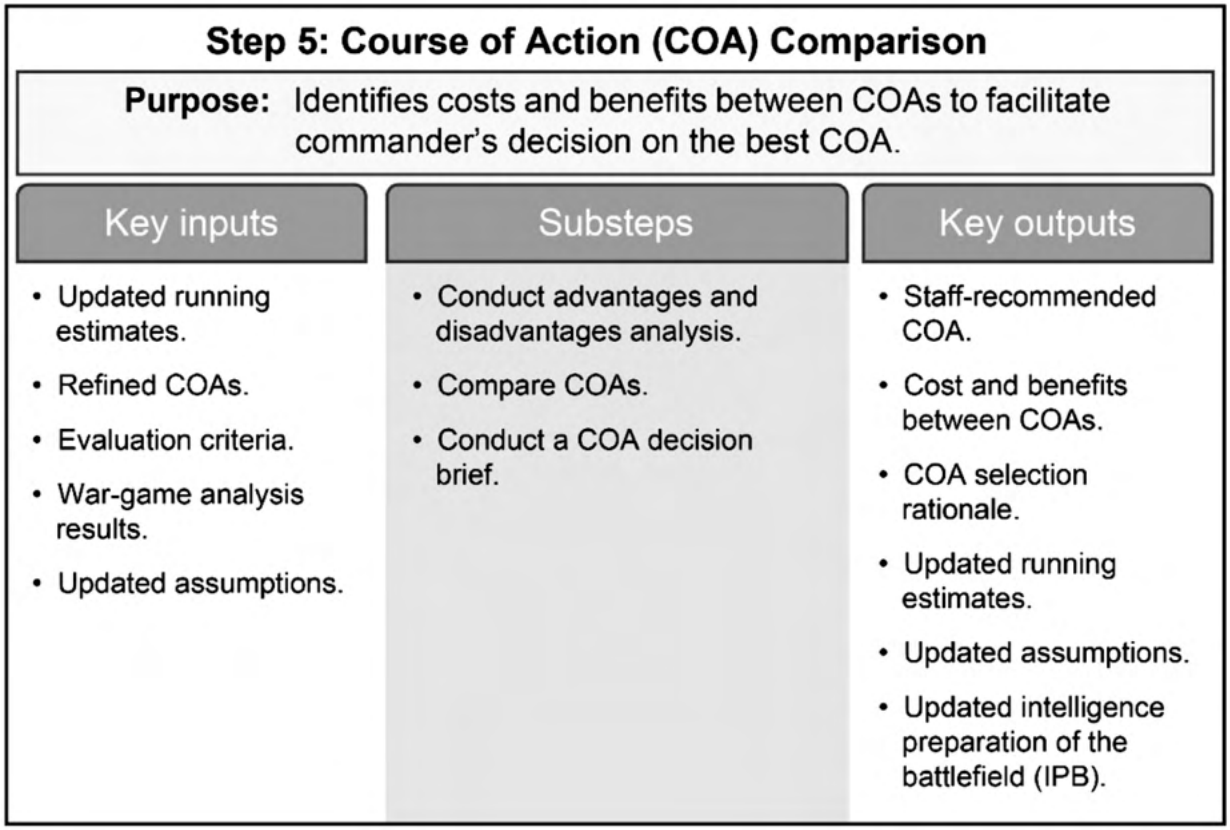

Figure 8-1. Step 5-COA comparison[3]

Lesson/best practice. If the commander directs a COA, COA comparison and comparison criteria are not necessary and can save the staff planning time. However, if options are developed within the single COA, planners must compare those options (advantages/disadvantages). Commanders decide how they want to fight via the single COA; the staff completes the COA and adjusts it to make it work.

COA comparison is an objective process to evaluate COAs independently and against set evaluation criteria approved by the commander or the commander's designated representative. The goal is to identify the advantages and disadvantages of each COA, before comparing COAs to determine cost and benefit, which then enables recommending and selecting a COA with the highest probability of success, and further developing a COA in an operation plan (OPLAN) or operation order (OPORD). The commander and staff perform certain actions and processes that lead to key outputs (see figure 8-1 for a depiction of the course of action comparison).[4]

COA Comparison Techniques:[5]

Descriptive. Instead of listing a numeric score for each COA, this technique relies on a few short sentences or bullets to convey advantages and disadvantages. Advantage: this is a good tool for starting dialogue. Disadvantages: comparing advantages and disadvantages in a time-constrained environment can be difficult, which can force limited dialogue and an incorrect decision.

Comparison. Based on the number of COAs, each evaluation criterion receives a value from 1 to 10 with "1" being best. When all evaluation criterion are added together, the COA with the lowest value is chosen. Advantages: the comparison is easy to perform. Disadvantages: the comparison can distort differences between COAs. For example, if a potential operation has two evaluation criteria of "Fuel Used" and "Casualties," comparing COAs using this technique potentially results in: one gallon of fuel equal to one casualty.

Plus or Minus. For each evaluation criterion, instead of assigning a value, assign a "+" or "-" to signify the COA is either favorable or unfavorable. Add plusses and minuses for the criteria, with a plus neutralizing a minus for an overall score. For example, 3 "+"s and 2 "-"s results in a score of +1. Advantages: this technique is fast and provides an easy way to understand the information. Disadvantages: complex evaluation criteria might be over simplified.

Relative Value. The raw score for each evaluation criterion is assigned a relative score of 0–100; the worst raw score receives a "0" and the best receives a "100." The rest of the COAs raw scores receive a proportion of the score. Add scores together. The highest score is the recommended COA. Advantages: this technique better captures the advantages and disadvantages of each evaluation criterion. Disadvantages: the conversion to a score takes a stronger understanding of mathematics and ratios; therefore, this technique can be difficult to use initially.

CONDUCT ADVANTAGES AND DISADVANTAGES ANALYSIS

"The COA comparison starts with all staff members analyzing and evaluating the advantages and disadvantages of each COA from their perspectives. Staff members each present their findings to the other staff members for their consideration. Using the evaluation criteria developed during mission analysis (MA) and refined during COA development, the staff outlines each COA, highlighting its advantages and disadvantages. Comparing the advantages and disadvantages of the COAs identifies their benefits and associated risks with respect to each other."[6] See table 8-1 for a list of COA advantages and disadvantages.

Table 8-1. Sample advantages and disadvantages[7]

Course of Action	*Advantages*	*Disadvantages*
Course of action 1	Decisive operation avoids major terrain obstacles. Adequate maneuver space available for units conducting the decisive operation and the reserve.	Units conducting the decisive operation face stronger resistance at the start of the operation. Limited resources available to establishing civil control to town X.
Course of action 2	Shaping operations provide excellent flank protection of the decisive operation. Upon completion of decisive operations, units conducting shaping operations can quickly transition to establish civil control and provide civil security to the population in town X.	Operation may require the early employment of the division's reserve.

COMPARE COURSES OF ACTION

"A comparison of COAs is critical. The staff uses any technique that helps develop those key outputs and recommendations that assist the commander in making the best decision. A common technique is the decision matrix. This matrix uses evaluation criteria developed during MA and refined during COA development to help assess the effectiveness and efficiency of each COA."[8] See table 8-2 for a sample decision matrix.

Table 8-2. Sample decision matrix[9]

Weight[1]	*1*	*2*	*1*	*1*	*2*	
Criteria[2] / **Course of Action (COA)**	Simplicity	Maneuver	Fires	Civil control	Mass	Total
COA 1[3]	2	2 (4)	2	1	1 (2)	8 (11)
COA 2[3]	1	1 (2)	1	2	2 (4)	7 (10)

Notes.
[1]The chief of staff or executive officer may emphasize one or more criteria by assigning weights to them based on a determination of their relative importance. Higher weights correspond to emphasized or more important criteria.
[2]Criteria are those approved by the commander during the mission analysis brief.
[3]COAs selected for war gaming have rankings assigned with regards to each criteria based on relative advantages and disadvantages of each COA. For example, when compared for relative simplicity, COA 2 is simpler than COA 1 and is therefore ranked 1, with COA 1 ranked 2.
[4] For this example a lower score is the better COA

"The decision matrix is a tool to compare and thoroughly and logically evaluate COAs. However, the process may be based on highly subjective judgments that can change dramatically during the course of evaluation. In table 8-2, the weights reflect the relative importance of each criterion as initially estimated by a chief of staff (COS) or XO during MA and adjusted or approved by the commander. During COA comparison, rankings are assigned from 1 to the number of COAs that exist. Lower rankings are preferred. After assigning ranks to COAs, the staff adds the unweighted ranks in each row horizontally and records the sum in the total column on the far right of each COA. The staff then multiplies the same ranks by the weights associated with each criterion and notes the product in parenthesis underneath the unweighted rank. No notation is required if the weight is 1. The staff adds these weighted ranks horizontally and records the sum in parenthesis underneath the unweighted total in the total column to the right of each COA. The staff then compares the totals to determine the most preferred (lowest total) COA based on both unweighted and weighted ranks. Although the lowest total denotes a most preferred solution, the process for estimating relative COA ranks and relative criteria weighting may be highly subjective."[10]

"Commanders and staffs cannot solely rely on the outcome of a decision matrix, as it only provides a partial basis for a solution. A decision matrix is a starting point for dialogue between the commander and staff. During the COA comparison process, planners carefully avoid reaching conclusions from a quantitative analysis of subjective weights. Comparing and evaluating COAs by each criterion is probably more useful than merely comparing totaled ranks. Judgments often change with regard to the relative weighting of criteria during close analysis of COAs, which will change weighted rank totals and possibly the most preferred COA. Upon review and consideration, the commander—based on personal judgment—may accept the results of the decision matrix or elect to execute one of the other COAs."[11]

"The staff compares feasible COAs to identify the one with the highest probability of success against the most likely enemy COA, the most dangerous enemy COA, the most important stability task, or the most damaging environmental impact. The selected COA generally"—[12]

- Poses the minimum amount of risk to the force and mission accomplishment.
- Places the force in the best posture for future operations.
- Provides maximum latitude for initiative by subordinates.
- Provides the most flexibility to meet unexpected threats and opportunities.
- Provides the most secure and stable environment for civilians in the area of operations (AO).

"Staff officers often use their own matrix to compare COAs with respect to their functional areas. Matrixes use the evaluation criteria developed before the war game. Their greatest value is providing a method to compare COAs against criteria that, when met, produce operational success. Staff officers use these analytical tools to prepare recommendations. Commanders provide the solution by applying their judgment to staff recommendations and making a decision."[13]

CONDUCT A COURSE OF ACTION DECISION BRIEFING

After completing the analysis and comparison, the staff identifies its preferred COA and makes a recommendation. If the staff cannot reach a decision, the XO decides which COA to recommend. The staff then delivers a decision briefing to the commander. The XO highlights any changes to each COA resulting from the war game. The decision briefing includes—[14]

- The commander's intent of the higher and next higher echelon commanders.
- The status of the force and its components.
- The current intelligence preparation of the battlefield (IPB).
- Each COA considered, including—
  - Assumptions used.
  - Concept of operations brief review.
  - COA analysis results.
  - Modifications to friendly COAs.
  - Evaluation criteria results.
  - Advantages and disadvantages (including risks) of each COA.
- The recommended COA. If a significant disagreement exists, then the staff should inform the commander and discuss, if necessary.

