

Decision-Support Planning and Tools: Planning to Support Decision-Making

by CPT Gary M. Klein and CPT Alan P. Hastings

As the Army increases its focus on decisive action, more units are emphasizing decision-support templates and matrices as part of the planning process. Unfortunately, these tools have only minimally impacted tactical decision-making and mission outcomes because leaders are using these tools as another synchronization tool rather than focusing on decision points.¹ When used correctly, decision-support tools link directly to the information-collection (IC) plan, facilitate the creation of branch plans prior to execution and assist the commander's decision-making.

All leaders strive to support decision-making, so what are the challenges to accomplishing this? One is the sequence of decision-support planning within the military decision-making process (MDMP). Staffs create friendly decision-support tools late in the planning process during course-of-action (CoA) analysis, according to doctrine.² Given time constraints at this point, staffs often create these tools hastily, focusing on routine synchronization triggers instead of anticipating significant transitions or branch plans.

Also, the sequence of IC planning and decision-support planning creates a frequent disconnect between these two plans. To overcome these challenges staffs should develop decision points earlier in the planning process and practice MDMP more to recognize when and how to deviate from doctrine. We will recommend one such technique to alter existing doctrine and enable decision-support planning.

We will start by reviewing the current doctrine that outlines decision-support planning and a case study describing its typical, doctrinal execution. This review will explore the aforementioned challenges regarding decision-support planning. Then, we will review a foreign humanitarian assistance (FHA) contingency plan and summarize decision-point tactics (DPTs) as additional case studies. These latter case studies will demonstrate potential adjustments to decision-support planning. Finally, we will summarize some of the advantages and disadvantages to the recommended adjustments to decision-support planning.

Doctrinal review

When seeking doctrinal information about planning, MDMP and decision-support matrices (DSMs) and templates (DSTs), leaders typically reference Army Doctrinal Reference Publication (ADRP) 5-0, *The Operations Process*, and Field Manual (FM) 6-0, *Commander and Staff Organization and Operation*.

The Operations Process is the U.S. Army's primary reference for planning, preparing, executing and assessing, and it states that a DST is "[a] combined intelligence and operations graphic based on the results of wargaming. The [DST] depicts decision points, timelines associated with movement of forces and the flow of the operation, and other key items of information required to execute a specific friendly [CoA] ([Joint Publication (JP)] 2-01.3). Part of the [DST] is the [DSM]. A [DSM] is a written record of a wargamed [CoA] that describes decision points and associated actions at those decision points. The [DSM] lists decision points, locations of decision points, criteria to be evaluated at decision points, actions that occur at decision points and the units responsible to act on the decision points."³

Commander and Staff Organization and Operation, the U.S. Army's primary reference for MDMP and plans formats, references DSTs as a result of wargaming that "portray[s] key decisions and potential actions that are likely to arise during the execution of each CoA."⁴

These descriptions summarize DSTs and DSMs and what they contain. However, to find more details or an example, planners must follow the reference in ADRP 5-0 to JP 2-01.3, *Joint Intelligence Preparation of the Operational Environment* (JIPOE), and its Army equivalent, Army Techniques Publication (ATP) 2-01.3, *Intelligence Preparation of the Battlefield/Battlespace* (IPB). The IPB and JIPOE manuals present decision-support tools within the larger intelligence-planning process. They begin their description with the four steps of IPB, when staffs create a modified combined obstacle overlay (MCOOs), threat CoA(s) and an event template (eventemp), which depicts key differences in the threat CoAs. After completing these IPB estimates, the staff creates an IC plan to answer

intelligence gaps and narrow the range of possible threat CoAs, both of which influence the commander's decision-making.

The staff creates these four products (the MCOO, threat CoA(s), eventemp and IC plan) during mission analysis and will use the eventemp later to develop the decision-support plan. However, friendly decision points and decision-support tools are not created until CoA analysis, according to doctrine.⁵ This gap in time between IC planning during mission analysis (Figure 1, Star 1) and decision-support planning during CoA analysis (Figure 1, Star 2) creates a potential disconnect between these two plans, especially since units initiate IC prior to beginning decision-support planning.

