Joint Operation Planning Process

Introduction to JOPP

THE JOINT OPERATION PLANNING PROCESS

Step 1: Initiation
Step 2: Mission Analysis
Step 3: Course of Action (COA) Development
Step 4: COA Analysis and Wargaming
Step 5: COA Comparison
Step 6: COA Approval
Step 7: Plan or Order Development

Peter R. Scheffer, Jr.
Title X Assistant Professor
Dept. of Joint, Interagency, & Multinational Operations (DJIMO)
Joint Operation Planning Process

We are Here...
Joint Operation Planning Process

COA Comparison
“Governing Factors”

11 August 2011
Joint Operation Planning Process

• COA Comparison:
  - “An objective process whereby COAs are considered independently of each other and evaluated/compared against a set of criteria that are established by the staff and commander.”
  - The goal is to identify the strengths and weaknesses of COAs so that a COA with the highest probability of success can be selected and developed.

• The commander and staff analyze each tentative COA separately according to the commander’s guidance.

• COA analysis identifies advantages and disadvantages of each proposed friendly COA.

• Governing Factors:
  - “Those aspects of the situation (or externally imposed factors) that the commander deems critical to mission accomplishment.”
  - Governing Factors are key outputs of COA Analysis and Wargaming and key inputs to COA Comparison.
  - The staff evaluates COAs using Governing Factors to identify the one with the highest probability of success.
  - Governing Factors are criteria!
  - Potential Governing Factors include elements of the commander’s intent and planning guidance; wargaming results; principles of joint operations; operational limitations or any other criteria the commander desires.

- JP 5-0, Joint Operation Planning
Evaluation Criteria are “factors the commander and staff will later use to measure the relative effectiveness and efficiency of one COA relative to other COAs.”

Evaluation Criteria address factors that affect success and those that can cause failure.

The staff presents proposed Evaluation Criteria to the commander at the Mission Analysis briefing for approval.

Proposed Evaluation Criteria are a key output of Mission Analysis and a key input to COA Development.

Refined Evaluation Criteria are a key output of COA Development and a key input to COA Comparison.

Evaluation Criteria may be weighted based on their relative importance and the commander’s guidance.

“COA Comparison is an objective process to evaluate COAs independently of each other and against set criteria approved by the commander and staff.”

The goal is to identify the strengths and weaknesses of COAs and enable selection of a COA with the highest probability of success for further development.
In COA Comparison and decision, the commander evaluates all friendly COAs against established criteria, evaluates them against each other, and selects the COA that will best accomplish the mission.

- COA Evaluation and COA Comparison occur during Step 4 (Course of Action Comparison and Decision) of the Marine Corps Planning Process.

- The commander uses the information gathered, which was based on his Evaluation Criteria, to select a COA to develop into the concept of operations.

- Each COA is examined against the commander’s Evaluation Criteria.

- The results of COA Evaluation allow the commander to conduct COA Comparison.

- The commander may use a comparison and decision matrix to help compare one COA against another.

- COA Comparison provides the commander with an understanding of the relative merit of each COA.

- The commander’s Evaluation Criteria addresses specific issues and/or questions the commander wants the staff to determine on each COA during the conduct of the wargame.
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.
- The standard or basis for determining relative advantage or disadvantage of a particular COA.
- Benchmark sources may include regulation, historical precedent, experience, and averaging.

Formula:
- An expression of how changes in the value of the criterion affect the desirability of the possible solution.
- The formula may be stated in comparative or absolute terms.
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--Joint Challenge--

"Governing Factors"
1. Risk of Triggering Deployment of IRS Forces
2. Risk of Coalition Casualties in Event of Attack
3. Time to Emplace FDOs
4. Time for Coalition to Seize Initiative
5. Amount of Destruction to GOI Military & Infrastructure
6. Risk that IDP Issues Affect Operations (IO, Sanctuary, Interference)
7. Risk of Diminishing International Support
8. Ability of AQ to Disrupt Coalition Operations
Short Title: Risk of Triggering Deployment of IRS Forces
Definition: The level of risk of triggering deployment of IRS forces
Unit of Measure: Gradations (Low, Medium or High)
Benchmark: Medium
Formula: Low is an advantage; medium is neutral; high is a disadvantage; less is better
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Governing Factor #2