ENDNOTES

1. Field Manual (FM) 5-0, *Planning and Orders Production*, 4 November 2022, pages 5-53 to 5-56.

2. Center for Army Lessons Learned (CALL) 20-16, *Defense of the Cajun Bayou, The Joint Readiness Training Center Operations Group*, April 2020. This is fictional yet based on the Cajun Bayou storyline.

3. Ibid, page 5-53.

4. Ibid, paragraph 5-191.

5. Army Techniques Publication (ATP) 5-0.2-1, *Staff Reference Guide Volume 1 Unclassified Resources*, 7 December 2020, chapter 2, page 67.

6. FM 5-0, pages 5-53 and 5-54, paragraph 5-192.

7. Ibid, 5-54.

8. Ibid, paragraph 5-193.

9. Ibid.

10. Ibid, pages 5-54 and 5-55, paragraph 5-194.

11. Ibid, page 5-55, paragraph 5-195.

12. Ibid, paragraph 5-196.

13. Ibid, paragraph 5-197.

14. Ibid, paragraph 5-198.

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CHAPTER 9

The Military Decision-Making Process: Step 6. Course of Action Decision (or Approval)[1]

Cajun 6 was tired, but to some extent, energized. He was pleased the staff worked effectively and efficiently to put together a solid course of action (COA) brief. Cajun 6 confirmed the COA and issued final planning guidance. He wanted to ensure the next warning order (WARNORD) was clear and concise before the staff went into orders production.

Once Cajun 6 finished his guidance, he went to the coffee pot, refilled his cup, and let the staff know he would be back for the operation order (OPORD) brief.[2]

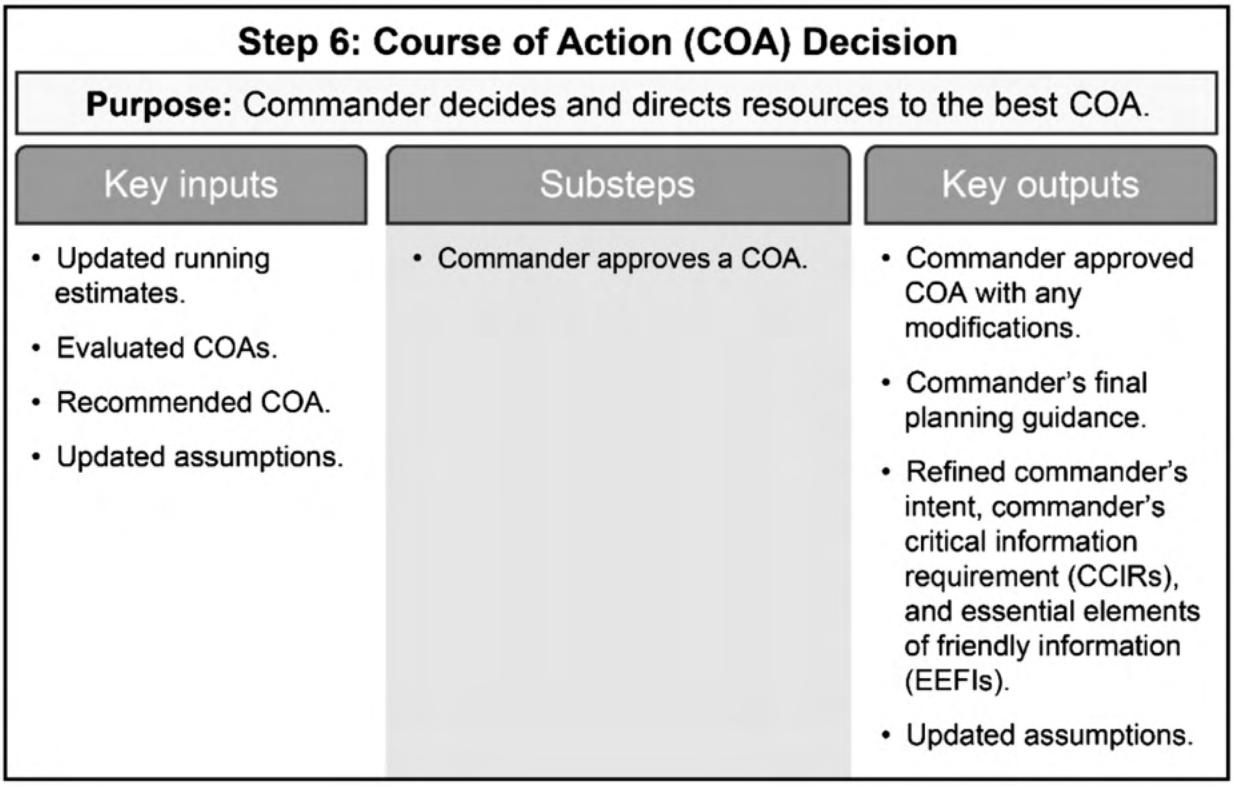

Figure 9-1. Step 6-COA approval[3]

"After the decision briefing, the commander selects the COA to best accomplish the mission. If the commander rejects all COAs, the staff starts COA development again. If the commander modifies a proposed COA or gives the staff an entirely different one, the staff develops and analyzes the new COA and presents the results to the commander with a recommendation."[4] See figure 9-1 for a depiction of COA approval.

"After approving a COA, the commander issues the final planning guidance. The final planning guidance includes a refined commander's intent (if necessary) and new commanders critical information requirements (CCIRs) to support execution. It also includes any additional guidance on priorities for the warfighting functions (WfFs), orders preparation, rehearsal, and preparation. This guidance includes priorities for resources needed to preserve freedom of action and ensure continuous sustainment."[5]

"Commanders include the risk they are willing to accept in the final planning guidance. Commanders discuss acceptable risk with adjacent, subordinate, and senior commanders as time and communications allow. However, commanders still obtain the higher echelon commander's approval to accept any risk that might imperil accomplishing the higher commander's mission."[6]

"Based on the commander's decision and final planning guidance, the staff issues a WARNORD to subordinate headquarters. This WARNORD contains the information subordinate units need to refine their plans. It confirms guidance issued in person or by video teleconference and expands on details not covered by the commander personally. The WARNORD issued after COA approval normally contains"—[7]

- The area of operations (AO).
- Mission.
- Commander's intent.
- Updated CCIRs and essential elements of friendly information (EEFIs).
- Concept of operations.
- Principal tasks assigned to subordinate units.
- Preparation and rehearsal instructions not included in standard operating procedures (SOPs).
- A final timeline for the operations.
- Updated task organization.
- Necessary graphics.

ENDNOTES

1. Field Manual (FM) 5-0, *Planning and Orders Production*, 4 November 2022, pages 5-55 and 5-56.

2. Center for Army Lessons Learned (CALL) 20-16, *Defense of the Cajun Bayou, The Joint Readiness Training Center Operations Group*, April 2020. This portion is fictional and not directly located in CALL 20-16. It was developed to maintain the story flow.

3. Ibid, page 5-56.

4. Ibid, pages 5-55 and 5-56, paragraph 5-199.

5. Ibid, page 5-56, paragraph 5-200.

6. Ibid, paragraph 201.

7. Ibid, paragraph 202.

CHAPTER 10

The Military Decision-Making Process: Step 7. Orders Production, Dissemination, and Transition[1]

1000 hours, Brigade Main Command Post

Cajun 6 looked around the table, taking roll of his commanders.

Copperhead 6 was still fighting to get his battalion (BN) into position out near the low-water crossings. The others sat in their chairs, hard copies of the order in triplicate, rolls of acetate, warning orders (WARNORDs), and graphics stacked in front of each of them.

Cajun 6 turned to the S-3 and nodded, giving him the approval to start.

"Good morning gentlemen," Cajun 3 began. "Copies of the order and all associated graphics and products are in front of each of you." He continued with a brief review of the parallel planning efforts through each of the BN liaison officers (LNOs) and turned it over to the S-2.

Cajun 2 extended his telescoping pointer and slapped it against the map board. "Gentlemen, as most of you know, the enemy was slightly more prepared than we originally anticipated..."[2]

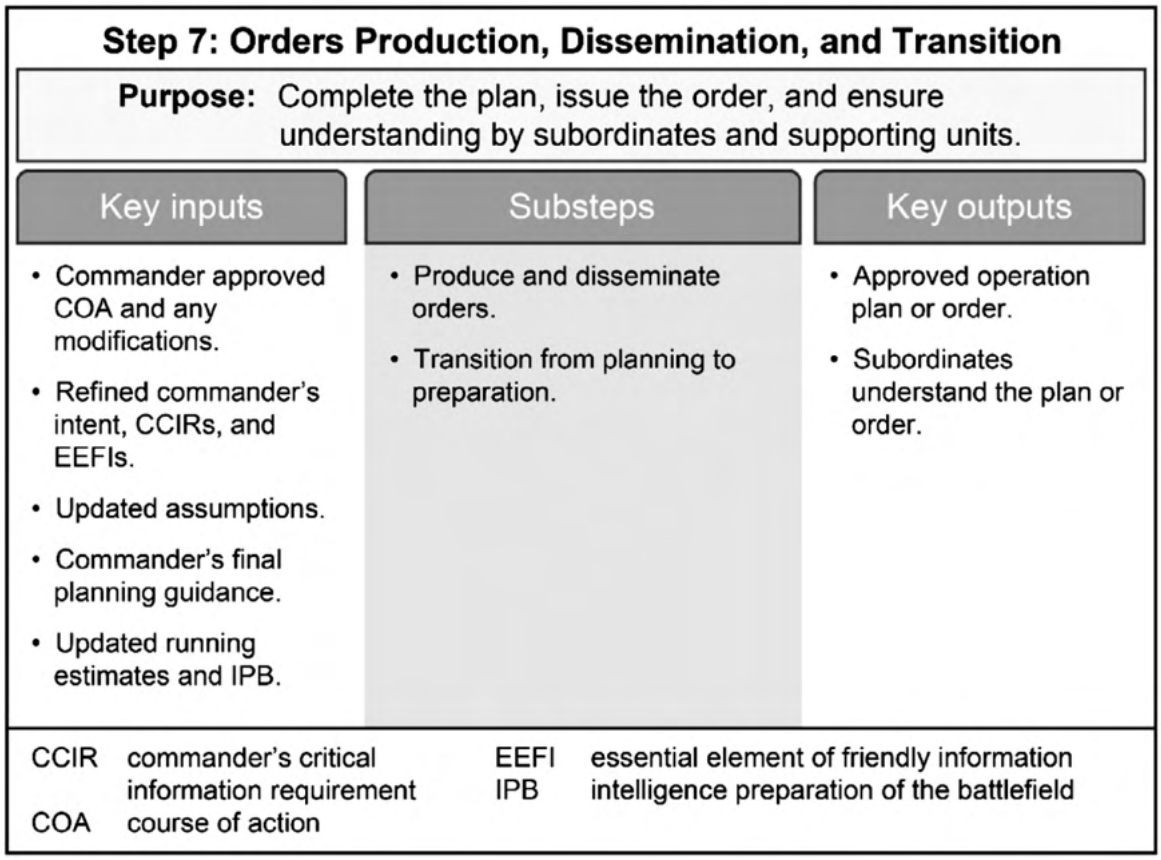

Figure 10-1. Step 7-orders production, dissemination, and transition[3]

Lesson/best practice. The operation order (OPORD) is a written directive of the tasks and guidance from the commander. Commanders and staffs should ensure this is completed in the most concise and understandable manner possible that does not require subordinates to reference multiple documents and files to gain understanding.