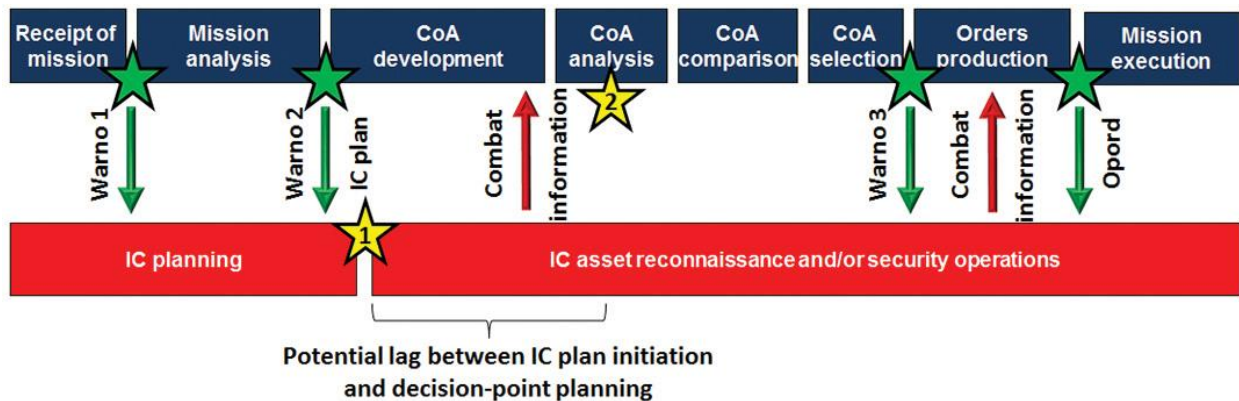


Figure 1. The MDMP planning process and IC planning and execution align as they occur sequentially and simultaneously. Note the gap in time between when a unit initiates its IC and when the staff develops its decision-support plan.

The doctrinal-planning sequence may be suitable when friendly branch plans are slight adjustments to a well-formulated plan based on minor differences in the threat situation. However, plans rarely survive first contact with the enemy, so leaders should emphasize decision-support planning to enable more flexible plans.

Case study: doctrinal decision-support planning

The following Joint Readiness Training Center (JRTC) brigade-defense case study highlights a typical decision-support plan.

In December 2014, JRTC conducted Rotation 15-02.5, a Joint Conflict and Training Simulation exercise, involving 21st Infantry Division (i.e., the JRTC headquarters and staff), 56th Stryker Brigade Combat Team (SBCT), two constructive brigade combat teams (BCTs) and a number of other brigade and battalion supporting units. Operations Group's Task Force 4 (cavalry squadron) roleplayed the Arianan 181st Brigade Tactical Group (BTG), the opposing force for this exercise. This case study is presented from 181st BTG's perspective.⁶

In the exercise scenario, 181st BTG attacked into the sovereign country of Atropia and established a defense to protect the flank of subsequent Arianan units that would continue the attack. To counter this, 21st Infantry Division attacked 181st BTG to re-establish the international boundary. The 181st BTG planned its defense using U.S. Army MDMP planning doctrine, including the development of its IC plan during mission analysis and DST during CoA analysis.

The 181st intelligence section analyzed its area of operations to understand the environmental effects and then analyzed its threat, 21st Infantry Division. During this analysis, it created its MCOO and developed threat most-likely and most-dangerous CoAs. The route along which 21st Infantry Division would attack differentiated the two threat CoAs the most. Recognizing this, the 181st intelligence section created an eventemp to visually depict the enemy's decision points and an IC plan to answer pertinent commander's critical information requirements (CCIR) at the appropriate named areas of interest (NAIs). By collecting this information, 181st BTG sought to predict the enemy's actions during its attack, thereby enabling the commander to make informed decisions to adjust the main body's defense.

