



PLANS SERIES

ADDP 5.01

JOINT PLANNING (PROVISIONAL)

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Chief of the Defence Force

Australian Defence Headquarters
Canberra ACT 2600

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FOREWORD

1. The provisional edition of Australian Defence Doctrine Publication (ADDP) 5.0—*Joint Planning*, has been published to facilitate joint training and planning at the operational level. Significant changes have been made to the Joint Military Appreciation Process (JMAP) to warrant publication now rather than delay publication until the strategic level chapters have been revised and validated during Exercise CROCODILE 03.
2. ADDP 5.01 includes the planning aspects from ADDP 3.13—*Australian Defence Force Information Operations* and ADDP 4.2—*Operations Support*. These additions will assist joint planners to develop and complete the joint plan.
3. The provisional edition will be numbered as ADDP 5.01 and will be included as part of ADDP 5.0 in due course.
4. ADDP 5.01—*Joint Planning (Provisional)* is not to be released to foreign countries, other than those listed in the secondary release statement, without the written approval of COMAST through the COMDT Australian Defence Warfare Centre.

AUSTRALIAN DEFENCE DOCTRINE PUBLICATIONS

Abbreviation	Superseded ADFP No	Title
CAPSTONE DOCTRINE		
ADDP–D	N/A	<i>Foundations of Australian Military Doctrine</i>
ADDP–D.1	N/A	<i>Australian Approach to Warfare</i>
ADDP–D.2	N/A	<i>Force 2020</i>
ADDP–D.3	N/A	<i>Future Warfighting Concepts</i>
ADDP–D.4	N/A	<i>Joint Warfighting</i>
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ADDP 2.0	19	<i>Intelligence</i>
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Abbreviation	Superceded ADFP No	Title
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ADDP 3.5	24	<i>Electronic Warfare</i>
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ADDP 3.8	35	<i>Peace Operations</i>
ADDP 3.9	39	<i>Airborne Operations</i>
ADDP 3.10	43	<i>Evacuation Operations</i>
ADDP 3.11	44	<i>Civil-Military Cooperation</i>
ADDP 3.12	45	<i>Special Operations</i>
ADDP 3.13	N/A	<i>Information Operations</i>
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ADDP 4.0	N/A	<i>Defence Logistics</i>
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ADDP 4.3	N/A	<i>Supply</i>
ADDP 4.4	14, 21 and 22	<i>Movement and Transport</i>
ADDP 4.5	N/A	<i>Equipment Engineering and Maintenance</i>
ADDP 4.6	N/A	<i>Infrastructure Engineering and Maintenance</i>

Abbreviation	Superceded ADFP No	Title
5-PLANS SERIES		
ADDP 5.0	9	<i>Joint Planning</i>
ADDP 5.01	N/A	<i>Joint Planning (Provisional)</i>
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7-DOCTRINE AND TRAINING SERIES		
ADDP 7.0	N/A	<i>Doctrine and Training</i>
ADDP 7.1	N/A	<i>Individual Training</i>
ADDP 7.2	17	<i>Collective Training</i>

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CHAPTER 1

**PLANNING AT THE OPERATIONAL
LEVEL—CAMPAIGNS AND OPERATIONS**

A prince or general can best demonstrate his genius by managing a campaign exactly to suit his objectives and his resources, doing neither too much nor too little.

Major General Carl von Clausewitz, On War

INTRODUCTION

1.1 A campaign is a controlled series of simultaneous or sequential military operations designed to achieve a strategic objective, normally within a given time or space. A campaign does not imply the employment of a particular scale of military assets, intensity of operations, or size of geographic theatre. The conduct of campaigns and major operations is the focus of the operational level of war. It is at this level that military strategy is implemented by assigning missions, tasks and resources to tactical operations. Planning and conducting campaigns and major operations is based on the operational art which is explained in detail in Australian Defence Force Publication (ADFP) 6—*Operations*, chapter 3 soon to be retitled Australian Defence Doctrine Publication (ADDP) 3.0. It requires broad vision, foresight and a careful understanding of the relationship between the levels of command. This relationship can be described in terms of ends, ways and means, as shown in figure 1–1:



Figure 1–1: Command levels

1.2 Ends—Strategic level of conflict. The strategic level of conflict is concerned with the art and science of employing national power in a synchronised fashion to secure national objectives. The strategic level of conflict includes:

- **National strategic level of conflict.** National strategy is the application of national resources to achieve national objectives. This will include diplomatic, information, psychological, economic industrial and military resources.
- **Military strategic level of conflict.** Military strategy is the application of military resources to achieve national strategic objectives. The military strategic level encompasses the art and science of employing armed force to achieve a political objective.

1.3 Ways—Operational level of conflict. Campaigns and major operations are constructed and directed at the operational level in fulfilment of a strategic directive. It is the operational level that provides the link between military strategic objectives and all tactical activity in the theatre of operations. The focus at this level is on operational art, which is the use of military forces to achieve strategic goals through the design, organisation and execution of campaigns and major operations.

1.4 Means—Tactical level of conflict. Battles and engagements within a sequence of major operations are planned and executed at the tactical level in order to achieve the operational objectives of a campaign.

1.5 While the categorisation of war according to the different levels at which it is conducted is a useful analytical device, in practice the distinctions are often blurred. For example:

- A particular battle may be so critical to a campaign, and the campaign so critical to the war aim, that the battle may involve a merging of the different levels of command, reflecting the strategic implications of the tactical-level engagement.
- The impact of pervasive media attention may turn a tactical action, particularly if conducted unethically, into a strategic outcome.

1.6 Campaigns and operations are planned and directed at the operational level to achieve strategic objectives. It is the level that links military strategic objectives and all tactical activity in the theatre. Operational planning cannot be accomplished in isolation from the strategic level; the two processes are inextricably linked. Ideally, operational and strategic level planning will be initiated at the same time with each process informing the other.

1.7 **Overlap in the levels of command.** The levels of command overlap because, while commanders have different responsibilities, the effects of their decisions will pervade all levels. For example, decisions taken by strategic leaders on ROE and the allocation of resources will have a direct impact on the tactical level. Similarly, decisions made by a junior commander in combat might have direct strategic repercussions. Overlap between the levels also shows the importance of a coherent chain of intent from top to bottom that ultimately produces the desired national end-state.