"The staff turns the selected course of action (COA) into a clear, concise order with the required supporting information. The COA statement becomes the concept of operations for the plan. The COA sketch becomes the basis for the operation overlay. Planners use their knowledge, experience, skills, and judgement to fill in missing details for any part of the operation not analyzed during COA analysis. If time permits, the staff may conduct a more detailed analysis of the selected COA to more fully synchronize the operation and complete the plan. The staff writes the OPORD or operation plan (OPLAN) using the Army's OPORD format."[4] See figure 10-1 for a depiction of orders production, dissemination, and transition. See Field Manual (FM) 5-0, appendix D, for more information on the OPORD format.

Normally, the executive officer (XO) coordinates with staff principals to assist the operations officer (S-3) in developing the plan or order. Based on the commander's planning guidance, the XO dictates the type of order, sets, and enforces, the time limits and development sequence, and determines which staff section publishes which attachments as described in tables or based on planning standard operating procedures (PSOPs).[5]

Lesson/best practice. Keep your OPORDs short and to the point. Remove redundancy. Build around the fighting products and include (in the base) what is necessary to tie the fighting products together as a coherent plan, coordinating instructions, etc.

"Prior to the commander approving the plan or order, the staff ensures the plan or order is consistent and nested with the higher echelon commander's intent. They do this through"—[6]

- Plans and orders reconciliation.
- Plans and orders crosswalk.

PLANS AND ORDERS RECONCILIATION

"Plans and orders reconciliation occurs internally as the staff conducts a detailed review of the entire plan or order. This reconciliation ensures the base plan or order and all attachments are complete and in agreement. It identifies discrepancies or gaps in planning. If staff members find discrepancies or gaps, they take corrective actions. Specifically, the staff compares the commander's intent, mission, and commander's critical information requirements against the concept of operations and the different schemes of support (such as the scheme of fires or scheme of sustainment). The staff ensures attachments are consistent with the information in the base plan or order."[7]

Technique. Staffs reconcile an order using two techniques. The first technique requires a key leader (operations officer, chief of staff [COS], XO, or lead planner) to read an order to ensure no discrepancies or gaps exist. The leader provides immediate guidance on how to fix any identified discrepancies or gaps. The second technique requires staff members to convene and brief the OPORD to a key leader. Each warfighting function (WfF) briefs its part of the OPORD, and the key leader checks for consistency.[8]

PLANS AND ORDERS CROSSWALK

"During the plans and orders crosswalk, the staff compares the plan or order with those of higher and adjacent commanders to achieve unity of effort and ensure the plan meets the superior commander's intent. The crosswalk identifies discrepancies or gaps in planning and, if found, staffs implement corrective actions."[9]

Technique. During the MDMP, planners can collect adjacent units' plans to ensure synchronization. They inform a key leader of any identified discrepancies or gaps so the leader can assist in making appropriate decisions on corrective actions. A corrective action could be for a planner to change the plan or have an adjacent unit change theirs.[10]

APPROVING THE PLAN OR ORDER

"The final action in plan and order development is the approval of the plan or order by the commander. Commanders normally do not sign attachments; however, they should review them before signing the base plan or order."[11]

"Commanders review and approve orders before the staff reproduces and disseminates them unless commanders have delegated that authority. Subordinates immediately acknowledge receipt of the higher order. If possible, the higher commander and staff brief the order to subordinate commanders in person. The commander and staff conduct confirmation briefings with subordinates immediately afterwards. Confirmation briefings can be conducted collaboratively with several commanders at the same time or with single commanders. These briefings may be conducted in person or by other means including radio, telephone, or video teleconference."[12]

"Immediately after receiving the order, subordinate leaders brief their superiors on the order just received. Subordinate leaders brief an understanding of the commander's intent, the specific tasks assigned and their purposes, and the relationship of tasks to other elements conducting operations."[13]

"This step bridges the transition between planning and preparations. The plans-to-operations transition is a preparation activity that occurs in the headquarters. It ensures members of the current operations cell fully understand the plan before execution. During preparation, the responsibility for developing and maintaining the plan shifts from the plans (or future operations) cell to the current operations cell. This transition is the point at which the current operations cell becomes responsible for controlling execution of the OPORD. This responsibility includes answering requests for information (RFIs) concerning the order and maintaining the order through fragmentary orders (FRAGORDs). This transition enables the plans cell to focus its planning efforts on sequels, branches, and other planning requirements directed by the commander (see Army Doctrine Publication [ADP] 5-0 for information on the plans to operations handover and FM 6-0 for information on rehearsals.)"[14]

Technique. Cutting and pasting the OPORD into slides is not the best technique for giving an OPORD brief. The brief should focus on maps, overlays, graphics, images, interactions between units, and critical events that increase the unit's shared understanding. While some direct lifts will be required (for example, tasks to subordinate units section), the staff should treat this like any other brief.[15]

Lesson/best practice. During the OPORD brief, the target audience is the subordinate executors so make them the center of focus when setting up your briefing site. If you put commanders as the center, staff members will gravitate their focus to them instead. Commanders have already been briefed multiple times, and in this situation, is a briefer themself.

1115 hours, Brigade Main Command Post

"I appreciate the staff's effort on this," remarked Cajun 6. "Next time let's try to keep this within an hour. Commanders, let's roll directly into confirmation briefs. If you need coffee, get it, and come straight back."

"Cajuns!" Cajun 6 replied. The group adjourned.

Cajun 2 might have been longwinded, but he had painted a clear picture of exactly what enemy force they would face. The 1713 Battalion-Sized Detachment (BDET) would come into the area of operations (AO) looking for a fight, with the ability to sequence battalion tactical group (BTG) ground and aerial reconnaissance, long-range artillery and rocket fire, chemical munitions, cyberattacks, attack aviation, and close air support (CAS) from MiG-29 fighter jets. Each commander had listened attentively, even Copperhead 6 after he arrived late and promptly spilled his coffee on the briefing table. Cajun 6 took a mental note to spend extra time walking his engagement area (EA). In sequence, the commanders repeated their assigned task and purpose, adding their concerns and initial risk assessments.[16]

ENDNOTES

1. FM 5-0, *Planning and Orders Production*, 4 November 2022, pages 5-56 to 5-58.

2. Center for Army Lessons Learned (CALL) 20-16, *Defense of the Cajun Bayou, The Joint Readiness Training Center Operations Group*, April 2020, page 37.

3. FM 5-0, page 5-57.

4. Ibid, pages 5-56 and 5-57, paragraph 5-203.

5. Ibid, page 5-57, paragraph 5-204.

6. Ibid, paragraph 5-205.

7. Ibid, paragraph 5-206.

8. Army Techniques Publication (ATP) 5-0.2-1, *Staff Reference Guide Volume I Unclassified Resources*, 7 December 2020, chapter 2, page 71.

9. Ibid, paragraph 2-232.

10. Ibid.

11. FM 5-0, page 5-58, paragraph 5-208.

12. Ibid, paragraph 5-209.

13. Ibid, paragraph 5-210.

14. Ibid, paragraph 5-211.

15. ATP 5-0.2-1, page 72.

16. CALL 20-16, pages 37 and 38.

CHAPTER 11
Rehearsals

1500 hours, Terrain Model outside the Brigade Main Command Post

Cajun 3 pulled out his map board and checked over the terrain model to ensure it was accurate. After the mission command, information collection (IC), fires, and sustainment rehearsals earlier, he was sure there were going to be things that were messed up or trampled. He quickly tasked his noncommissioned officers (NCOs) to clean up a few errant phase lines (PLs) and coordination points. Cajun 6 slipped through the crowd, deftly avoiding being trapped by one of his commanders, and convened the combined arms rehearsal (CAR). "S-3, if everyone is here, let's begin." Cajun 3 nodded.

Cajun 6 began. "Team, for those of you who don't know where you are, this is the brigade combat team (BCT) CAR. We call it that because it's first and foremost a rehearsal, and because we all need to understand how we are applying combined arms, not just infantry, to defeat the enemy in this operation. Cajun 3's assistant is the official note taker. You all have the latest copies of our products. These will certainly change with what we discuss here today, and as one last act of kindness to the chief of operations (CHOPS), we will publish a fragmentary order (FRAGORD) within one hour covering all the changes we make today. After the CAR today, we will execute the fires technical and IC technical rehearsals in the main command post (CP), starting at 1800 hours.

Cajuns, this is what we've trained for – this is where we prove ourselves. All the staff work in the world can't save us if we don't understand the plan and how to execute it rapidly and violently. My intent is to leverage the brigade's (BDE's) firepower to destroy as much of the enemy as possible east of the coordinated fire line (CFL). From there, the rest will be up to you and your company commanders to close with and destroy the enemy. This is where we resolve friction. It's not a backbrief to me, so if you see an issue, speak up so we can fix it."

Cajun 6 sat down, and the CHOPS walked to the center of the terrain model with his briefing stick. "Cajuns, I'm the chief of operations and this point marks the transition of the plan from plans to current operations. I'll lead the rehearsal, and my team is responsible for all changes to the plan from here on out. Verify you are on execution checklist version 3.1. S-3, please cover any changes to the task organization."[1]

"Experience from the combat training centers (CTCs) indicate that units struggle to conduct effective rehearsals, including the brigade CAR. This challenge is especially true at echelon (including fires, IC, and sustainment). Time management has been identified as a key factor for units that fail in this task. It is time for leaders and staffs to plan sequencing of the various rehearsals, time for key personnel to attend designated rehearsals, and time to conduct the rehearsals to standard to drive the quality of the event."[2]

Lesson/best practice. Unit fighting products are the script for rehearsals. Rehearsals are not briefings. Commanders synchronize actions, identify conflicts, and solve problems. See *Lead 6 Tactics, Techniques, and Procedures (TTPs) for Effective Rehearsals*.[3]

Lead 6 TTPs for Effective Rehearsals: The National Training Center (NTC)

- **Purpose.** A great rehearsal accomplishes three things:
  - Allows all participants to visualize the fight in **space** *and* **time**.
  - Ensures a logical consistency between the brigade scheme of maneuver and subordinate concepts of operations.
  - Develops a common understanding of how we will respond to likely enemy actions.
- **If you do not own it, you cannot brief it.** Staffs should only discuss assets that they actually control. **Let the doers do** and do not let an elaborate scene-setting "preamble" detract time from the commander's dialogue around the decisive point.
- **Do not "stand and brief" – "walk and show."** Staffs should avoid re-briefing the operation order but should focus instead on **describing** their assets and actions on the terrain board in terms of tasks, time, and triggers.
- **Battalion commanders should brief decisions, intent, risk, and triggers (DIRT).** Commanders should outline how their concept of operations fits within the higher scheme of maneuver. They should articulate the decisions, intent, risk, and triggers for each phase. Commanders brief, not S-3s.
- **"How long will that take?"** The brigade commander and command sergeant major should focus their attention on two things—the synchronization of concurrent events and the logical integration of warfighting functions.
- **"How will we know?"** When decision points are discussed, the collection plan and reporting mechanisms for the information those decisions are based on should also be discussed by those who will collect and report the information.
- **Uncooperative enemy:** The S-2 should designate an intelligence officer to play the role of an uncooperative enemy who will inflict friendly casualties based on expected outcomes.
- **Known versus templated enemy:** Consider marking a templated enemy on the map in a different color from an enemy that has been detected by a collection asset.
- **"What did we decide?"** A designated note taker should record all unresolved issues and actions on a white board for publication in future fragmentary orders; the note taker should brief all decisions and due outs at the conclusion of the rehearsal.
- **Site selection:** The rehearsal site should allow all participants to hear and participate in the dialogue. Personnel who cannot hear the discussion should leave and get other work done.