4	Execute chemical artillery strike against 56 th SBCT?	If 56 th SBCT commits its 1 st Battalion and is decisively engaged at EA Einstein (Leesville)	Then request chemical strike authority and release of chemical munitions from 18 th DTG	NAI: 11 CCIR: 5 Unit: 1812 Infantry Battalion
5	Commit our reserve Armor battalion to BP 2 in Leesville?	1. If one of 1811st's companies in Leesville are about to be destroyed / penetrated 2. If U.S. forces have been fixed at BP 2	1. Then 1814 Armor should reinforce 2. Then counterattack 21 st Infantry Division along its southern flank	NAI: N/A CCIR: 3,4 Unit: 1811 Infantry Battalion
6	Maneuver 1813 Infantry Battalion from BP 4 in southern AoA to BP 2 in Leesville?	If all anticipated enemy forces have been identified and forces were unable to destroy / penetrate BP 3	Then maneuver 1813 Infantry Battalion from BP 4 in southern AoA to BP 2 in Leesville	NAI: 7 CCIR: 3,4 Unit: 3067 AT Battalion

Figure 2 (graphic and table combined). The 181st BTG's DST from JRTC Rotation 15-02.5.

Throughout mission analysis and CoA development, the 181st staff developed its concept of operations, prioritized efforts, synchronized adjacent units and defined command and support relationships, but it lets its subordinate units determine the detailed "how." By using mission orders and following the principles of mission command, the staff advanced succinctly to CoA analysis and wargamed more than one avenue in depth thoroughly. It used the time saved to develop its aforementioned decision points and branch plans (Figure 2).

A quick critique of this DST reveals that Decision Points 3, 5 and 6 result in bona fide branch plans, whereas Decision Points 1, 2 and 4 are more analogous to triggers and engagement criteria. In this case, the staff used mission orders to maximize its time during CoA analysis but still created a suboptimal decision-support plan. Most staffs spend even more time on mission analysis and CoA development, stealing precious time from CoA analysis and decision-support planning. This is the first of two challenges that leaders often fall victim to when using the doctrinal-planning sequence to create decision-support tools.

Very few staffs wargame their CoAs enough to develop decision points that trigger completely distinct branch plans because they spend too much time on mission analysis and CoA development.⁷ They use most of their time creating mission-analysis outputs (MCOO, situation template, eventemp and IC plan) and developing a detailed CoA, resulting in little or no time available for CoA analysis. Some units skip CoA analysis altogether, and even units that do conduct CoA analysis usually focus on synchronizing combat power, resulting in decision-support tools that capture nothing more than triggers to execute fine-tuned adjustments.

The second challenge, summarized previously, is that staffs develop decision points during CoA analysis (Figure 1, Star 2) after IC assets have already departed to initiate IC (Figure 1, Star 1).⁸ So units initiate IC before developing decision points, often reducing the usefulness of the information collected. For example, doctrine states that the cavalry squadron initiates reconnaissance immediately following a BCT's mission analysis.⁹ This allows the cavalry squadron to collect information with enough time for the BCT to adjust its plans based on what the squadron learns about the reconnaissance objectives (i.e., reconnaissance pull). However, this means the squadron initiates IC without knowing the BCT's decision points. This dilemma is not unique to BCTs – it exists in all units that employ IC assets – but leaders do not have to wait until CoA analysis to conduct decision-support planning.

Case studies: 'non-traditional' decision-support planning

El Niño flooding. The following Combined Joint Task Force-Horn of Africa (CJTF-HoA) FHA case study and summary of DPT will show that staffs can develop decision points during mission analysis or CoA development. Developing decision points earlier will ensure IC plans answer the CCIR and monitor the criteria related to the commander's decision points.