1.8 It is at the operational level that military resources are applied to campaign objectives to achieve the end-state. The theatre commander (COMAST in the Australian context) is responsible for:

- designing a campaign plan within the designated theatre;
- commanding assigned forces;
- directing major operations of the campaign;
- determining what operational objectives are necessary to achieve the end-state;
- determining in what sequence operational objectives should be achieved;
- determining the concept of operations, which is endorsed at the military strategic level;

- determining the resources (national and international) required to achieve operational objectives and allocating those resources as necessary for subordinate commanders to achieve their tactical missions;
- setting priorities for the provision of combat and logistic support to sustain tactical battles;
- directing the activities of those formations, ships, aircraft and other units or assets not delegated to subordinate commanders, especially those earmarked as theatre reserves; and
- keeping the military strategic commander informed of their actions, problems and future plans, and maintaining awareness of considerations affecting the military strategic commander and the latter's possible future intentions.

1.9 The link between the strategic and tactical levels must provide the ways of using the tactical means to achieve the required strategic/national ends. To do this, the operational commander and staff develop a concept of operations, draft a campaign plan and conduct major operations. A campaign plan provides:

- the decisive points to be achieved, and their sequence to form lines of operation;
- a definition of what constitutes success;
- guidance to subordinate commanders for taking action in the absence of specific orders, designed to encourage initiative necessary to maintain operational momentum; and
- branches and sequels.

Approaches to the operational level of war

1.10 A campaign plan can offer a direct or indirect approach, or a combination of both, ie a broad or comprehensive systematic approach. In the direct approach, military force will generally be brought to bear via the quickest and most direct route; and as such, attrition is likely to be high. It will require political, media and public support. The direct approach should only be adopted when a marked superiority of force exists and it can be employed effectively to achieve the desired end-state. This superiority can be in either the quantity or quality of the force, particularly where a force possesses a technological advantage. The design, organisation, sequencing and application of those superior forces are intended to grind an enemy down through attrition or deliver overwhelming force at a decisive point.

1.11 An indirect approach is normally preferred over the direct clash of military forces as it aims to avoid the attrition and risk inherent in the direct approach. The indirect approach will employ more oblique methods to achieve the desired end-state by exploiting the enemy's vulnerabilities and the opportunities in the environment. It will carefully coordinate the military dimensions of a campaign with the other elements of national power, including the political, economic, technological and diplomatic elements.

The expert approaches his objective indirectly. By selection of a devious and distant route he may march a thousand miles without opposition and take his enemy unaware. Such a commander prizes above all freedom of action. He abhors a static situation and therefore attacks cities only when there is no alternative. Sieges, wasteful in both lives and time, entail abdication of the initiative.

Sun Tzu

1.12 The reality of warfare is that most campaigns consist of a synchronisation of direct and indirect approaches, and that manoeuvre will rarely achieve the desired end-state without some level of attrition.

Operational art

1.13 In seeking to structure campaigns and major operations in pursuit of strategic objectives, theatre commanders should design their plans around a number of building blocks, which help them to conceptualise how operations will unfold. Their skill at this stage forms the essence of operational art. The key elements of operational art, which mirror the tenets of manoeuvre warfare, are listed below (and described in greater detail in ADFP 6):

- **Operational objectives.** These are the objectives that need to be achieved in the campaign to reach the military strategic end-state. Correct assessment of operational objectives is crucial to success at the operational level.
- **End-state.** Will be identified at the national and military strategic levels as follows:
 - The national end-state is the set of desired conditions, incorporating the elements of national power that will achieve the national objectives.
 - The military strategic end-state is the set of desired conditions beyond which the use of military force is no longer required to achieve national objectives.

- **COG.** That characteristic, capability or locality from which a military force, nation or alliance derives its freedom of action, strength or will to fight at that level of conflict. The centre of gravity at each level of conflict may consist of a number of key elements. The COG may be physical or psychological. At the operational level it will usually be a combination of both.
- **Critical capability.** A characteristic or key element of a force that if destroyed, captured or neutralised will significantly undermine the fighting capability of the force and its centre of gravity. A critical capability is not necessarily a weakness but any source of strength or power that is capable of being attacked or neutralised. A successful attack on a critical capability should aim to achieve a decisive point in an operation or campaign. A force may have a number of critical capabilities. For example, a critical capability could be considered an adversary's air defence.
- **Critical requirement.** Is an essential condition, resource or means that is needed for a critical capability to be fully functional. For example, a critical requirement for an adversary's air defence could be fighter aircraft.
- **Critical vulnerability.** Is an element of a critical requirement that is vulnerable or that can be made vulnerable. For example, a critical vulnerability of an adversary's fighter aircraft could be POL, pilots, airfield etc.
- **Decisive Point (DP).** A DP is not an event or necessarily a battle; it may be the elimination or denial of a capability; or an achievement—such as obliging an adversary to engage in formal negotiations.
- A DP is created normally by successfully affecting or neutralising a critical vulnerability. Operational level planning aims to exploit an enemy's critical vulnerabilities in a sequence or matrix of DP known as lines of operation. The key determinant of a decisive point is its effect on the enemy. Identifying decisive points is a fundamental part of campaign planning. During the course of the campaign, opportunities may present themselves—or may need to be created—which require a rapid reappraisal of, and adjustment to, the previously determined decisive points. Disruption of the centre of gravity is achieved by successfully attacking the critical vulnerabilities on which it depends. Decisive points may also relate to the protection of one's own campaign plan.

- **Information Operations (IO).** Actions taken to defend and enhance one's own information, information processes and information systems and to affect adversary information, information processes and information systems. It is a fundamental resource that is central to the commander's decision-making processes.
- **Manoeuvre.** Is attainment of relative advantage in space and time and is at the heart of the indirect approach.
- **Tempo.** Tempo is the rate or rhythm of activity relative to the enemy. It incorporates the capacity of the force to transition from one operational posture to another. Tempo is a critical determinant of operational logistics.
- **Attrition.** Attrition is the reduction of military effectiveness or capability of either friendly or enemy forces caused by the continued loss of personnel or materiel. Rates of attrition determine the progress and likely outcome of a campaign embracing the direct approach.
- **Leverage.** This refers to possessing a marked advantage in a particular capability, and the advantage that can be gained by exploiting that capability.
- **Operational pauses.** Operations cannot always be conducted continuously, and there may be a need for periodic pauses to consolidate and to prepare for subsequent activity.
- **Culminating points.** A culminating point is the point in time and location where a force will no longer be stronger than the enemy and risk losing the initiative. This may be due to reduced combat power, attrition, logistics, dwindling national will or other factors. To be successful, the operation must achieve its objectives before reaching its culminating point.
- **Contingency planning.** Contingency plans are designed to provide responses for events that can reasonably be anticipated in an area of responsibility.

THEATRE PLANNING ENVIRONMENT

1.14 The planning environment determines the relationships between the planning methods used at various levels to optimise the preparation and employment of elements of the ADF. The planning relationship between the strategic and operational level is outlined in figure 1–2.