Short Title: Coalition Casualties

Definition: The degree of risk of coalition casualties in event of an attack

Unit of Measure: Gradations (Low, Medium, or High)

Benchmark: Medium

Formula: Low is an advantage; medium is neutral; high is a disadvantage; less is better
**Governing Factor #3**

**Short Title:** Time to Emplace FDOs*

**Definition:** The amount of time needed to employ Diplomatic, Informational, Military and Economic Flexible Deterrent Options

**Unit of Measure:** Days

**Benchmark:** 150**

**Formula:** Less than or equal to 150 days is an advantage; more than 150 days is a disadvantage; less is better

* Based on Cdr’s Guidance for COA Development

** Based on the J4 estimate of the number of days to deploy the entire force
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**Governing Factor #4**

**Short Title:** Time to Seize the Initiative*

**Definition:** The amount of time required for the Coalition to seize the initiative.

**Unit of Measure:** Days

**Benchmark:** 30**

**Formula:** Less than or equal to 30 days is an advantage; more than 30 days is a disadvantage; less is better

* Based on PACOM CONPLAN 1234-11 Concept of Operations
** Based on the number of days from the start of Phase II (Seize the Initiative/Assure Friendly Freedom of Action) to the start of Phase III (Dominate/Offensive Operations) IAW the PACOM CONPLAN 1234-11 Concept of Operations
Governing Factor #5

Short Title: Destruction to GOI (Aceh) military and infrastructure

Definition: The estimated amount of destruction to the GOI military and infrastructure in Aceh

Unit of Measure: Percentage

Benchmark: 10%

Formula: Less than or equal to 10% is an advantage; greater than 10% is a disadvantage; less is better
Short Title: IDP Disruption

Definition: The level of risk that IDP issues will affect operations (IO, Sanctuary, Interference)

Unit of Measure: Gradations (Low, Medium, or High)

Benchmark: Medium

Formula: Low is an advantage; medium is neutral; high is a disadvantage; less is better
**Governing Factor #7**

**Short Title:** International Support

**Definition:** The degree of risk of diminishing international support

**Unit of Measure:** Gradations (Low, Medium, or High)

**Benchmark:** Medium

**Formula:** Low is an advantage; medium is neutral; high is a disadvantage; less is better
Governing Factor #8

Short Title: AQ Disruption

Definition: Ability of AQ to disrupt coalition operations

Unit of Measure: Gradations (Low, Medium, or High)

Benchmark: Medium

Formula: Low is an advantage; medium is neutral; high is a disadvantage; less is better
Joint Operation Planning Process

--Joint Challenge--

“Methods of Comparison”
## Joint Operation Planning Process

### Raw Data Matrix

<table>
<thead>
<tr>
<th>Criteria</th>
<th>IRS Deployment</th>
<th>Emplace FDOs</th>
<th>Seize the Initiative</th>
<th>GOI/Aceh Military Destruction</th>
<th>IDP Disruption</th>
<th>Int’l Support</th>
<th>AQ Disruption</th>
<th>Coalition Casualties</th>
</tr>
</thead>
<tbody>
<tr>
<td>COA 1 Attack South</td>
<td>High</td>
<td>&lt; 150 days</td>
<td>&lt; 30 days</td>
<td>&lt; 10%</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>COA 2 2 x Attacks S. &amp; NE</td>
<td>Low</td>
<td>&gt; 150 days</td>
<td>&gt; 30 days</td>
<td>&gt; 10%</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>High</td>
</tr>
</tbody>
</table>
Advantages:
- Time to Seize the Initiative – < 30 days
- Destruction to GOI Military – < 10%
- IDP Disruption – Low
- Coalition Casualties – Low
- International Support – High
- Time to Emplace FDOs – < 150 days

Disadvantages:
- Risk of IRS Deployment – High
- AQ Disruption – High
Analysis of COA-2 (2 x Attacks)

Advantages:
Risk of IRS Deployment – Low
AQ Disruption – Low

Disadvantages:
Time to Seize the Initiative – > 30 days
Destruction to GOI Military – > 10%
IDP Disruption – High
Coalition Casualties – High
International Support – Low
Time to Emplace FDOs – > 150 days
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Weighting

“Pairwise Comparison”

11 August 2011
“Pairwise Comparison” (PC) involves one-on-one comparisons of ‘Governing Factors’. A planner is asked to make comparative judgments on the relative importance of ‘Governing Factors’. These judgments are used to assign relative weights to the ‘Governing Factors’. This method is based on the premise that the ‘Principles and Criteria’ are most “measurable” and/or “observable”.