In Fall 2015, CJTF-HoA stood up an operational planning team (OPT) to develop a FHA contingency plan to address anticipated El Niño floods in Eastern Africa.¹⁰ The OPT used the joint-operation planning process as a foundation but significantly adjusted the traditional planning sequence when developing its IC plan, friendly CoAs and

decision-support tools. The OPT developed decision points in between mission analysis and CoA development, when mission analysis revealed substantial and insurmountable unknowns that made it unfeasible to create a suitable, continuous CoA that progressed to the desired endstate.

Given the uncertain and ambiguous situation, the staff addressed the problem by using an approach similar to the Army's design methodology. It framed its current situation and desired endstate during mission analysis while simultaneously identifying key challenges. By deliberately identifying challenges during mission analysis, the staff framed the problem enough to develop assumptions, related CCIR and requests for information, which would turn its assumptions into facts. The staff identified the primary challenge to be that no one knew what, where or when CJTF-HoA would be asked to provide humanitarian assistance. By acknowledging and studying these unknowns, the staff focused its planning to generate CoAs based on informed assumptions.

To help understand "what," the staff – with the support of 415th Civil Affairs Battalion – began analyzing the problem by studying previous FHA cases. It studied the U.S. government and international response to the 1997 and 2006 Somalia floods, the 2010 Pakistan floods and the 2014 Western Africa Ebola outbreaks. The staff identified two potential "whats" from these case studies. The first was the need to coordinate the international response through a civil-military operations cell (CMOC). The second was the requirement to provide the military's unique aerial mobility, both fixed and rotary, to deliver humanitarian aid.

With these two assumptions, the staff began to study "where" it would conduct these operations. The intelligence section and meteorological and oceanographic cell's mission analysis defined an area of operations based on those areas that faced the highest threat of flooding. Simultaneously, the sustainment and air-operations cells studied the airfields and lines of communication that could be used to reach these threatened areas. This helped develop a concept for where the CMOC might set up and potential lines of communication that could be used to deliver logistics support.

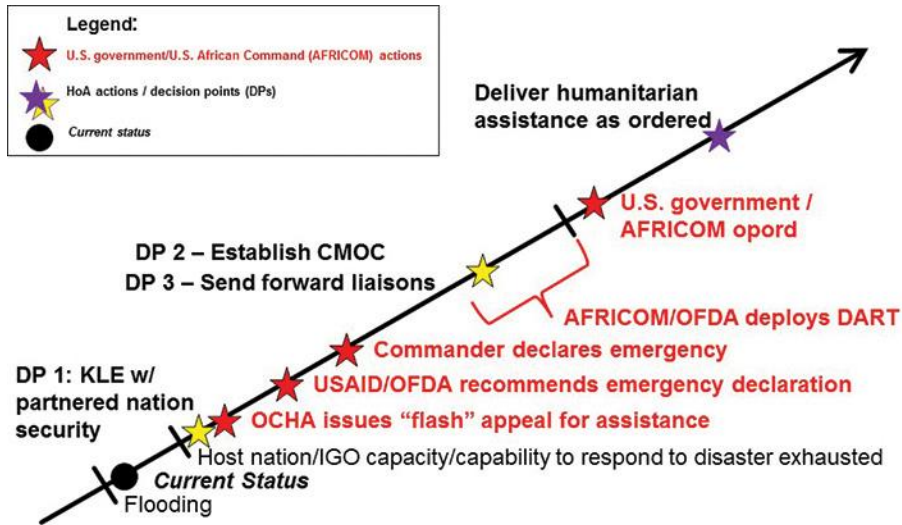
Recognizing the difficulty in predicting the weather, the primary threat in this situation, the hardest assumption to validate was "when" this operation would take place. Oceanographers were predicting significant El Niño rainfall based on higher than average ocean temperatures, but this indicated seasonal trends, not daily or weekly weather patterns. So, immediately upon planning initiation, the staff developed CCIR to monitor rainfall and river levels to anticipate disastrous flooding. These CCIR helped anticipate the physical environment, but the staff had to predict the conditions under which the U.S. government would get involved as well.