Center for Army Lessons Learned (CALL) handbook (CALL 19-18), *Commander and Staff Guide to Rehearsals* (see figure 11-1), is a useful resource for commanders and staffs. CALL 19-18 can be retrieved at https://api.army.mil/e2/c/downloads/2023/01/19/48e6a637/19-18-commander-and-staff-guide-to-rehearsals-a-no-fail-approach-handbook-jul-19-public.pdf.[4]

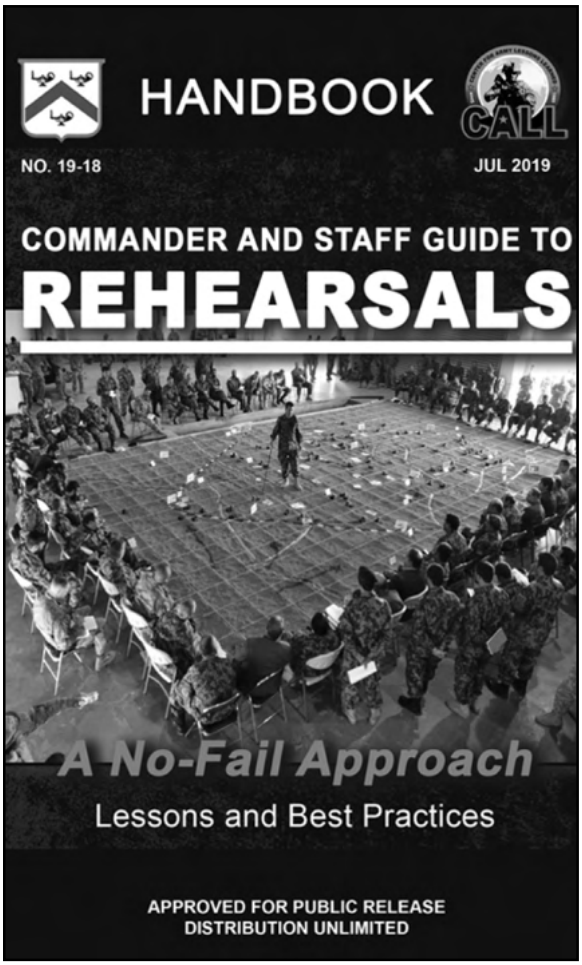

Figure 11-1.
CALL handbook 19-18[5]

"The rehearsal is a coordination event, not an analysis. It does not replace war gaming. Commanders war-game during the military decision-making process (MDMP) to analyze different courses of action (COAs) to determine the optimal one. Rehearsals practice that selected COA. Commanders should avoid making major changes to operation orders (OPORDs) during rehearsals. They make only those changes essential to mission success and risk mitigation."[6]

"Effective and efficient units habitually rehearse during training. Commanders at every level routinely train and practice various rehearsal types. Local standard operating procedures (SOPs) identify appropriate rehearsal types and standards for their execution. All leaders conduct periodic after action reviews (AARs) to ensure their units conduct rehearsals to standard and correct substandard performances. AARs also enable leaders to incorporate lessons learned into existing plans and orders, or into subsequent rehearsals."[7]

"Adequate time is essential when conducting rehearsals. The time required varies with the complexity of the mission, the type, the technique, and the level of participation of the rehearsal. Units conduct rehearsals at all levels, using the most thorough technique possible, given the time available. Under time-constrained conditions, leaders conduct abbreviated rehearsals, focusing on critical events determined by reverse planning. Each unit will have different critical events based on the mission, unit readiness, and the commander's assessment."[8]

"Units conduct rehearsals before training events and early enough to conduct multiple rehearsals, if necessary. Rehearsals provide an invaluable means of ensuring actions during training are synchronized and executed to standard. The takeaway from this is that rehearsals apply in both training and operations with minor differences in technique."[9]

Insights from the CTCs:[10]

- Rehearsals are a lost art.
- Rehearsals can be done many ways.
- Record as much as you can in your SOP to facilitate integration into higher headquarters (HHQ) as well as integration of attached subordinate units.
- Delineate roles and responsibilities during rehearsals to create detailed understanding across the formation.

"Finally, rehearsals are effective tools for implementing effective mission control within an organization, enabling specific functional tenants of the science of control and art of command. Rehearsals provide an effective platform to communicate the commander's intent, create a shared understanding, build cohesive teams, develop mutual trust, enable subordinates to exercise disciplined initiative, and identify opportunities to accept prudent risk."[11]

Field Manual (FM) 6-0, *Commander and Staff Organization and Operations* (see figure 11-2), provides a doctrinal breakdown of rehearsals in appendix C, Rehearsals. FM 6-0 can be found at https://armypubs.army.mil/epubs/DR_pubs/DR_a/ARN35404-FM_6-0-000-WEB-1.pdf.[12]

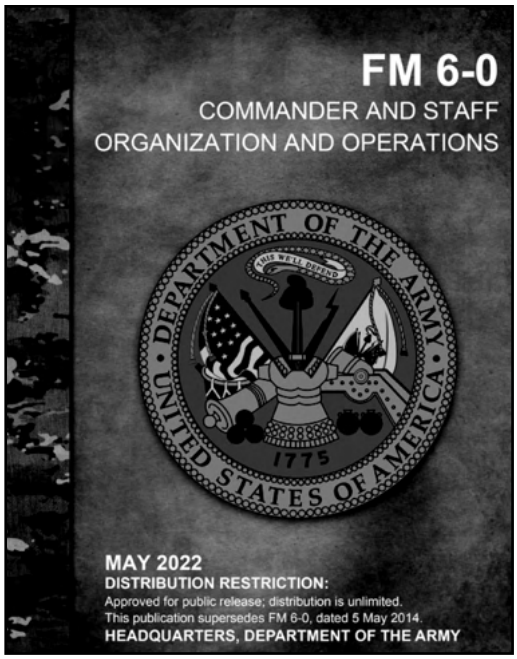

Figure 11-2. FM 6-0[13]

REHEARSAL TYPES

"Each rehearsal type achieves a different result and has a specific place in the preparation timeline. The types of rehearsals are the"—[14]

- Backbrief.
- Combined arms rehearsal.
- Support rehearsal.
- Battle drill or SOP rehearsal

BACKBRIEF

"**A *backbrief* is a briefing by subordinates to the commander to review how subordinates intend to accomplish their mission.** Subordinates perform backbriefs throughout preparation to allow commanders to clarify intent and provide additional guidance early in subordinate planning. Commanders use the backbrief to identify any problems in the concept of operations."[15]

"Backbriefs are performed sequentially in which subordinate leaders review assigned tasks and planned actions from start to finish of the operation. When time is available, backbriefs can be combined with other types of rehearsals to allow subordinate leaders to coordinate plans before performing more elaborate drills. Backbriefs require the fewest resources and may be the only option under time-constrained conditions."[16]

FM 6-0 note. The backbrief must not be confused with a confirmation brief. A confirmation brief is an opportunity for subordinate leaders to verify receipt and understanding of the commander's intent and specified tasks, immediately following the issuance of the order.[17]

COMBINED ARMS REHEARSAL

"A CAR is a scripted event involving the commander, staff, and units used to identify and solve problems. A CAR enables the commander, staff, and subordinate units to synchronize plans, actions, and responsibilities across warfighting functions (WfFs). Higher headquarters should execute a CAR after subordinate units not only issue their OPORDs but also have an opportunity to rehearse their individual plans. This type of rehearsal helps ensure subordinate commanders' plans achieve the higher echelon commander's intent."[18]

"A CAR is intended to be an opportunity to synchronize actions, identify conflicts, and solve problems through the FRAGORD process. It should not be a rigidly scripted event and should have time allocated for discussion. A CAR may be the final opportunity for problem identification and conflict resolution prior to execution, as the entire staff and unit is exposed to the overall scheme of events."[19]

Lesson/best practice. Combined arms rehearsals. The National Training Center (NTC) Operations (OPS) Group provides lessons and best practices (or "a way") on the execution of CARs in *TAC Talks Episode 01: A Way to CAR* (see figure 11-3), available at https://www.dvidshub.net/video/877576/tac-talks-episode01-way-car.[20]

Figure 11-3. NTC OPS Group *TAC Talks Episode 01: A Way to CAR*[21]

Lesson/best practice. The following are steps to effective CARs:

- Get commanders involved talking early in the rehearsal process, describing their concerns and how they see the fight.
- Limit the length of time for staff briefs, prioritizing addressing efforts not covered by commanders that seek to converge effects at decisive times/locations.
- Have commanders stand on the enemy objective that they consider decisive throughout the rehearsal process; this allows commanders to see friction points in friendly maneuver and discuss areas of concern while subordinates brief them directly.
- Subordinate commanders brief using forms of maneuver, tactical mission and enabling tasks and purposes, and graphic control measures (GCMs) (boundaries, PLs, target reference points [TRPs], restrictive fire lines [RFLs], etc.) that support direct coordination with the adjacent unit.
- Most of the discussion during each turn should be subordinates describing activities in the close fight. Staffs can focus their discussion on enabling activities in the close flight, and then the deep and rear areas as they set conditions for the next event.

SUPPORT REHEARSAL

"A support rehearsal is an event focused on synchronizing each WfF with the overall operation. Throughout preparation, units conduct support rehearsals within the framework of a single or limited number of WfFs that can involve coordination and procedure drills for aviation, fires, engineer support, or casualty evacuation (CASEVAC). Support rehearsals and CARs complement preparations for an operation. Units may conduct support rehearsals separately and then combine them into full-dress rehearsals. Although these rehearsals differ slightly by WfF, they achieve the same result."[22]

BATTLE DRILL OR STANDARD OPERATING PROCEDURE REHEARSAL

"A battle drill is an action units collectively and rapidly execute without applying a deliberate decision-making process. A battle drill or SOP rehearsal ensures that all participants understand a technique or a specific set of procedures. Throughout preparation, units and staffs rehearse battle drills and SOPs. These rehearsals do not need a completed order from HHQ. Leaders place priority on those drills or actions they anticipate occurring during the operation. For example, a transportation platoon may rehearse a battle drill on reacting to an ambush while waiting to begin movement."[23] See FM 6-0, appendix E, for details on CP battle drills.