Figure 1–2: Planning relationship

Deliberate planning

1.15 Deliberate planning is conducted at all levels of command. It is the process for the development of military operational/campaign plans for the employment of the ADF, to achieve an end-state as directed by strategic guidance through the military strategies and relevant MSPG. The process is generally free of time constraints. It relies on a mix of assumption-based planning against current force structure and capability. The process covers the full range of options to produce plans that are generic in nature. The products of deliberate planning are ADF Operational Concepts (AOC).

Immediate planning

1.16 Immediate planning is situation specific and based on current events. By its nature, it accounts for situations that can develop over a short time frame. These situations often fall into the spectrum of military support operations. Planning involves the anticipated use of the extant force and current capabilities. This planning is informed by the products of deliberate planning, with assumptions and projections replaced with facts as the situation unfolds. Immediate planning is responsive to the NCMM and must be flexible enough to incorporate changing circumstances. It is generally time-sensitive and therefore considers only a limited range of options.

Campaign planning

1.17 Campaign planning is a process, conducted at the theatre HQ, that controls the sequencing of military operations in order to achieve strategic level objectives. Campaign planning integrates both deliberate and immediate-planning processes and seeks to orchestrate the ways in which tactical means can be used to achieve strategic ends. It is informed by both standing government guidance and the NCMM. There are a number of concepts that relate to the operational art that require particular consideration when campaign planning.

1.18 Sequencing. Within a purely military line of activity, sequencing is the ordering of military activities into a logical progression. It is unlikely that a commander will be able to achieve success by a single activity. The commander must therefore have a clear conception of the relationship between events in terms of time, space and resources. Without this, the commander cannot establish which events can be conducted simultaneously, which events must be conducted in sequence, and in which order events should be taken. The process of ordering activities is referred to as sequencing. In some types of campaigns, the lines of activity will be political, economic, and humanitarian as well as military. In these circumstances the events in the military line of activity must be sequenced to conform with the requirements of the non-military lines of activity to ensure the success of the military campaign within the strategic framework. It requires particular care to order all other activities on the different lines to ensure that they are complementary and do not contradict or obstruct each other.

1.19 Parallel operations. Where possible, the campaign plan must incorporate multiple lines of activity and plan to conduct operations along these lines simultaneously, rather than phasing them sequentially. The aim being to force the enemy commander to react to multiple threats simultaneously thereby overloading the commander's decision-making capabilities and making it more difficult to respond effectively to any specific threat.

1.20 Branches and sequels. Planning for branches and sequels gives the commander the flexibility to retain the initiative, or to regain it if lost. The sequence of events leading to the desired end-state is not rigid. Sequencing should possess the inherent flexibility for a commander to adjust the activities of a sequence, to change the order in which they are used, or to create new ones. In managing a sequence of military activities, the commander retains future options through constant planning of potential branches and sequels. Options should be built into the initial plan, enabling the commander to adjust the lines of activity or to vary the policy on offering or declining battle. This enables the imposition on the enemy of the commander's chosen tempo of

military activities. This planning must, however, have a logical basis, rather than depending on 'instinctive' assessments of, and responses to, operational developments.

1.21 Synchronisation. In conducting the campaign, an operational commander will attempt to synchronise the employment of capabilities to strike the enemy simultaneously throughout the theatre of operations. These strikes should be aimed to exploit an enemy's critical vulnerabilities at decisive points, which form a line of operation to the enemy's centre of gravity. Therefore, the commander will continuously synchronise all the assets available to support the overall campaign plan. It will be necessary to synchronise campaign activities with other national efforts devoted to the same objective. This may include but is not limited to diplomatic and economic lines of activity.

1.22 Termination. The commander and staff must remain focused throughout the conduct of the plan on the methodology for bringing the campaign/operation to a close, ensuring a smooth transition to the desired end-states. The resolution of armed conflict will generally be characterised by parallel political, diplomatic and military activity. Military planning must always be conducted against the expectation of the need to fight. Resolution of the conflict may be achieved however at any stage during planning and deployment. The activities may themselves contribute to the resolution of the conflict. Furthermore, the conflict may be terminated before the originally envisaged end-state is reached. These uncertainties will bear heavily on the operational commander, who must consider the consequences of unexpected termination. These may include the need for the commander's force to be able to undertake new missions, possibly of a humanitarian or peace support nature. In any event, the operational commander may be the conduit for negotiations with the enemy political and military leaders, as part of the conflict termination process. The force may have an important role in the maintenance of internal stability within the theatre of conflict.

PLANNING PROCESS

1.23 Initiating directive. Planning at the operational level is initiated by either direction from higher authority or internally at the direction of COMAST. The direction from higher authority may take the form of a CDF planning order, or in a crisis, a warning order following recognition of a situation that may require a response from the ADF. In a period of sustained tension or conflict, COMAST may need to initiate planning autonomously within HCAST or may direct an appropriate subordinate HQ to commence planning. In these cases, COMAST would issue an initiating or planning directive, keeping ADHQ informed.

1.24 Planning guidance. Military strategy documents detail the strategies to be employed by the ADF to undertake combat operations. MSPG is developed within ADHQ to inform deliberate planning. Military Strategic Estimates, are used in immediate planning and provide details of the strategic end-state and the facts to replace the assumptions used in MSPG. A WNGO from CDF provides the final detailed information required to develop campaign and other operational plans.

1.25 Relationship between strategic and theatre level planning. Theatre HQ planning is driven by the Strategic Planning Process. A CDF WNGO or PLANO will initiate theatre HQ planning activity. The alert order enables the issue of detailed operation orders and instructions, and the execute order authorises the deployment of forces and the execution of the approved plan. This is shown graphically in figure 1–3.

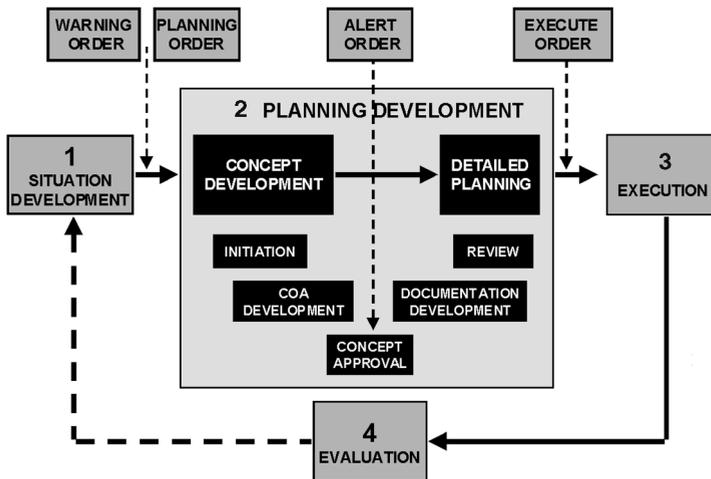


Figure 1–3: Operational level planning model

1.26 JMAP. Military planning in a crisis will never be simple because political and diplomatic activity will proceed in parallel with it. The JMAP facilitates the rapid planning and complex decision making required at the operational level of war in modern conflict. The JMAP provides the basis for planning in HQAST and is described in detail in chapter 2—‘Joint Military Appreciation Process’. The application of the JMAP within HQAST is detailed in annex A.