To further define "when," the 415th Civil Affairs Battalion and OPT planners studied the 2010 Pakistan floods to understand a typical U.S. government response and develop friendly-force information requirements (FFIRs) to anticipate potential U.S. government action. These FFIRs were based on the conditions that would cause the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) to issue a flash appeal for assistance, the U.S. Embassy Chief of Mission to declare an emergency, and the Joint Staff and U.S. Africa Command (AFRICOM) to order an FHA mission. Once the staff identified these FFIR, it began communicating with OCHA and the embassies to understand the interagency DPs.

Now that the staff had determined what CJTF-HoA's responses might be (implied tasks), where it might operate and when (decision points), the staff assembled and sequenced these pieces into a composite CoA it called a "decision-point CoA." This name reflected the fact that the CoA proposed a series of branches that could be executed singularly or in combination, based on how the situation unfolded and the associated decision points.

Linking decision points and branch plans is not unique, but the planning sequence was unique. The staff developed decision points in between mission analysis and CoA development, when the branch plans were still implied tasks.

If the CJTF-HoA staff had not adjusted the doctrinal-planning process, it would have likely spent more time on mission analysis trying to gain greater fidelity on the mission variables rather than progressing to CoA development. There were simply too many unknowns for the staff to plan a traditional CoA from start to finish. Instead, based on informed assumptions, the staff developed potential responses, or branch plans, tied to sequential decision points, which collectively formed its CoA. Whereas the 181st staff created decision points and branch plans during CoA analysis, the CJTF-HoA staff developed decision points in between mission analysis and CoA development.



Decision-Support Matrix				Supporting CCIR and Units
DP #	Decision	Criteria / Conditions	Action	
	What decision must be made?	Criteria is condition(s) that when met require the decision to be made	Actions to be executed	
1	Coordinate KLEs to energize partner-nation security?	<i>If</i> VEOs establish unacceptable threshold of control over HA process and if particular zone or partner is identified that can / should be influenced	Then coordinate engagement between CJTF-HoA commanding general and appropriate AMISOM or TCC leader	PIR: 1, 4, 5, 7 Units: CJ-2, TSC-FAC, 415 th Civil Affairs Battalion
2	Establish CMOC as component of JOC?	<i>If</i> commander has declared state of emergency and if another unit has not been ordered to form JTF/CMOC	Then 415 th Civil Affairs embeds civil liaison in JOC to help establish civil COP and synchronize with IGOs	PIR: 8, 9; FFIR 1-3 Unit: CJ-35, TSC-FAC, 415 th Civil Affairs Battalion
3	Send LNOs forward to key IGO C-2 / logistics nodes to assist with decision-making?	<i>If</i> commander has declared state of emergency and if another unit has not been ordered to form JTF / CMOC and if we know USAID's primary C-2 node	Then 415 th Civil Affairs and / or CJ-4 sends LNO forward to location to be determined	PIR: 8, 9; FFIR 1-3 Units: CJ-35, TSC-FAC, 415 th Civil Affairs

Figure 3 (graphic and table combined). CJTF-HoA's DST from an El Niño FHA contingency plan.

11th Armored Cavalry Regiment (ACR) DPT. Another technique for planning decision points is called DPT. The 11th ACR (opposing force) at the National Training Center (NTC) developed DPTs in the 1990s.¹¹ The DPT is a flexible plan that links two or more complete branch plans into a composite CoA. Since the staff must develop and link the branch plans before completing its CoA, it must develop decision points prior to CoA analysis to link the branch plans together using a conditional "if-then" framework, analogous to decision-support tools. Figure 4 and the following example describe DPT further.

