

b. Synchronization Matrix

A synchronization matrix is a planning support tool designed to integrate the efforts of the force across the warfighting functions and to record the results of the COA war game. It depicts, over time, the diverse actions of the entire force that are necessary to execute the COA. When completed, it provides the basis for an execution matrix or Annex X, Execution Checklist, to the OPLAN or OPORD. See table D-5.

Table D-5. Synchronization Matrix.

TIME/EVENT		PRE D-DAY	D-DAY – D + 2	D + 3 – D + 4	D + 5 – D + 6
Enemy Action					
Decision Points				1	2
Intelligence		MEF conducts reconnaissance in zone.			
	Named area of interest		1, 2	3, 4	5
Force Protection	Survivability	Establish combat air patrol over MEF area of operation.			
	NBC		Priority of support to aviation combat element (ACE).		

Table D-5. Synchronization Matrix—Continued.

TIME/EVENT		PRE D-DAY	D-DAY – D + 2	D + 3 – D + 4	D + 5 – D + 6
Maneuver	Deep		MAW attacks Northern Operational Group armor and artillery, command and control (C2), and combat service support (CSS) facilities.	MAW attacks 102, 103, 401, and 402.	
	Security		Covering forces conduct security operations		
	Close		1 st and 3 ^d MARDIVs complete rupture of enemy defenses.	1 st MARDIV attacks enemy forces south of phase line TEAL. 3 ^d MARDIV conducts link up with Blue-land forces.	1 st MARDIV and MAW defeat enemy forces south of phase line TEAL. The 3 ^d MARDIV conducts a link up with Special Purpose MAGTF-B (SPMAGTF-B).
	Reserve	3 ^d MARDIV— one regiment to MEF reserve.			
	Rear	3 ^d MARDIV— one battalion to tactical combat force.			
	Mobility	Priority of main supply route development in main effort zone.			
	Counter-mobility			Complete execution of Barrier Plan South.	
	Fires	Lethal			
Nonlethal				Fire expendable jammer to disrupt Northern Operational Group attack.	
Targeted areas of interest				A	B

Table D-5. Synchronization Matrix—Continued.

TIME/EVENT		PRE D-DAY	D-DAY – D + 2	D + 3 – D + 4	D + 5 – D + 6
Logistics	Sustainment	Logistic Throughput Plan.			
	Transport	Movement Control Plan.			
C2				MEF assumes tactical control of Blueland Forces in the vicinity of Tealton.	
	Information warfare and C2 warfare	Build enemy electronic order of battle nodal analysis.	Attack Northern Operational Group C2 nodes.		

c. Course of Action War Game Worksheet

The COA war game worksheet is used during the war game to record friendly action, enemy reaction, and friendly counter-action involved in each COA. It is also used to capture critical information that may be identified during the war game, such as potential CCIRs, decision points, and named areas of interest. See table D-6.

Table D-6. Course of Action War Game Worksheet.

COA 1, STAGE A; BOX: MOST LIKELY							
ACTION	REACTION	COUNTER ACTION	ASSETS	APPROX. TIME	DECISION POINT (DP)	CCIR	REMARKS
MARDIV envelops Orangeland forces north of Gray City.	102 ^d and 103 ^d Armored Brigades counter-attack.	MAW interdicts moving enemy forces. MARDIV engages and destroys enemy armor at long range.	Surge MAW attack assets to interdict enemy armor.	D + 3	DP 3	Will 102 ^d and 103 ^d Armored Brigades move west to counter-attack.	MARDIV has priority of close air support.

d. COA Comparison and Decision Matrix

The COA comparison and decision matrix is a planning support tool designed to assist the commander and staff in recording the advantages and disadvantages of each COA as it is compared against the commander’s evaluation criteria. It may reflect various techniques for weighing the COA against the commander’s evaluation criteria, as shown below in tables D-7 and D-8. The commander may use the COA comparison and decision matrix to aid his decisionmaking process during the selection of a COA for execution.

Table D-7. Comparison and Decision Matrix with Comments.

COMMANDER'S EVALUATION CRITERIA	COA 1	COA 2	COA 3
Force Protection	Moderate casualties.	High casualties. Increased nuclear, biological, and chemical threat.	Light casualties.
Tempo, Surprise		Achieving surprise unlikely.	High chance of achieving surprise.
Shapes the Battlespace	ACE interdiction of enemy lines of communication limits enemy's ability to reinforce.		Deception likely to be effective.
Asymmetrical Operations	ACE operates against second echelon armor forces. Ground combat element (GCE) mechanized forces attack enemy dismounted infantry.	MEF mechanized forces against enemy mechanized forces.	
Maneuver	Frontal attack followed by penetration.	Frontal attack.	Turning movement.
Decisive Actions	ACE disrupts deployment of second echelon forces through interdiction.		Isolate first echelon forces. Disrupt lines of communication, logistics facilities, and assembly areas.
Simplicity		Simplest.	Demanding command and coordination requirements.

Table D-8. Comparison and Decision Matrix with Sample Ranking.

COMMANDER'S EVALUATION CRITERIA	COA 1	COA 2	COA 3
Intelligence	3	2	1
Force Protection	2	1	3
Tempo, Surprise	1	2	3
Focus, Speed, Concentration	3	2	1
Shapes the Battlespace	3	2	1
Asymmetrical Operations and Combined Arms	1	2	3
Maneuver	2	1	3
Decisive Actions	3	2	1
Simplicity	2	3	1
Friendly Casualties	2	3	1
TOTAL	22	20	18

(reverse blank)