Planning products

1.27 ACP. COMAST is responsible for the production of Campaign Plans to meet the major military strategic objectives. They are produced using the deliberate planning process and may identify the need for a number of AOC.

1.28 AOC. HQAST maintains generic operational level plans which replace the former AJSPs in a web-based format. These plans are endorsed by the TPG and CPG.

1.29 CONOPS or Campaign Concept. The CONOPS describes how and why COMAST intends to employ assigned forces. It also includes the desired end-state that should exist on termination. The campaign concept, while similar to the CONOPS, also details the synchronisation of operations across the theatre.

PLANNING RESPONSIBILITIES

1.30 COMAST CPG. This Group is the senior operational level decision-making group. The CPG will provide planning guidance throughout the planning process. The CPG is used by COMAST to review, guide and endorse the planning products of the TPG. The CPG is convened when required by COMAST. The standing members of the CPG are as follows:

- COMAST (chair);
- LCC;
- MCC;
- ACC;
- SOCC;
- Chief of Staff Australian Theatre;
- MA to COMAST;
- Branch heads from J5, J2, J3, J4; and
- other HQAST branch heads, specialist staff and liaison officers as required.

1.31 TPG. This Group is COMAST's principal staff-level working group for the development of campaign and other operational level plans. The group is chaired by HCAST J5 with representatives from the various AST branches and the component HQ. Time permitting, representatives of the subordinate Joint Task Force Headquarters may be invited to attend the TPG, as appropriate, to provide input into HCAST planning and/or enable concurrent planning activity. The role of the TPG is to produce operational level plans using the JMAP as per the HCAST planning process and detailed in chapter 2. The TPG will provide direction to the TAPG and the TLPG, and other subordinate planning groups as required. The TPG is responsible for producing operational correspondence including:

- COMAST PLANO and WNGO,
- CONOPS, and
- AOC.

1.32 TIPG. This Group is convened by the HCAST J2 as required. This can be for a range of tasks ranging from the routine oversight, administration and development of the Theatre Intelligence System, to the focused support of the operational planning process. The HCAST J2 will chair the TIPG, which normally includes the following:

- J2 staff representatives (as required);
- representative from each component HQ;
- JTF representatives;
- representatives from the ASTJIC;
- representative from the ADF Intelligence Centre and/or Defence Intelligence Organisation;
- representative from Defence Signals Directorate (if required);
- liaison officers from civil agencies, if invited; and
- 1st Intelligence Company (for specific operational support as required).

1.33 TAPG. This Group is formed to ensure the supportability of the TPG's operational plan. While one representative of the J4 staff will always be part of the TPG, there will also be a requirement to form a TAPG to generate detailed administrative planning for any operation/campaign. The TAPG is to

produce an administration instruction for COMAST's approval, detailing the operational support requirements necessary to put into effect COMAST's plan. The TAPG is chaired by the J1/4 and will comprise:

- J15 AST;
- J05 AST;
- J06 AST representative;
- J07 AST;
- J43/J45 AST;
- J5 AST representative;
- component logistics representatives;
- J3/5 Joint Logistics Command;
- Corporate Support and Infrastructure Group representative;
- ADHQ (Director Joint Logistics Operations and Plans) representative;
- mission critical contractors and relevant Defence contract managers;
and
- appropriate JTF logistics representative.

In addition, representatives may be invited from other areas of the Defence Organisation as well as members of foreign militaries as required by the nature of the activity.

1.34 TLPG. This Group will be convened as required during the course of campaign and other operational planning. The J06 AST chairs the TLPG, which comprises legal officers from the component HQ, Northern Command and Deployable Joint Force Headquarters as required. The TLPG provides support to the CPG, the TPG and the Joint Targeting Coordination Board. The TLPG will produce the Legal Support Plan which deals with the following:

- The legal basis for the operation.
- The legal regime under which the operation will be conducted.
- The application of international law including Laws of Armed Conflict, Law of the Sea, Air Law and any other relevant treaties and conventions.

- The status of the forces, SOFA arrangements and visiting forces legislation and any other agreements or arrangements required for, or impacting on the operation.
- Australian and foreign domestic law including any emergency provisions.
- ROE and government directives/guidance.
- The legal framework of civil/military coordination (including civil authorities and non-government organisations).
- The legal aspects of command and control.
- Any discipline and administrative legal matters.

1.35 THPG. This Group will be convened as required during the course of operational planning to develop the health support concept and produce a Health Support Plan as required. The HQAST J07 will chair the THPG which comprises:

- Representatives from the four Component HQ (Maritime, Land, Air and Special Operations) and ASTJIC.
- Representatives from JTF health branches (as required).
- Joint Health Support Agency.
- Defence Health Service Branch of Defence Personnel Executive (as required).
- SPA medical logistics representative.

In addition, representatives may also be invited from single-Service support commands, the Service HQ and other government or civilian agencies or regional authorities as required.

1.36 The THPG supports the activities of the TPG by coordinating health support input to the joint operational plan and preparing any separate health support orders or instructions considered necessary. Following the THPG, operational level health support planning is carried out by the HQAST health staff in conjunction with representatives of relevant members of the THPG. Close liaison with the TAPG is to be maintained throughout.

1.37 TIOPG. This Group plans, coordinates and advises on IO activities, including deception, psychological operations, operations security, electronic warfare, physical destruction, public information and civil affairs (CA). The

group is chaired by the HQ IO officer, with representatives from the intelligence, plans, operations and communications information systems staffs, the public affairs and CA officers, representatives of the components, lower HQ and other organisations as applicable. The TIOPG supports the TPG and liaises closely with the TLPG and the Joint Targeting Cell.

1.38 Support commands. Commanders of the Services' support commands may prepare additional supporting plans and issue orders or instructions to their own subordinate units. This is essential when Service dependencies for logistic support are varied or changed to suit a particular operation. Orders or instructions must be distributed to all interested parties including the joint force HQ and other services. General guidance on operational correspondence is in annex B.