In this scenario, a Donovanian mechanized-infantry battalion (MIBN) planned to breach to allow freedom of maneuver and pass the BTG's decisive operation (DO). The MIBN intelligence section analyzed the terrain in its area of operations and developed a few threat CoAs. Its terrain analysis identified three avenues of approach

(AoAs) along which the enemy was likely defending, and its threat CoAs had the enemy defending using a combination of two or more AoAs.¹² Finally, the intelligence section developed an IC plan to determine the threat's current CoA and seek exploitable weaknesses – for example, a bypass lane or the easiest breach point.

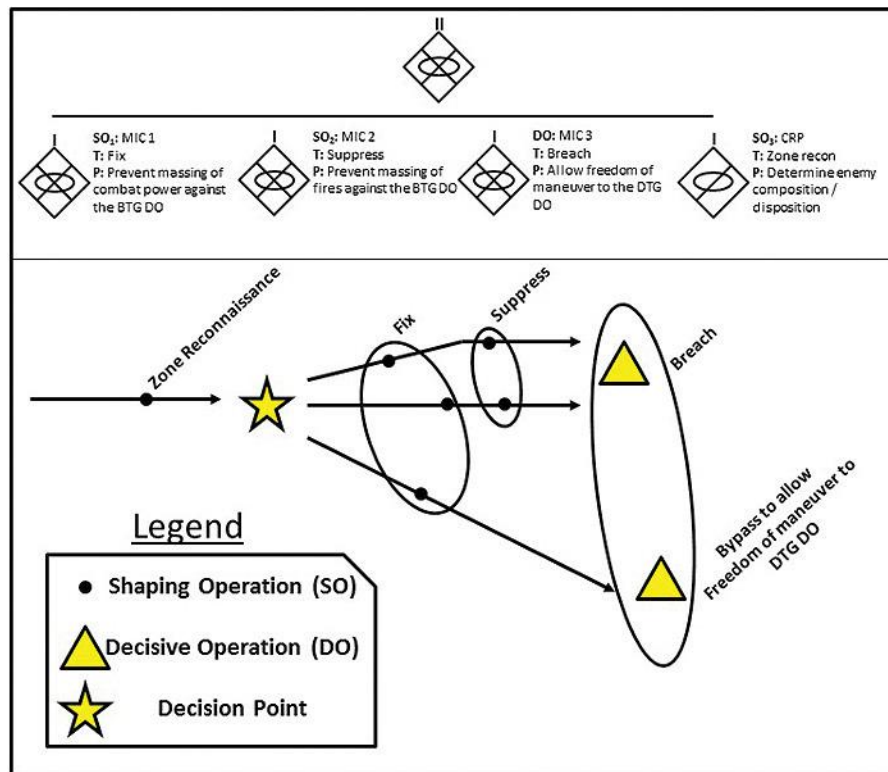


Figure 4. In the authors' graphic depiction of a typical plan that uses DPT, the commander assigns each unit a task and purpose as a foundational CoA, but the precise axes of advance for the attack are not known until the commander makes a decision based on continued development of the situation.

The decision as to which AoA the MIBN would attack along depended on the information the combat reconnaissance patrol (CRP) and other IC assets gathered. If the IC assets discovered a bypass lane, the MIBN would bypass the threat engagement area (EA) and pass the BTG's DO along that AoA. If a bypass was not feasible, the CRP and other IC assets would continue to collect information to enable the commander's decision as to which AoA to breach along. Even before the commander could make this decision, he assigned his three mechanized-infantry companies (MICs) the tasks of fix (Shaping Operation 1 (SO₁), suppress (SO₂) and breach (DO)). Also, the commander task-organized and provided a purpose for each enabler to ensure a complete, fully integrated branch plan.¹³ Although the axis of advance had not yet been determined, these planning details were enough to enable subordinate units to prepare, coordinate with adjacent units and rehearse.