✓ Gradations:
  ✓ “Favored”
  ✓ “Slightly Favored”
  ✓ “Equal”
  ✓ “Less Favored”
  ✓ “Least Favored”

- Guidelines for Applying Multi-Criteria Analysis, Guillermo Mendoza
Weighting of Criteria
(Pairwise Comparison)

Risk of IRS Deployment is slightly favored over Time to Emplace FDOs; Time to Seize the Initiative; and Destruction to GOI Military and Infrastructure

Risk of IRS Deployment is favored over Coalition Casualties; IDP Disruption; International Support; and AQ Disruption

Time to Emplace FDOs; Time to Seize the Initiative; and Destruction to GOI Military are weighted equally

Time to Emplace FDOs; Destruction to GOI Military; and Risk of IRS Deployment are slightly favored over Coalition Casualties; IDP Disruption; International Support; and SAPA Disruption
### Joint Operation Planning Process

#### COA Comparison

(Less is Better)

<table>
<thead>
<tr>
<th>Criterion</th>
<th>COA-1 (1xAttack)</th>
<th>COA-2 (2xAttacks)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk of triggering Deployment of IRS (x3)</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Risk of Coalition Casualties in Event of Attack</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Time to emplace FDOs (x2)</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Time for Coalition to Seize Initiative (x2)</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Amount of Destruction to GOI Military (x2)</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Risk that IDP issues affect Operations (IO, Sanctuary, Interference)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Risk of diminishing Int’l Support</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Ability of AQ to disrupt Coalition Operations</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>19</strong></td>
<td><strong>22</strong></td>
</tr>
</tbody>
</table>

Numbers in RED represent weights for particular criterion.
### Joint Operation Planning Process

#### Plus/Minus/Neutral Comparison

<table>
<thead>
<tr>
<th>Criteria</th>
<th>IRS Deployment</th>
<th>Emplace FDOs</th>
<th>Seize the Initiative</th>
<th>GOI Military Destruction</th>
<th>IDP Disruption</th>
<th>Int'l Support</th>
<th>AQ Disruption</th>
<th>Coalition Casualties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COA-1 1xAttack</strong></td>
<td>-</td>
<td>0</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td><strong>COA-2 2xAttacks</strong></td>
<td>+</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
</tbody>
</table>

**Positive Influence** (+)

**Neutral Influence** (0)

**Negative Influence** (-)
<table>
<thead>
<tr>
<th>COA</th>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COA-1</strong></td>
<td>Time to Seize the Initiative – &lt; 30 days</td>
<td>Risk of IRS Deployment – High</td>
</tr>
<tr>
<td>1xAttack</td>
<td>Destruction to GOI Military – &lt; 10%</td>
<td>AQ Disruption – High</td>
</tr>
<tr>
<td></td>
<td>IDP Disruption – Low</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Coalition Casualties – Low</td>
<td></td>
</tr>
<tr>
<td></td>
<td>International Support – High</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Time to Emplace FDOs – &lt; 150 days</td>
<td></td>
</tr>
<tr>
<td><strong>COA-2</strong></td>
<td>Risk of IRS Deployment – Low</td>
<td>Time to Seize the Initiative – &gt; 30 days</td>
</tr>
<tr>
<td>2xAttacks</td>
<td>AQ Disruption – Low</td>
<td>Destruction to GOI Military – &gt; 10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IDP Disruption – High</td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
<tr>
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<td></td>
<td>International Support – Low</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Time to Emplace FDOs – &gt; 150 days</td>
</tr>
</tbody>
</table>
Joint Operation Planning Process

Next Class: C506B
Fri., 7Nov14

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JOPP Initiation
(Caucasus)

Scan: Ch. IV, JP 5-0