Liaison

1.39 If concurrency is to be achieved in the overall planning process, there will be an ongoing requirement for effective liaison between all participating HQ. The following principles for establishing liaison should be noted:

- Liaison should be reciprocal between higher, lower, lateral HQ and civil authorities.
- Liaison must be reciprocal when:
 - force elements are assigned to a combined force commander, and
 - force elements are collocated or adjacent to allied or different nationality forces.

1.40 When not reciprocal, responsibility for establishing liaison rests with higher HQ for lower HQ, and supporting HQ for supported HQ.

Annexes:

- A. Headquarters Australian Theatre Planning Process
- B. Operational correspondence
- C. Australian Defence Force Operational Concept format
- D. Campaign Plan format

HEADQUARTERS AUSTRALIAN THEATRE PLANNING PROCESS

PLANNING STAGE	(1) INITIATION		(2) MISSION ANALYSIS		(3) COA DEV/ANALYSIS			(4) COMAST CONOPS DEV			(5) EXECUTION	
Activity	Trigger	COMAST Guidance	TPG	CPG	TPG	CPG	WGG ¹	TPG	CPG	COSC	Instructions	Monitor
Input	Planning guidance CDF's Directive CDF's WNGO COMAST initiative	CDF planning guidance Initial INT advice	Theatre Int Estimate (TIE) Planning guidance CDF directive	Draft Mission Analysis Draft COMAST guidance Draft WNGO Draft CIR	TIE update Endorsed Mission Analysis Endorsed COMAST guidance Endorsed Warning Order	COA Decision brief	CPG endorsed COA CPG war game guidance	endorsed COA possible branches and sequels	CONOPS brief to CPG	CPG endorsed COMAST CONOPS	CDF endorsed CONOPS CDF guidance CDF ALERTO CDF EXECUTO	COMAST Directives COMAST OPINST Support Plans
Output		COMAST initial planning guidance to planning staff Verbal advice to component commanders	Draft Mission Analysis Draft COMAST guidance Draft WNGO	CPG endorsed Mission Analysis COMAST guidance CPG endorsed WNGO CPG endorsed CIR	Initial COA preferred COA War game guidance	endorsed COA and guidance for war gaming endorsed COA for development into CONOPS	refined COA preferred COA	Draft COMAST CONOPS	CPG endorsed CONOPS	COSC approval issue of CDF ALERTO EXECUTO will be issued after GOVT approval	COMAST Directives COMAST OPINST and ADMININST Support Plans	

RESTRICTED

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PLANNING STAGE	(1) INITIATION		(2) MISSION ANALYSIS		(3) COA DEV/ANALYSIS			(4) COMAST CONOPS DEV			(5) EXECUTION	
Activity	Trigger	COMAST Guidance	TPG	CPG	TPG	CPG	WGG ¹	TPG	CPG	COSC	Instructions	Monitor
Description	Planning process is triggered by input from higher or other means of initiation.	COMAST initial guidance on: op/admin aspects HQAST planning process Critical timings	Mission Analysis: Process brief TIE Own Forces CDF's Intent End-states Own COG and DP Tasks COMAST Mission Facts Assumptions Freedom of Action Comd Guidance.	COMAST/CPG review, endorsement and advice is sought for: Draft Mission Analysis Draft COMAST guidance Draft WNGO Draft CIR	COA DEV/ANALYSIS as per HQAST SOP, COA DEV/ANALYSIS-AIDE MEMOIRE	COMAST/CPG provides guidance on: endorsed COA for war game possible branches and sequels war game endorsed COA from war game	WGG forms teams to war game CPG endorsed COA	Draft CONOPS as per HQAST CONOPS shell: CDF's Intent Assumptions Planning Constraints Mil/Strat End-states Threat Mission COMAST Intent Operational Concept Admin Concept C2 Key Operational Considerations Preparedness	Endorsement of CONOPS		Based on endorsed CONOPS HQAST staff prepare directives and, instructions and support plans.	HQAST implements plan and manages op level aspects. J3 monitors operation. J5 conducts planning for branches and sequels.

1. War gaming Group.

OPERATIONAL CORRESPONDENCE

Directives

1. A directive provides direction in accordance with higher policy decisions, and may be of the following type:

a. **Command directive.** This directive is often issued to senior commanders on appointment and defines the functional responsibilities of the commander. The contents may include:

- (1) title of the appointment,
- (2) identification of the superior commander and any requirement to establish liaison, and
- (3) assignment of tasks.

b. **Policy directive.** These directives normally relate to a particularly important aspect of a commander's responsibilities, such as the division of effort between allied forces.

c. **Planning directive.** These directives are issued by a commander to set subordinate commanders and staff to work on preliminary planning while the final details of the plan for an operation have yet to be agreed. The directive specifies principal plans to be prepared and sets a deadline for completion of each major step in the planning process. Planning directives express the commander's intention and may cover, but not be limited to:

- (1) situation;
- (2) mission;
- (3) assumptions;
- (4) limitations;
- (5) military objectives;
- (6) military end-state;
- (7) tasks;
- (8) coordinating instructions;
- (9) force elements available;

- (10) timings;
- (11) planning considerations;
- (12) administration and logistics;
- (13) command and control;
- (14) liaison;
- (15) security;
- (16) communications;
- (17) electronic warfare;
- (18) rules of engagement;
- (19) reports;
- (20) legal considerations; and
- (21) public information.

Orders and instructions

2. Orders and instructions are the means by which the intentions of a commander, and the directions for fulfilling them, are conveyed to subordinates. However they are conveyed, they must be:

- a. accurate,
- b. clear and unambiguous,
- c. as brief as is consistent with clarity,
- d. capable of execution, and
- e. timely.

Difference between orders and instructions

3. Orders. The following criteria are used to identify an order:

- a. An order requires definite action to be taken to achieve a certain intention. The mission and the method of fulfilling it must be clearly stated so that the recipient is in no doubt about what action is to be taken.

- b. Orders are normally issued when the commander has some form of immediate control over the situation, and when compliance with the method laid down is necessary for coordination, and unlikely to prejudice the initiative or local knowledge of a subordinate.
4. **OPINST.** The following criteria are used to identify an OPINST:
- a. An OPINST indicates the commander's intention and possibly the overall plan, but leaves the detailed course of action to the subordinate commander.
 - b. OPINST are normally issued instead of an order:
 - (1) to a commander with an independent mission;
 - (2) where the speed of movement or lack of information makes specific orders impossible or undesirable;
 - (3) when a commander wishes to communicate the aim, or future intentions, beyond that which can be defined in a specific and detailed order;
 - (4) to deal with unforeseen emergencies such as civil emergencies or terrorist attacks; or
 - (5) to plan for contingencies.