Then, once the IC assets collected enough information or the commander selected the AoA for the breach, the first MIC (SO₁) would attack to fix to prevent massing of combat power against the breach force. The second MIC (SO₂) would attack to suppress to prevent the enemy from massing direct fire against the breach force. Finally, once these conditions had been set, the third MIC (battalion DO) would attack to breach the threat's defensive line to pass the BTG DO.

Since DPT requires multiple, complete branch plans (i.e., CoAs), the time required to develop a detailed plan has the potential to make this planning technique unfeasible. Because of this, leaders must use mission orders and encourage disciplined initiative to facilitate planning. Also, when planning using DPT, staffs must develop decision points prior to CoA analysis. It must propose and incorporate decision points into the plan no later than CoA development since they are an integral part of the composite CoA. Staffs will refine decision-support tools through CoA analysis, but it must propose tentative decision points during CoA development.

Adjusting decision-support planning within MDMP

As the CJTF-HoA FHA case study and DPT proved, decision points can be proposed prior to CoA analysis. In the joint-task-force (JTF) case study, the staff proposed decision points in between mission analysis and CoA development, while DPT established decision points during CoA development. Based on these observations, the outputs of the MDMP steps could be adjusted so that potential decision points are recommended during mission analysis and initial decision-support tools are created during CoA development (Figure 5).¹⁴

	Doctrinal outputs	Proposed outputs
Receipt of mission	Warning order (warno) 1	Warno 1
Mission analysis	Updated IPB IC plan Warno 2	Updated IPB IC plan Potential decision points Warno 2
CoA development	CoA statement and sketch	CoA statement and sketch Initial decision-support tools
CoA analysis	Refined CoAs Potential decision points (and decision-support tools) Wargame results	Refined CoAs Refined decision points and decision-support tools Wargame results

Figure 5. The recommended changes to the doctrinal-planning process are highlighted in red. Instead of waiting until CoA analysis to begin decision-support planning, potential decision points should be proposed during mission analysis, and initial decision-support tools should be developed during CoA development. (Doctrinal outputs from Field Manual 6-0, Chapter 9)

There are two benefits to these recommendations. The most obvious benefit is that by developing decision points earlier in the planning process, the staff will now develop an IC plan that considers the commander's decision points. This is a critical flaw in the current MDMP planning sequence, but the recommendation to conduct decision-point planning earlier has the potential to overcome this. Even though staffs will continue to refine decision points through CoA analysis, proposing decision points during IC planning will increase the linkage between the IC and decision-support plans. The second benefit is that by developing decision points earlier, units are more likely to conduct decision-support planning, thereby enabling adaptive plans that account for changes in the environment.

The benefits of planning decision points earlier are significant, but leaders must be mindful of two challenges this will create as well. The first is the challenge of identifying potential decision points during mission analysis. Admittedly, it is easier to develop decision points after mission analysis, when the staff understands the mission variables better. However, initial decision points can be anticipated from collaborative terrain analysis and development of enemy CoAs, both of which happen during mission analysis. In fact, leaders often anticipate decisions already when they start thinking about potential CoAs during mission analysis. This is an example of the tension between adhering to a systematic, doctrinal process vs. following an intuitive thought process.

The second, and more difficult challenge, is the requirement for staffs to develop several branch plans and link them together using decision points and decision-support tools. Some staffs struggle to develop even a single synchronized CoA. Leaders should overcome this challenge by conducting rigorous staff training and strictly enforcing planning timelines. Spending more time on decision-support planning might add some risk by not focusing on a single synchronized CoA, but it will mitigate tactical risk by developing a more flexible plan. A composite CoA with multiple branch plans enables the greatest chance of success by seeking exploitable weaknesses regardless of the enemy CoA.

Regardless of the sequence used to plan, leaders should remember that MDMP is iterative and that assumptions and tools, including IC plans and decision-support tools, must be periodically reassessed. As the understanding of

the situation changes, these plans and products must be adjusted to ensure units collect the information most pertinent to decision-making.