"All echelons use these rehearsal types; however, they are most common for platoons, squads, and sections. They are conducted throughout preparation, and they are not limited to published battle drills. All echelons can rehearse actions such as a CP shift change, an obstacle breach lane-marking SOP, or a refuel-on-the-move (ROM) site operation."[24]

REHEARSAL TECHNIQUES

"Techniques for conducting rehearsals are limited only by the commander's imagination and available resources. Several techniques are illustrated in figure 11-4. Resources required for each technique range from narrow to broad. As listed from left to right, each successive technique takes more time and more resources. Each rehearsal technique also imparts a different level of understanding to participants. Considerations for determining the appropriate rehearsal technique include"—[25]

- Time—the amount of time required to conduct (plan, prepare, execute, and assess) the rehearsal and make changes to the plan if gaps are identified.
- Echelons involved—the number of echelons that can participate in the rehearsal.
- Operations security (OPSEC) risks—unprotected friendly critical information observed by the enemy that can be exploited to affect the operation.
- Terrain—the amount of area needed for the rehearsal.

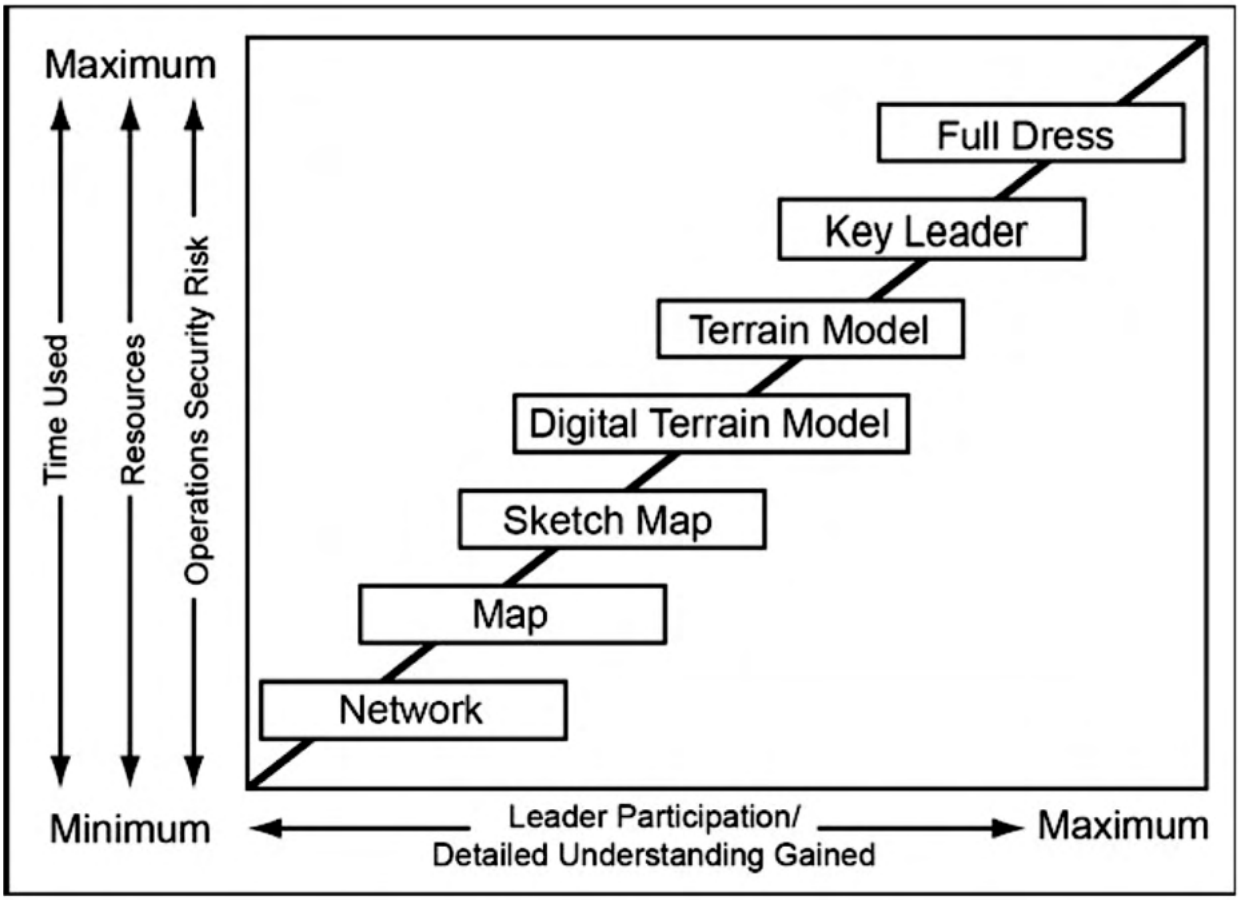

Figure 11-4. Rehearsal techniques[26]

ROLES AND RESPONSIBILITIES

"Planning for, setting up, and controlling a rehearsal involves the entire staff with principal roles by the commander, executive officer (XO), S-3, and S-2, etc. Knowing the rehearsal actions required and the separate and shared responsibilities involved are integral to successful rehearsal execution."[27]

"Regardless of which type and technique of rehearsal is selected, there are numerous command and staff responsibilities associated with planning, preparing, and executing one. The lion's share of responsibility normally rests with the commander, XO, S-3, and S-2; however, the conducting

headquarters staff, subordinate leaders, and even a designated recorder are critical to a successful rehearsal event. FM 6-0, appendix C, provides doctrinal guidance regarding commander and staff rehearsal responsibilities, but each unit commander may designate more if necessary."[28]

Units should provide specific roles and responsibilities within the unit's planning standard operating procedures (PSOPs). Like the operations process, executing a rehearsal often follows the plan, prepare, execute, and assess format (see figure 11-5).[29]

Figure 11-5. Rehearsal roles and responsibilities[30]

CONDUCTING THE REHEARSAL

"All participants have responsibilities before, during, and after a rehearsal. Before a rehearsal, the rehearsal director states the commander's expectations and orients the other participants on details of the rehearsal, as necessary. During a rehearsal, all participants rehearse their roles in the operation. They make sure they understand how their actions support the overall operation and note any additional coordination required. After a rehearsal, participants ensure that they understand any changes to the OPORD and coordination requirements and that they received all updated staff products."[31]

"Commanders do not normally address small problems that arise during rehearsals. Instead, the S-3 recorder keeps a record of these problems. This ensures the commander does not interrupt the rehearsal's flow. If the problem remains at the end of the rehearsal, the commander solves it then. If the problem jeopardizes mission accomplishment, the staff accomplishes the coordination necessary to solve it before the participants disperse. Identifying and solving such problems is a major reason for conducting rehearsals. If commanders do not make corrections while participants are assembled, they may lose the opportunity to do so. Coordinating among dispersed participants and disseminating changes to them often proves more difficult than accomplishing these actions in person."[32]

BEFORE THE REHEARSAL

Before the rehearsal, the staff completes the OPORD with overlays and conducts three events:[33]

- Introduction and overview.
- Orientation.
- Rehearsal script.

DURING THE REHEARSAL

"Once the rehearsal director finishes discussing the ground rules and answering questions, the S-3 reads the mission statement, the commander reads the commander's intent, and the S-3 establishes the current friendly situation. The rehearsal then begins, following the rehearsal script."[34]

The following are a generic set of rehearsal steps developed for CARs. However, with a few modifications, these steps support any rehearsal technique. The products depend on the rehearsal type.[35] The following are the generic steps:[36]

- **Step 1-Deploy Enemy Forces.** The S-2 briefs on the current enemy situation and operational environment (OE). The S-2 places markers on the map or terrain board (as applicable) indicating where enemy forces and other operationally significant groups or activities would be before the first rehearsal event. The S-2 then briefs the most likely enemy course of action (COA) and operational context. The S-2 also briefs the status of IC operations (for example, citing any patrols still out or any observation post positions).
- **Step 2-Deploy Friendly Forces.** The S-3 briefs friendly maneuver unit dispositions, including security forces, as they are arrayed at the start of the operation. Subordinate commanders and other staff officers brief their unit positions and any particular points of emphasis at the starting time. For example, the chemical, biological, radiological, and nuclear (CBRN) officer states the mission-oriented protective posture level, and the chief of fires, deputy

fire support coordinator, fire support officer (FSO), or fires unit commander states the range of friendly and enemy artillery. Other participants place markers for friendly forces, including adjacent units, at the positions they will occupy at the start of the operation. As participants place markers, they state their task and purpose, task organization, and strength.

Sustainment and protection units brief positions, plans, and actions at the starting time and at points of emphasis the rehearsal director designates. Subordinate units may include forward arming and refueling points, ROM points, communications checkpoints, security points, or OPSEC procedures that differ for any period during the operation. The rehearsal director restates the commander's intent, if necessary.

- **Step 3-Initiate Action.** The rehearsal director states the first event on the execution matrix. Normally this involves the S-2 moving enemy markers according to the enemy COA. The depiction must tie enemy actions to specific terrain or to friendly unit actions. The S-2 portrays enemy actions based on the situation template developed for staff war gaming.

  As the rehearsal proceeds, the S-2 portrays the enemy and other operational factors and walks through the enemy COA (per the situation template). The S-2 stresses reconnaissance routes, objectives, security force composition and locations, initial contact, initial fires (including artillery, air, and attack helicopters), probable main force objectives or engagement areas (EAs), and likely commitment of reserve forces.

- **Step 4-Reach Decision Points**. When the rehearsal director determines that a particular enemy movement or reaction is complete, the commander assesses the situation to determine if a decision point has been reached. Decision points are taken directly from the decision support template (DST).

  If the commander determines the unit is not at a decision point and not at the end state, the commander directs the rehearsal director to continue to the next event on the execution matrix. Participants use the response sequence and continue to act out and describe their units' actions.

  When the rehearsal reaches conditions that establish a decision point, the commander decides whether to continue with the current COA or select a branching COA. If electing the current COA, the commander directs the rehearsal director to move to the next event in the execution matrix. If selecting a branch, the commander states the reason for selecting that branch, states the first event of that branch, and continues the rehearsal until the organization has rehearsed all events of that branch. As the unit reaches decisive points, the rehearsal director states the conditions required for success.

  When it becomes obvious that the operation requires additional coordination to ensure success, participants immediately begin coordinating. This is one of the key reasons for rehearsals. The rehearsal director ensures that the recorder captures the coordination and any changes and ensures that all participants understand the coordination.

- **Step 5-Achieve End State.** Achieving the desired end state completes that phase of the rehearsal. In an attack, this will usually be when the unit is on the objective and has finished consolidation and CASEVAC. In the defense, this will usually be after the decisive action (such as committing the reserve or striking force), the final destruction or withdrawal of the enemy, and CASEVAC is complete. In stability tasks, this usually occurs when a unit achieves the targeted progress within a designated line of effort.