Operation orders

5. An OPORD is the means by which a commander clearly, accurately and concisely directs and coordinates the actions of their forces in preparation for and in the conduct of operations. OPORD are divided into the following sections:

- a. situation,
- b. mission,
- c. execution,
- d. administration and logistics, and
- e. command and signal.

Administrative order

6. An ADMINORD covers the operational requirements for logistics, health, personnel, finance and movements. Like an OPORD, an ADMINORD should be clear, accurate and concise. The contents of an ADMINORD includes, but is not limited to:

- a. situation—enemy, friendly, assumptions, resource availability and planning factors;
- b. mission;
- c. execution—concept of logistic support, environmental issues and tasks;
- d. administration and logistics—supply and distribution, levels of supply, water winning, class III bulk, salvage, local acquisition of supplies and services, petroleum, oils and lubricants and mortuary affairs;
- e. legal aspects;
- f. medical—preventative medical and health services;
- g. mobility and transportation;
- h. civil engineering support;
- i. security assistance;
- j. administration; and
- k. command and signal.

AUSTRALIAN DEFENCE FORCE OPERATIONAL CONCEPT FORMAT

1. Once the concept of operations has been endorsed at the strategic level, an Australian Defence Force Operational Concept (AOC) and supporting plans are produced.

2. The contents of the AOC will vary depending upon the nature of possible operations, and as a general rule, should provide adequate guidance to enable staff to develop the OPORD or OPINST. AOC should specify:

- a. mission, intent and end-state (normally a higher HQ will set the tasks to be achieved by the subordinate HQ from which the subordinate HQ will decide its mission);
- b. constraints;
- c. force allocation and grouping;
- d. command and control arrangements (it is the prerogative of the appointed commander to decide on the method to be used to control assigned forces);
- e. IO;
- f. communications;
- g. OPSEC;
- h. deception aspects (if applicable);
- i. offensive support priorities;
- j. intelligence aspects;
- k. EW aspects (if applicable);
- l. rules of engagement and law of armed conflict aspects;
- m. administration and logistics;
- n. movement priorities;
- o. civil affairs and civil aid (if applicable);
- p. public affairs aspects;
- q. financial arrangements;

- r. legal aspects;
 - s. codewords; and
 - t. reporting.
3. Requirements for production of supporting plans and the regular review of the plan should also be addressed.

Supporting plans

4. Supporting plans will be developed by staff branches, in consultation with Service HQ/agencies as appropriate, and those commanders supporting a joint operation. Their timely development is very much dependent on the concurrent involvement of all planning staffs during development of the AOC. Mechanisms establishing liaison between planning staffs from the highest to the lowest levels are essential.

5. The commander or the principal staff officers may determine aspects to be included in the AOC, and those aspects to be relegated to supporting plans. There are no firm rules concerning this division, as long as the main plan is coherent and the supporting plans are closely integrated in both timeliness and content. In many circumstances, supporting plans are used to reduce to essentials the scope and detail of the AOC. More complex and specialised aspects likely to be of interest to specific staff branches and elements can be covered in the supporting plans. The subjects covered by supporting plans are flexible and could include, but are not limited to:

- a. intelligence,
- b. IO,
- c. administration,
- d. movement,
- e. communications,
- f. EW,
- g. deception,
- h. surveillance,
- i. reinforcement,
- j. OPSEC,
- k. psychological operations,

- l. public affairs,
- m. legal support, and
- n. fire support.

6. Throughout all stages of development, supporting plans must be reviewed and checked against the AOC. When finalised, endorsement of the supporting plan must come from Commander Australian Theatre. Once completed, the plan will be reviewed by the commander planning group before being passed to Australian Defence Headquarters for endorsement by the Strategic Policy Group and Chief of the Defence Force. After examination and modification, if required, the plan is issued as a directive, OPORD or OPINST as appropriate.

CAMPAIGN PLAN FORMAT

1. The format of the campaign plan is based on extant operational writing doctrine. The plan is designed to be presented as a simple concept with comprehensive coordination of detail. Specifically, the plan will detail the synchronisation of operations and the allocation, coordination and prioritisation of available resources across the theatre. The plan will normally consist of the following sections:

- a. **Situation.** The situation is a brief description of the conditions which resulted in the requirement for the production of a campaign plan. The situation could include the following points:
 - (1) The strategic situation across the theatre and the events that brought about the situation.
 - (2) The Whole of Government appreciation of the situation, including relationship with allies and the actions being undertaken by other departments.
 - (3) Strategic guidance:
 - (a) Chief of the Defence Force intent;
 - (b) strategic objectives;
 - (c) military/strategic end-state (including conflict termination considerations); and
 - (d) strategic limitations and constraints.
 - (4) **Threat.** Briefly describes the threat situation, the threat COG, critical capabilities, critical requirements, critical vulnerabilities and threat courses of action.
 - (5) **Own forces.** Identifies own COG and critical vulnerabilities. States the forces available for operations and any force preparation issues.
- b. **Assumptions.** All assumptions used in the development of the campaign plan are to be listed here. Campaign plans are a combination of deliberate and immediate planning, based on assumptions initially, with facts replacing assumptions in real time. Logistic assumptions are also to be listed.
- c. **Mission.** The campaign mission must be a concise statement focused on achieving the strategic objective and defeating the threat COG.

- d. **COMAST intent.** COMAST intent will include the campaign purpose and end-state. The intent will provide COMAST vision for the campaign and should be a clear, concise and relatively short statement. The intent will describe the military conditions that subordinate commanders must meet to achieve the campaign's desired end-state.

- e. **Campaign outline.** The campaign outline describes the objectives, tasks and supporting plans required for the success of the campaign. The campaign outline consists of:
 - (1) **General description.** A simple, concise explanation of the campaign by phases. Each phase may, if desired, have a phase name.

 - (2) **Phases.** Each phase is described in detail. This is to include any operation, which needs to be conducted during each stage. Synchronisation of operations and supporting activities is to be detailed. Any branches identified are also to be listed for each phase. For each branch, a trigger or triggers must be provided to allow activation of branch. Included in the description of each phase are any targeting and information operations requirements for that phase. The phases are described by:
 - (a) purpose;

 - (b) method:
 - (i) main and supporting efforts identified, and

 - (ii) reserve designated.

 - (c) end-state; and

 - (d) key operational considerations.

 - (3) **Deception measures.**

 - (4) **Force assignment.** Brief description of forces required for the campaign is provided for each phase. Detailed assignment of forces is to be attached as an annex to the plan.