Also, leaders should remember that the appropriate planning sequence depends on the situation. In instances like the CJTF-HoA contingency plan and DPT, leaders will benefit from changing the order in which they conduct decision-support planning.

Conclusion

Current planning doctrine gives a low priority to decision-support planning by waiting to introduce it until CoA analysis. Leaders should place a higher priority on decision-support planning by starting it earlier during mission analysis and CoA development. Developing decision points earlier in the planning process will help units link their IC and decision-support plans, which assist the commander's decision-making.

Finally, leaders are well-versed in the science of planning but are often under-practiced. There are an abundance of instructors, observers/coaches/trainers (O/C/Ts), FMs and other resources that emphasize the science of planning. However, commanders and staffs must increase the frequency of MDMP training to enable the art of adjusting MDMP to particular situations and constraints. Additional repetitions on MDMP will enable adaptive planning to maximize success during mission execution.

Ultimately, military operations consist of a series of decisions, so the unit that anticipates transitions and the associated decision points will likely be the most successful. If leaders delay or neglect developing decision points, how will this affect the outcomes of our plans and operations?

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Notes

¹ These are CPT Klein's and CPT Hastings' observations as O/C/Ts at JRTC and NTC, respectively. Also, DSTs and DSMs are designed to aid in decision-making, so we will collectively refer to them as decision-support tools.

² ADRP 5-0, **The Operations Process**, Washington, DC: U.S. Government Printing Office, May 2012.

³ Ibid.

⁴ FM 6-0, **Commander and Staff Organization and Operations**, Washington, DC: U.S. Government Printing Office, May 2014.

⁵ ATP 2-01.3, **Intelligence Preparation of the Battlefield/Battlespace**, Washington, DC: U.S. Government Printing Office, November 2014.

⁶ This vignette is a first-person account from CPT Klein, who was in Task Force 4 (cavalry squadron) and served as 181st BTG's operations officer for Rotation 15-02.5.

⁷ These are CPT Klein's observations as an O/C/T at JRTC from February 2014 to March 2015.

⁸ Ibid.

⁹ FM 3-98, **Reconnaissance and Security Operations**, Washington, DC: U.S. Government Printing Office, July 2015.

¹⁰ This vignette is a first-person account from CPT Klein, who was at CJTF-HoA and served as an assistant OPT leader during the El Niño contingency-planning effort.

¹¹ LTC Pete Palmer and CPT Jim Crider, "Decision-Point Tactics (Fighting the Enemy, Not the Plan!)," **CALL Combat Training Center (CTC) Quarterly Bulletin No. 97-4**, Fort Leavenworth, KS, April 97. See also, by the same authors, "Decision-Point Tactics and the Meeting Battle" and "Decision-Point Tactics During the Defense," **Infantry** magazine, Fort Benning, GA, January-

February and March-April 1997, respectively. Finally, see Carl A. Alex, ***Process and Procedure: The Tactical Decision-Making Process and Decision-Point Tactics***, master's of military art and science monograph (2000), U.S. Army Command and Staff College, Fort Leavenworth, KS, for a thorough explanation of DPT.

¹² For further discussion on the need to develop multiple enemy CoAs when planning using DPT, refer to Eric Slater, "Decision-Point Tactics: Elevating Intelligence Preparation of the Battlefield in a Decisive-Action Training Environment," ***Small Wars Journal***, Sept. 30, 2015.

¹³ For a technique to develop a fully integrated branch plan to support a tactical decision point, see LTC Curt Taylor, "Chapter 1: Fighting a Complex Threat: Ten Observations from the Decisive-Action Training Environment," ***CALL Newsletter 13-18 Decisive Action Training Environment at the JMRC 2***, July 2013.

¹⁴ Anthony Lupo and Isaac Best, "Decision Point Tactics," Fort Irwin, CA, Defense Entrepreneurs Forum Agora Presentation, Oct. 2, 2015.