- **Step 6-Reset**. At this point, the commander states the next branch to rehearse. The rehearsal director resets the situation to the decision point where that branch begins and states the criteria for a decision to execute that branch. Participants assume those criteria have been met and then conduct the operation along that branch until they attain the desired end state. They complete any coordination needed to ensure all participants understand and can meet any requirements. The recorder records any changes to the branch. The commander then states the next branch to rehearse. The rehearsal director again resets the situation to the decision point where that branch begins, and participants repeat the process. This continues until the rehearsal has addressed all decision points and branches that the commander wants to rehearse.

  If the standard is not met and time permits, the commander directs participants to repeat the rehearsal. The rehearsal continues until participants are prepared or until the time available expires. Commanders may allocate more time for a rehearsal, but they must assess the effects on subordinate commanders' preparation time. Successive rehearsals, if conducted, should be more complex and realistic. At the end of the rehearsal, the recorder restates any changes, coordination, or clarifications that the commander directed and estimates how long it will take to codify changes in a written FRAGORD.

AFTER THE REHEARSAL

"After the rehearsal, the commander leads an AAR. The commander reviews lessons learned and makes the minimum required modifications to the existing plan. (Normally, a FRAGORD affects these changes.) Changes should be refinements to the OPORD; they should not be radical or significant. Changes not critical to the operation's execution may confuse subordinates and hinder the synchronization of the plan. The commander issues any last-minute instructions or reminders and reiterates the commander's intent."[37]

"Based on the commander's instructions, the staff makes any necessary changes to the OPORD, DST, and execution matrix based on the rehearsal results. Subordinate commanders incorporate these changes into their units' OPORDs. The chief of staff (COS) or XO ensures the changes are briefed to all leaders or liaison officers (LNOs) who did not participate in the rehearsal."[38]

"The rehearsal provides the final opportunity for subordinates to identify and fix unsolved problems. The staff ensures that all participants understand any changes to the OPORD, and the recorder captures all coordination done at the rehearsal. All changes to the published OPORD are, in effect, verbal FRAGORDs. As soon as possible, the staff publishes each verbal FRAGORD as a written FRAGORD that changes the published OPORD."[39]

CONCLUSION

"Army units must rehearse expected actions to improve performance during execution. All personnel involved must understand their own roles and the roles of those around them to sufficiently prepare for operations. Furthermore, if the situation requires, they must be able to assume the role of their supervisor or other leaders in the chain of command. It is therefore imperative that all personnel involved understand the mission, commander's intent, scheme of operations, and desired end state."[40]

Then Cajun 3 and Cajun 6 posed challenging vignettes, requiring company commanders to answer questions about reporting procedures, chemical decontamination routes, response to jamming, and CASEVAC execution.

Cajun 3 ended each phase by repeating where the BCT and battalions (BNs) should be focused, and the conditions required to move to the next phase. The whole process took about 90 minutes, and most of the BDE was mentally exhausted by the end and glad to head back to their area of operations (AO).

Cajun 6 ended the CAR, "I'm still not sure we have the rearward passage of lines (RPOL) for Swamp Fox correct, especially in the south, but Cajun 3 assures me the CHOPS will cover it in the FRAGORD. Copperhead…Swamp Fox…I need the two of you to talk that transition – rehearse it again on the ground before tomorrow night.[41]

ENDNOTES

1. CALL 20-16, *Defense of the Cajun Bayou, The Joint Readiness Training Center Operations Group*, April 2020, pages 109 to 111.

2. CALL handbook 19-18, *Commander and Staff Guide to Rehearsals: A No-Fail Approach*, July 2019, page 1.

3. *Lead 6 TTPs for Effective Rehearsals* was approved for use by BG Kurt Taylor, commander, NTC, Fort Irwin, CA.

4. Ibid.

5. Ibid.

6. Ibid.

7. Ibid.

8. Ibid.

9. Ibid, page 2.

10. Ibid.

11. Ibid.

12. FM 6-0, *Commander and Staff Organization and Operations*, 16 May 2022.

13. Ibid.

14. Ibid, page C-1, paragraph C-6.

15. Ibid, page C-2, paragraph C-7.

16. Ibid, paragraph C-8

17. Ibid.

18. Ibid, paragraph C-9.

19. Ibid, paragraph C-10.

20. Annette Pritt, *TAC Talks Episode 01: A Way to CAR,* https://www.dvidshub.net/video/877576/tac-talks-episode01-way-car.

21. Ibid.

22. FM 6-0, page C-2, paragraph C-11.

23. Ibid, paragraph C-12.

24. Ibid, paragraph C-11.

25. Ibid, page C-3, paragraph C-14.
26. Ibid.
27. CALL handbook 19-18, page 17.
28. Ibid.
29. Ibid, page 55.
30. Ibid, page 18.
31. FM 6-0, page C-9, paragraph C-56.
32. Ibid, paragraph C-57.
33. Ibid, paragraph C-58.
34. Ibid, page C-11, paragraph C-71.
35. Ibid, page C-12, paragraph C-72.
36. Ibid, pages C-12 and C-13, paragraphs C-73 to C-85.
37. Ibid, page C-13, paragraph C-86.
38. Ibid, paragraph C-87.
39. Ibid, paragraph C-88.
40. Ibid, C-89.
41. CALL 20-16, page 112.

CHAPTER 12
Final Guidance

0930 hours, Outside of Sangari

Razorback 6 went next. "Sir, I'm not sure about my fight. I've only got two companies at the moment and one of those companies is Delta Company. I'm also not on the ground you want me to defend from, so I haven't seen it to tell you better what I need."

Cajun 6 acknowledged and turned to Copperhead, "When will Razorback get on the ground. Are you out past Kushal yet?"

Copperhead 6 shook his head, "Not yet sir. We're working on it. We'll get out there tomorrow. I understand our task."

The backbrief culminated. Cajun 3 acknowledged the due-outs and said they would cut a fragmentary order (FRAGORD) with additional guidance.

Cajun 6 closed the meeting, "I'm getting out of here tomorrow to inspect your progress. I need to see where you are on the ground, hear your understanding of risk based on the terrain, and see how you're going to leverage fires and anti-tank weapons."[1]

PLANNING AND MISSION COMMAND

"Effective planning incorporates the principles of *mission command*—the Army's approach to command and control (C2) that empowers subordinate decision making and decentralized execution appropriate to the situation (Army Doctrine Publication [ADP] 6-0, *Mission Command: Command and Control of Army Forces*, 31 July 2019). Mission command is based on the Army's view that war is a human endeavor and inherently dynamic and uncertain. No plan can account for every possibility, and most plans must change rapidly during execution if they are to succeed. The principles of mission command are"—[2]

- Competence.
- Shared understanding.
- Mutual trust.
- Mission orders.
- Commander's intent.
- Disciplined initiative.
- Risk acceptance.

"Mission command requires an environment of trust and shared understanding among commanders, staffs, and subordinates. It requires building effective teams and a command climate in which commanders encourage subordinates to accept risk and exercise initiative to seize opportunities and counter threats within the commander's intent. Through mission orders, commanders focus leaders on the purpose of the operation rather than on the details of how to perform assigned tasks.

Doing this minimizes detailed control and allows subordinates the greatest possible freedom of action to accomplish tasks. Finally, when delegating authority to subordinates, commanders set the necessary conditions for success by allocating appropriate resources to subordinates based on assigned tasks (see ADP 6-0 for doctrine on C2 and the principles of mission command)."[3]

THE FUNCTIONS OF PLANNING

Imperfect knowledge and assumptions about the future are inherent in all planning. Planners cannot predict with precision how enemies will react or how other actors will respond during operations. Nonetheless, the understanding and learning that occurs during planning has great value. Even if units do not execute the plan exactly as envisioned—and few ever do—planning results in an improved understanding of the situation that facilitates future decision making. Planning and plans help leaders"—[4]

- Build situational understanding.
- Identify and develop solutions to problems.
- Understand, describe, and accept risk.
- Direct, coordinate, and synchronize action.
- Task-organize the force and prioritize efforts.
- Anticipate events.

See figure 12-1 for a depiction of Army processes in planning.

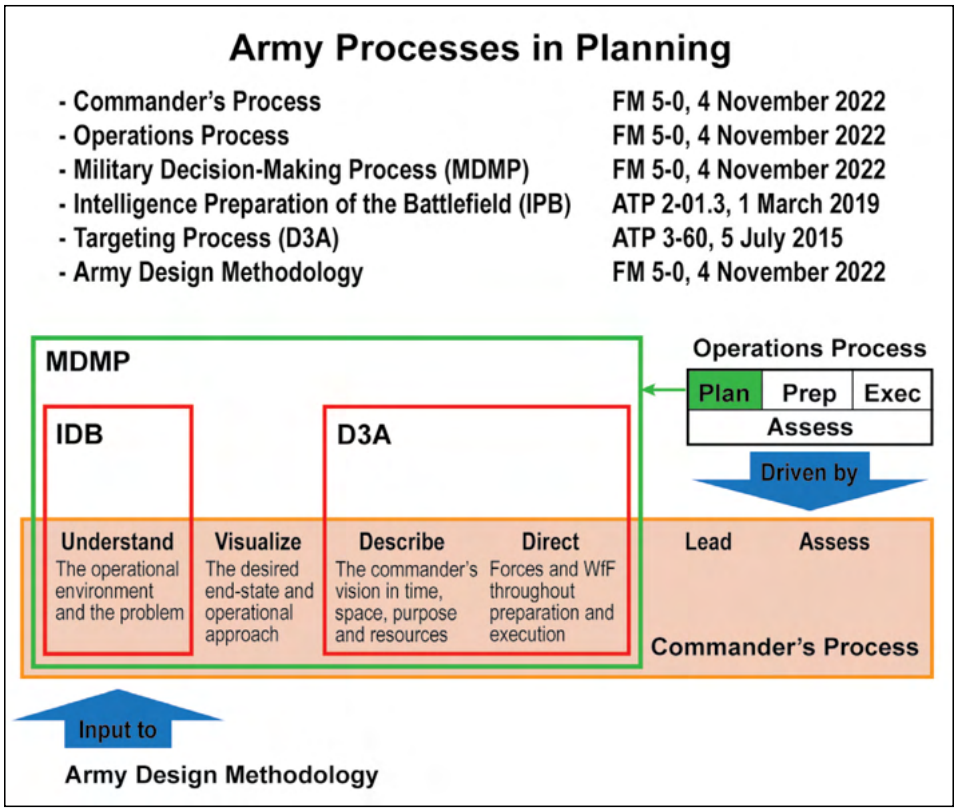

Figure 12-1. Army processes in planning[5]

TIME-SAVING TECHNIQUES

Maximize Parallel Planning

"Although parallel planning is the norm, maximizing its use in time-constrained environments is critical to developing and issuing a timely plan. In a time-constrained environment, the importance of warning orders (WARNORDs) increases as available time decreases. A verbal WARNORD now, followed by a written order later, saves more time than a written order one hour from now. The staff issues the same WARNORDs used in the full military decision-making process (MDMP) when abbreviating the process. In addition to WARNORDs, units must share all available information with subordinates, especially intelligence preparation of the battlefield (IPB) products, as early as possible. The staff uses every opportunity to perform parallel planning with the higher headquarters (HHQ) and to share information with subordinates."[6]

Increase Collaborative Planning

"Planning in real time with higher echelon headquarters and subordinates improves the overall planning effort of the organization. Modern information systems and a common operational picture (COP) shared electronically can allow collaboration with subordinates from distant locations, can increase information sharing, and can improve the commander's visualization. Additionally, taking advantage of subordinates' input and knowledge of the situation in their areas of operations (AOs) often results in developing better courses of action (COAs) quickly."[7]

Use Liaison Element

"Liaisons posted to higher echelon headquarters and unified action partners' headquarters allow commanders to have representation in their planning sessions. These Soldiers assist in passing timely information to their parent headquarters and directly to the commander. Effective liaison officers (LNOs) have the commander's full confidence and the necessary rank and experience for the mission. Commanders may elect to use a single individual or a liaison team. As representatives, liaison officers must"—[8]

- Understand how their commander thinks and interpret verbal and written guidance.
- Convey their commander's intent, planning guidance, mission, and concept of operations.
- Represent their commander's position.
- Know the unit's mission; tactics, techniques, and procedures; organization; general capabilities; and communications capabilities.
- Observe the established channels of command and staff functions.
- Be trained in their functional responsibilities.
- Be tactful.
- Possess the necessary language expertise.