- (5) **Tasks.** Tasks are to be allocated to subordinate HQ (including allocation of responsibility for further operational planning). A detailed task matrix is attached as an annex to the plan.
 - (6) **Coordination instructions.**
 - (7) **Boundaries.** Campaign area of operations and also joint task force area of operations are to be described and included as an annex.
 - (8) **Timings.** Broad timings are provided and the mechanisms to allow integration and synchronisation of operations are also provided.
 - (9) **Legal.** Includes legal regime applicable to the conduct of the campaign, including required status of forces agreements and memoranda of understanding, as well as guidance on rules of engagement.
- f. **Administration.** The administrative concept as outlined in this section is based on the campaign phases. It should allocate administrative responsibilities and support priorities, and identify special requirements.
 - g. **Command, Control and Communications.** The C2 relationships are detailed, including combined and joint command arrangements as required. The appointment of joint task force commanders and coordination and liaison requirements are presented with a C2 diagram. The communication information system plan is to be described in brief, with the detail included as an annex.
 - h. **Key operational considerations.** This section lists the issues, which are critical to the success of the campaign.
2. Once the main body of the campaign plan has been produced and endorsed by COMAST, subordinate HQ and components may be allocated responsibility for the development of supporting plans. Other supporting plans, such as intelligence operations or information operations, will generally be produced within HQAST through the TPG.
3. Once completed, the campaign plan will generally be forwarded to the SPG for approval and may be issued as a standing plan or serve a single purpose.

CHAPTER 2

JOINT MILITARY APPRECIATION PROCESS

INTRODUCTION

2.1 Joint Operations is the ability to collectively combine the full range of single-Service capabilities into a cohesive joint force that can conduct operations. Operations will almost certainly be expeditionary activities. When a military response is required, it must be rapid, appropriate, and proportional to the situation. Experience confirms that such military response must be joint and increasingly multinational. Furthermore, the national or multinational response to a crisis requires an integrated approach of which military action is only one part and must be planned accordingly with due regard for the strategic end state.

2.2 Joint operations places the greatest demands on military forces, but is also the capability for which armed forces are trained and equipped. It has been the catalyst for the development of our most enduring and fundamental doctrinal tenets, the Manoeuvrist Approach. Consequently this chapter focuses on planning for joint operations. A key characteristic of the manoeuvrist approach is to attack the adversary commander's decision making process by attempting to get ahead of his decision making cycle, thereby paralysing his capability to react.

2.3 At the operational level, the manoeuvrist approach is about combining all the capabilities of a joint force and 'fighting clever', by finding indirect and unexpected ways of achieving the aim through joint operational planning. It is also about focusing on the ends to be achieved rather than prescribing the ways. The concept is perhaps best described by Winston Churchill:

There are many kinds of manoeuvre in war ... some only of which take place on [or near] the battlefield; there are manoeuvres in time, in diplomacy, in mechanics, in psychology; all of which are removed from the battlefield, but react often decisively upon it, and the object of all is to find easier ways, other than sheer slaughter, of achieving the main purpose

Winston Churchill

2.4 Successful military operations depend on commanders making sound decisions that are developed into workable plans and executed by subordinates in a timely and appropriate manner. Staffs assist the commander's decision making, develop plans and ensure orders are communicated and executed effectively. Mastery in decision making and

planning is achieved by the commander and staffs understanding and employing a common process. The Joint Military Appreciation Process (JMAP) is a logical decision-making process that analyses all the relevant factors in a situation and coordinates all staff functions towards the development of the most appropriate plan of action.

2.5 The JMAP facilitates timely planning and the complex decision making required at all levels of war. Its introduction was motivated by the need to formally introduce a common staff-planning process across the three Services at the operational level. JMAP has been adopted by both the Navy and Air Force, as their single Service planning tool. The Army continues to utilise the MAP for their tactical level planning. The JMAP recognises the different factors and their application that are important at the joint task force and theatre level. Most operations are by their very nature not only joint activities, but are also combined or coalition. The JMAP has been developed to provide interoperability with planning authorities from other countries.

2.6 Effective decision making must take into account all aspects of operational planning. This includes deliberate planning prior to operations (contingency planning), immediate planning (responsive and quick planning during operations) and the concurrent planning of future operations. The effectiveness of the process is reliant on the provision of timely and informed commander's guidance, and regular consultation between the commander and staff. It enables concurrent and responsive planning for ongoing and future operations, and for crisis situations. The process assists the commander to select courses of action (COA) with an understanding of the associated risks. This publication provides an outline of the JMAP to assist commanders and staff in joint planning at all levels of conflict, but with the focus being on the operational level.

2.7 JMAP and the commander. The commander is an integral part of the JMAP process. The format outlined below is in no way designed to diminish the significant role a commander must play throughout the process. The commander maintains overall control of the process and, together with the Chief of Staff, provides cohesion to the overall effort of the headquarters (HQ). Depending on the level of the HQ and the style of the commander, the briefings that occur during the process are the vehicle by which the commander's intent and direction, together with the situation and plan updates, are communicated across the entire HQ. If time is not restricted, the commander should be shown the full range of options developed before he guides the planning staff in further development.

2.8 JMAP and risk. The JMAP is a tool that allows for the management of risk within the battlespace. No matter what level of command, a commander must ensure his staff is clear on the degree of risk that he is prepared to accept. Risk management is the systematic application of procedures and practises to the tasks of identifying, analysing, assessing,

controlling and monitoring risk and is applied throughout the JMAP. Rather than limiting activities through restrictive safety concerns, risk management allows the full operational potential to be achieved through managing rather than avoiding risk. The identification of various COA and the way in which a force manoeuvres allows the commander to manage and at times ameliorate, the risk associated with the prosecution of a course. At the Theatre HQ, risk management allows a commander to detail the cost of his planned military options. This cost can be measured in different ways depending on the circumstances and direction from the strategic level. Risk management is concerned with balancing identified threats against the harm those threats may inflict to various mission outcomes. There are a number of risk management procedures within each step of the JMAP and they are included within the text below. A list of risk management considerations is included in annex A, appendix 1.

PROCESS

2.9 The JMAP is initiated by either direction from higher authority or internally at the direction of the commander. The direction from higher authority may take the form of a directive, or in a crisis, a warning order following recognition of a situation that may require a response from the ADF. In a period of tension or conflict, the operational level commander may need to initiate planning autonomously within their HQ or they may direct an appropriate subordinate HQ to commence planning. In these cases a planning directive would be issued, keeping the superior HQ informed. In practice, informal advice by way of inter-staff liaison and consultation is also likely to be the initial stimulus.