(See FM 6-0 for additional discussion on liaisons.)

Cajun 6 was dying to get out of the command post (CP).

He had spent much of the last two days driving the operations process; now was his chance to break free of the cramped tents and see how his battalions (BNs) were turning their plans into action. He was determined to walk every engagement area (EA), ensure coordination and synchronization at the seams between units, inspect the progress of the blade teams as well as the amount of Class V on hand and the status of what was still being pushed to the maneuver BNs. It was going to be a long day, and he could not wait.[9]

ENDNOTES

1. Center for Army Lessons Learned (CALL) 20-16, *Defense of the Cajun Bayou, The Joint Readiness Training Center Operations Group*, April 2020, page 40.

2. Field Manual (FM) 5-0, *Planning and Orders Production*, 4 November 2022, page 1-3, paragraph 1-9.

3. Ibid, paragraph 1-10.

4. Ibid, page 1-4, paragraph 1-16.

5. Provided by the Wrangler Team, Leader Training Program (LTP), National Training Center (NTC), Fort Irwin, CA.

6. FM 5-0, paragraph 5-223.

7. Ibid, paragraph 5-224.

8. Ibid, paragraph 5-225.

9. CALL 20-16, page 41.

CHAPTER 13

Epilogue

1400 hours, Outside the Main Command Post

Cajun 6 was pleased with the planning effort by the staff—the efficiency and effectiveness they displayed was incredible.

Looking back, they came a long way.

The brigade's (BDE's) rotation at the combat training center (CTC) three months after he assumed command exposed the lack of training on the MDMP. There were too many inefficiencies and an overall lack of synchronization in the process. The planning standard operating procedure (PSOP) had not been updated since his predecessor assumed command. His CTC rotation made it clear; improvement in the MDMP was a top priority.

Cajun 6 knew the home-station staff training benefitted him as much as the staff. Many training iterations improved the staffs as well as his own understanding of the intricacies of the MDMP and built his trust and confidence in the team. It certainly provided the impetus to improve the PSOP, which they revisited after every training exercise.

Cajun 6 took a moment to review the things he and the brigade staff worked hard to improve after the CTC rotation:

- He had the staff members read the current and past *CTC Trends* published by the Center of Army Lessons Learned (CALL). The trends were fed to CALL for compilation, providing a wealth of information that assisted with improving all warfighting functions (WfFs). These documents, and their own CTC after action review (AAR), provided a wealth of knowledge they could use for improving their own planning processes and PSOP.
- Along with Cajun 3 and 5, they planned home-station training for the staff, which included the command post (CP) training tables. During home-station training, Cajun 6 was deeply involved with driving the operations process. His goal was twofold: first, build an effective, efficient, and agile planning process that the staff could execute with or without the commander present, and second, develop appropriate PSOPs that were understood and followed. Understanding roles and responsibilities (which included using noncommissioned officers [NCOs] and other subordinate staff members), producing clear and concise running estimates, developing unit fighting products, and writing clear and concise warning orders (WARNORDs) and operation orders (OPORDs) were a few items he worked on with the staff. During training, he emphasized that during operations, he may not be present in the CP because of battlefield circulation (BFC), higher headquarters (HHQ) meetings, or other factors that would necessitate the staff's ability able to anticipate planning requirements and start the process without him (presumptive planning); once he was available, he could see what they had, work his commander's guidance worksheet, and continue to drive the operations process, but without him being leashed to the main CP.

—continued on next page

- He focused all staff members on intelligence preparation of the battlefield (IPB). All staff members, or WfFs had to complete IPB. Focusing on "reverse IPB" before they began planning was essential to understanding how the enemy may present itself and led to the staff generating better options in a course of action (COA) versus developing COAs against enemy unlikely actions.
- Time management was crucial to the BDE's planning efforts. They had to allow time for parallel planning for the BDE's battalions (BNs), therefore he and the brigade staff practiced the MDMP in time-constrained environments. He found that directing a single COA or being physically with the staff during the MDMP assisted with planning efforts. Guidance was given to develop options within the directed COA (options for maneuver, fires, sustainment, and protection, etc.). Now the brigade staff could push forward with planning efforts, and simultaneously allow parallel planning efforts within the BNs.
- Understand the commander's process was a point of emphasis for Cajun 6. The brigade staff had to understand how the MDMP supports the commander's process of understand, visualize, describe, and direct (UVDD) (lead/assess). The COA, and options within the COA, assisted him and his subordinate commanders to direct the maneuver fight (and sustain and protect the force throughout the fight).
- Lastly, rehearsals were crucial tasks for Cajun 6 and the staff. He and the staff watched the National Training Center (NTC) Operations (OPS) Group *TAC Talks Episode 01: A Way to CAR* regarding the combined arms rehearsal (CAR). Mirroring this process greatly improved their own CAR. They also trained on and improved with other rehearsals such information collection (IC) and fires, sustainment, and the fires technical rehearsal.

The "sets and reps" of home-station training with staff members vastly improved their MDMP efforts and greatly assisted with codifying planning processes within their "new and improved" PSOP.

Cajun 6 ensured the staff's planning processes were aligned doctrinally yet solidified with lessons and best practices from the CTCs and CALL.

Cajun 6 could not resist a quick smile of satisfaction. They did alright…

The radio blaring his call sign shook him back to reality. Cajun 6 acknowledged and headed toward the main CP.

Change of mission from division, time to start another MDMP.

APPENDIX A

Military Decision-Making Process Proficiency Via Training

The military decision-making process (MDMP) challenges can be reversed through training. Commanders are responsible for training their staffs in the MDMP during home-station training. Training must be deliberate, focused, and repetitive. Therefore, the MDMP should be applied to routine staff actions.

NATIONAL TRAINING CENTER OPERATIONS GROUP MILITARY DECISION-MAKING PROCESS TRAINING RESOURCES

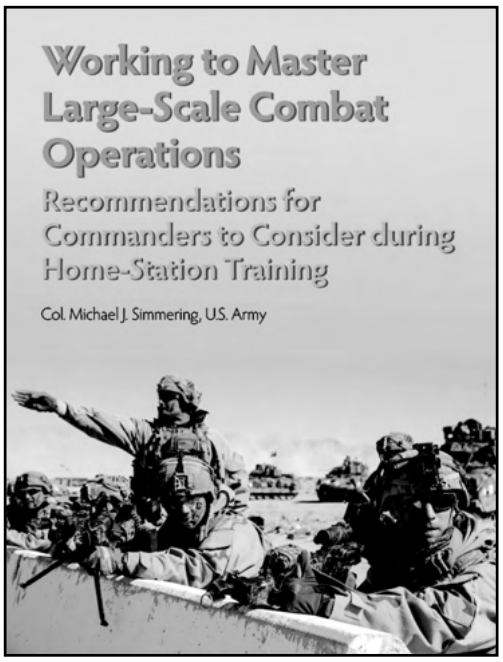

Figure A-1. *Working to Master Large-Scale Combat Operations: Recommendations for Commanders to Consider During Home-Station Training*, **COL Michael J. Simmering, former commander, Operations Group, National Training Center (NTC)**[1]

This publication (see figure A-1) addresses the need for staff proficiency when conducting the MDMP. Commanders must focus on the trend of staff. "Upon arrival at the NTC, staffs are not simply tasked to conduct the MDMP. Instead, the decisive action training environment confronts staffs with conducting the MDMP at speed in an environment where planning and current operations must occur simultaneously. Most staffs find this a challenge—primarily because our education and training focus often revolves around planning alone. Often, commanders become frustrated in the ability of the staff to coordinate and synchronize current operations at the pace required during a combat training center (CTC) rotation."[2]

Commanders with staffs should ask themselves the following questions:[3]

- Does my staff clearly understand how I receive information?
- Do I have an established system/process for communicating the commander's guidance that my staff understands?
- Have I personally *taught* each staff section my expectations of them as the entire staff progresses through the MDMP?
- Have I built a progressive training program for my staff at home station focused on increasing our ability to operate at an increased tempo?
- Have I trained my staff to conduct both planning and current operations simultaneously?

"As the Army hones its skills in large-scale combat operations (LSCO), commanders should remember that a very well-trained staff becomes a critical requirement to effectively negotiate the operations process."[4]

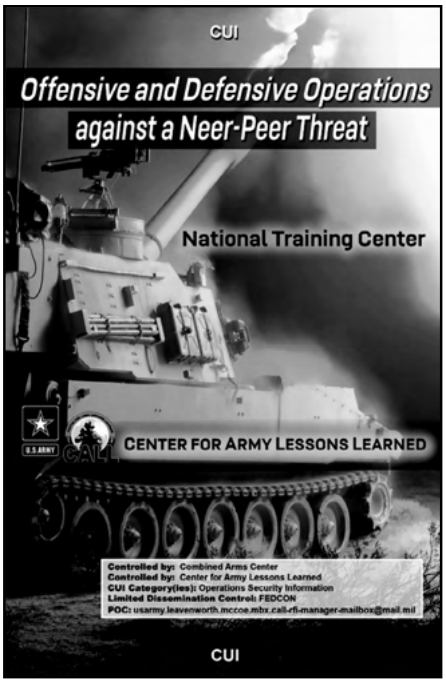

Figure A-2. Found in Center for Army Lessons Learned (CALL) 21-11, *Offensive and Defensive Operations against a Near-Peer Threat*, **chapter 1,** *Building Your Brigade Staff Training Program*, **by COL Michael J. Simmering[5]**

COL Simmering's chapter 1 article (see figure A-2) contains a methodology for developing a brigade-level staff training program for conducting LSCO against a near-peer threat. This methodology can be adapted for staff size and capacity, and, therefore, applied at the battalion level. Additionally, this training program can be completed within a unit's regular training cycle.

"Operations Group, NTC, created *Combining Arms in the Close Fight* (see figure A-3) to assist units in combining arms to win on the battlefield and is organized into three sections. Section I offers three foundational concepts and 18 critical tactics, techniques, and procedures (TTPs) that offer "a way" to think about how to combine arms. Section II focuses on brigade combat team (BCT) sustainment and describes why and how units should design their concept of support and logistics architecture. And, section III offers a series of hard problems for units to consider as they train for large-scale combat operations (LSCO)."[6]

"We intend for this book is to be practical. It builds upon NTC Operations Group's May 2021 publication, *Mastering the Fundamentals: For BCT and Below Formations*. It seeks to move beyond describing problems, focusing instead on concrete things units must do to combine arms. We take doctrine as our starting point — which rightly focuses on what must be done during operations — and move forward to offer ways to think about how to fight. Our source material for these recommendations is the hard work of nine BCTs during rotations spanning from July 2021 through May 2022."[7]

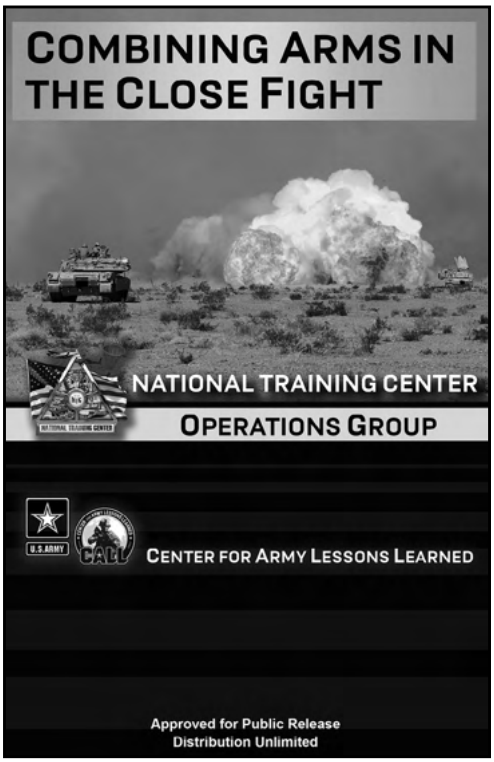

Figure A-3. CALL 23-01, *Combining Arms in the Close Fight*[5]

MISSION COMMAND TRAINING TABLES

Mission command training tables (MCTTs) are tools commanders can use to build and maintain their overall mission command and unit readiness.[8] Training Circular (TC) 6-0.2, *Training the Mission Command Warfighting Function for Battalions, Brigades, and Brigade Combat Teams*, 15 July 2019, provides training tables for battalions, brigades, and brigade combat teams (BCTs). The training tables featured in chapter 3, *Mission Command Warfighting Function Training Tables—BCT*, of TC 6-0.2,[9] focus on the BCT staff and detail all levels of mission command warfighting function training and certifications.

ENDNOTES

1. COL Simmering, Michael J. *"Working to Master Large-Scale Combat Operations: Recommendations for Commanders to Consider During Home-Station Training." Military Review*, May-June 2020. Available online at https://www.armyupress.army.mil/Journals/Military-Review/English-Edition-Archives/May-June-2020/Simmering-Home-Station-Training/. Common access card (CAC) required.

2. Ibid, pages 21 and 22.

3. Ibid, page 20.

4. Ibid, page 22.

5. CALL 21-11, *Offensive and Defensive Operations against a Near-Peer Threat*, chapter 1, pages 1 through 24, March 2021, found at https://armyeitaas.sharepoint-mil.us/teams/lessonslearned/CALL%20Publications/Forms/AllItems.aspx?id=%2Fteams%2Flessonslearned%2FCALL%20Publications%2F21%2D11%5FOff%20and%20Def%20Operations%20against%20a%20Near%2DPeer%2Epdf&parent=%2Fteams%2Flessonslearned%2FCALL%20Publications. CAC required.

6. CALL 23-01, *Combining Arms in the Close Fight*, retrieved from https://www.army.mil/article/261743/combining_arms_in_the_close_fight.

7. Ibid, page iii.

8. TC 6-0.2, T*raining the Mission Command Warfighting Function for Battalions, Brigades, and Brigade Combat Teams*, 15 July 2019, page ix.

9. Ibid, page 3-1.

APPENDIX B

Common Responsibilities for Operation Orders and Annexes; Warning Order, Operation Order, and Fragmentary Order Formats; and Annex Formats

COMMON RESPONSIBILITIES FOR OPERATION ORDERS AND ANNEXES

Army Techniques Publication (ATP) 5-0.2-1, *Staff Reference Guide, Volume I, Unclassified Resources*, 7 December 2020, and Field Manual (FM) 5-0, *Planning and Orders Production*, 4 November 2022, are doctrinal references that provide common responsibilities for operation order and annex production.

WARNING ORDER, OPERATION ORDER, AND FRAGMENTARY ORDER FORMATS

Field Manual (FM) 5-0, *Planning and Orders Production*, 4 November 2022, appendix D, figures D-3, D-4, and D-5 pages D-21, D-22, and D-23 provide format examples.

ANNEX FORMATS

Appendix E, *Annex Formats*, can be found in FM 5-0, pages E-1 through E-111. This appendix provides commanders and staffs guidance and formats to build annexes for plans and orders. This appendix lists 26 annexes and provides formats for 20 annexes. There are six annexes designated as spares: annexes I, N, O, T, X, and Y. Commanders and staffs use these annexes as required.

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GLOSSARY

ACRONYMS AND ABBREVIATIONS

AA	avenue of approach
AAR	after action review
ABCT	armored brigade combat team
ADM	Army design methodology
ADP	Army doctrine publication
AGM	attack guidance matrix
AO	area of operations
AOI	area of interest
ASCOPE	areas, structures, capabilities, organizations, people, and events (civil considerations)
AS3	assistant S-3
ATP	Army techniques publication
BCT	brigade combat team
BDA	battle damage assessment
BDE	brigade
BDET	battalion-sized detachment
BEB	brigade engineer battalion
BFB	Bilasuvar Freedom Brigade
BFC	battlefield circulation
BN	battalion
BSA	brigade support area
BSB	brigade support battalion
BTG	battalion tactical group
BUB	battle update brief
C2	command and control
CA	civil affairs
CAC	common access card
Cajun 2	fictional intelligence officer
Cajun 3	fictional operations officer
Cajun 5	fictional brigade executive officer
Cajun 6	fictional brigade commander
CAL	critical asset list
CALL	Center for Army Lessons Learned
CAR	combined arms rehearsal
CAS	close air support
CASEVAC	casualty evacuation
CAV	cavalry
CBRN	chemical, biological, radiological, and nuclear
CCIR	commander's critical information requirement
CDR	commander
C-Fire	counter-fire
CFL	coordinated fire line
CHOPS	chief of operations
COA	course of action

COMMEX	communications exercise
COMREL	community relations
COP	common operational picture
Copperhead 6	fictional battalion commander
COS	chief of staff
CP	command post
CPCE	Command Post Computing Environment
CPSOP	command post standard operating procedure
CPX	command post exercises
CSM	command sergeant major
CTC	combat training center
CUB	commander's update brief
DAL	defended asset list
D3A	decide, detect, deliver, and assess
DAGR	Defense Advanced Global Positioning System Receiver
DIRT	decisions, intent, risk, and triggers
DO	decisive operation
DP	decision point
DSM	decision support matrix
DST	decision support template
DTG	division tactical group
EA	engagement area
EEFI	essential element of friendly information
EMS	electromagnetic spectrum
EN	enemy
ENG	engineer
EVENTEMP	event template
EXCHECK	execution check
FA	field artillery
FASCAM	family of scatterable mines
FFA	free fire area
FFIR	friendly force information requirement
FOIC	future operations integrating cell
FRAGORD	fragmentary order
FSCOORD	fire support coordinator
FSEM	fire support execution matrix
FSO	fire support officer
G-3	assistant chief of staff, operations
Gator	fictional battalion call sign
GCM	graphic control measures
GLOC	ground line of communications
H	high
HHQ	higher headquarters
HOPES-W	higher headquarters, operational, planning, enemy, subordinate, and weather
HPTL	high-payoff target list
HUMINT	human intelligence
HVT	high-value target
IA	information advantage

IAW	in accordance with
IBCT	infantry brigade combat team
IC	information collection
ICP	intelligence collection plan or information collection plan
ICSM	information collection synchronization matrix
ID	infantry division
IDF	indirect fire
IN	infantry
IO	information operations
IOT	in order to
IPB	intelligence preparation of the battlefield
IR	information requirement
ISR	intelligence, surveillance, and reconnaissance
J-2	intelligence directorate of a joint staff
JP	joint publication
JRTC	Joint Readiness Training Center
JTF	joint task force
L	low
LD	line of departure
LNO	liaison officer
LOA	limit of advance
LOGSTAT	logistics status
LSCO	large-scale combat operations
LTP	Leader Training Program
M	medium
MA	mission analysis
MCOO	modified combined obstacle overlay
MCS	maneuver control system
MCTP	Mission Command Training Program
MCTT	mission command training table
MDMP	military decision-making process
ME	main effort
METT-TC (I)	mission, enemy, terrain and weather, troops and support available, time available, civil considerations [mission variables] (Army)
NAI	named area of interest
NCO	noncommissioned officer
NLT	no later than
NTC	National Training Center
O&I	operations and intelligence
OAKOC	observation and fields of fire, avenues of approach, key terrain, obstacles, and cover and concealment
OBJ	objective
OC/T	observer coach/trainer
OE	operational environment
OOB	order of battle
OPFOR	opposing force
OPLAN	operation plan
OPORD	operation order
OPS	operations

OPSEC	operations security
OPSYNC	operations synchronization
PAA	position area for artillery
PACE	primary, alternate, contingency, and emergency
PCC	precombat check
PCI	precombat inspection
PIR	priority intelligence requirement
PL	phase line
PMESII-PT	political, military, economic, social, information, infrastructure, physical environment, and time
PSOP	planning standard operating procedure
Razorback	fictional battalion commander call sign
RDSP	rapid decision-making and synchronization process
RECON	reconnaissance
RETRANS	retransmission
RFI	request for information
RFL	restrictive fire line
ROA	Republic of Atropia
ROM	refuel on the move
RPOL	rearward passage of lines
S-2	battalion or brigade intelligence staff officer
S-3	battalion or brigade operations officer
SE	supporting effort
SGM	sergeant major
SIGINT	signals intelligence
SIPRNET	SECRET Internet Protocol Router Network
SOP	standard operation procedure
SYNCMAT	synchronization matrix
TAC	tactical command post
TACSOP	tactical standard operating procedure
TC	training circular
TF	task force
TI	tactical internet
TOC	tactical operations center
TRP	target reference point
TSS	target selection standard
TTP	tactics, techniques, and procedures
USAF	United States Air Force
UVDD	understand, visualize, describe, and direct
WARNORD	warning order
WfF	warfighting function
WINTAK	Windows Team Awareness Kit
XO	executive officer
1SG	first sergeant

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