PRELIMINARY SCOPING

2.10 Prior to the formal initiation of the JMAP, an operational level HQ will normally conduct some form of preliminary scoping. Preliminary scoping will be used predominantly to focus the planning staff. The content and detail of preliminary scoping will be dictated by the planning timetable. The commander orients the planning staff to the 'big picture' with his understanding of the higher headquarters mission, superior commander's intent and initial guidance to ensure the staff proceed in the right direction and do not conduct nugatory planning. The format and detail covered during this activity will differ in each HQ as per their standard operating procedure (SOP). Preliminary scoping is not designed to situate or limit the JMAP, and will normally cover the following areas:

- situation update by either the J2 staff or the commanders;

- strategic/higher direction or Military Strategic Estimate (MSE);
- commander's initial guidance; ie, how the commander orients his staff;
- establish planning timeline;
- coordinate actions and allocation of responsibilities; and
- essential re-positioning and alterations to readiness levels to meet timeline.

JOINT INTELLIGENCE PREPARATION OF THE BATTLESPACE

2.11 The JMAP consists of four consecutive steps with an integral and continuous part known as the Joint Intelligence Preparation of the Battlespace (JIPB). The four steps of the JMAP and their relationship with the JIPB process are shown in figure 2–1. An overview of the JMAP is in the aide memoire in annex A.

2.12 JIPB is a continuous process that is integral to the JMAP. Its purpose is to maintain the situational awareness of the commander and staff. While essentially an intelligence function, commanders and all staff should have an understanding of the process. The JIPB is a systematic and dynamic process for analysing the threat and environment, considered in the dimensions of time and space. It is an information gathering and analysis process, coordinated and conducted by the intelligence staff that addresses adversary, neutral and friendly factors. The process requires a thorough study of the total operating environment, including physical (infrastructure, weather, terrain etc) and social (political, legal, cultural, ROE etc) influences and their cumulative effects on possible threat and friendly forces COA. It requires a detailed analysis of the full range of possible threat COA, including the most likely and most dangerous. The JIPB process recognises the uncertainty of conflict and allows assumptions to be made to keep the planning process active. It focuses information-gathering sources on validating those assumptions and possible threat COA as early as possible.

2.13 JIPB assists the commander and staff to identify Critical Capabilities (CC), Critical Requirements (CR), Critical Vulnerabilities (CV) and potential Decisive Points (DP) from the perspective of both the adversary and friendly forces. It also identifies the intelligence requirements to support the analysis, exploitation and targeting of the enemy centre of gravity (COG) and critical capabilities, requirements and vulnerabilities, and in turn, identifies the tasks for the appropriate reconnaissance, intelligence, surveillance and target

acquisition assets. Its products can be presented in many forms, such as a series of graphic overlays or matrices that depict the combined effect of the environment, threat capability and the range of threat COA.

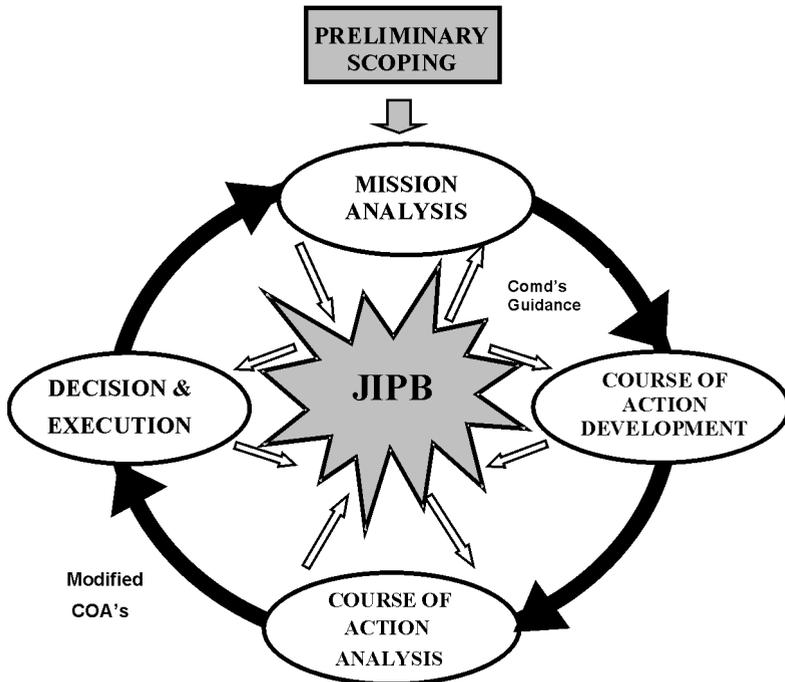


Figure 2–1: JMAP—showing the linkage with joint intelligence preparation of the battlespace

2.14 An example of a critical capability matrix is in annex C. The format of JIPB products is dependent on the nature of the problem, the capabilities of the intelligence staff, the HQ SOP and above all, the commander.

2.15 The planning time and resources available (size of the headquarters, information sources, analysis tools and staff skills) will determine the detail of the JIPB products. Establishing which products are required and their relative priority depends upon the commander's guidance, time available, information requirements and the demands of the situation. JIPB is described in detail in ADFP 19 (ADDP 2.0)—*Intelligence* and its steps are outlined in figure 2–2. A more detailed explanation is contained in annex B, which contains an Aide Memoire, the JIPB in detail and finally the JIPB inputs to the JMAP. It is stressed that the four JIPB steps shown in figure 2–2 are not linked in any way to the four JMAP steps.

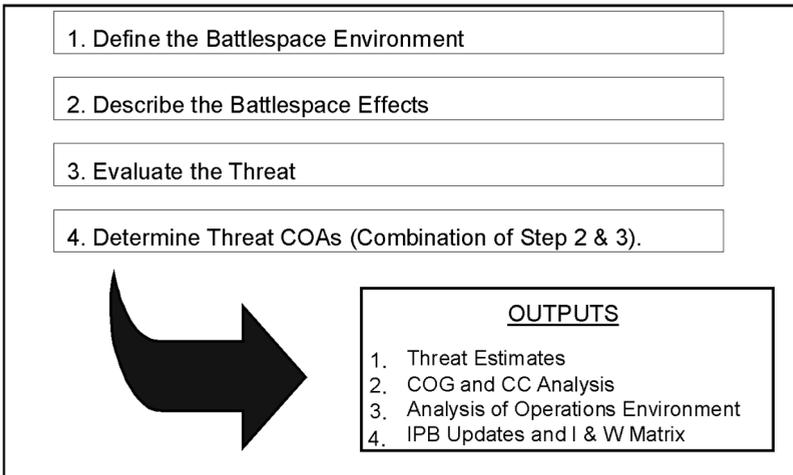


Figure 2–2: Joint intelligence preparation of the battlespace

STEP ONE JMAP—MISSION ANALYSIS

2.16 Mission analysis ensures that commanders and staff clearly understand the intent of their superior commanders up to two levels above. This focuses planning within the boundaries of that intent. It assists commanders and their staff to identify the mission and tasks that are essential to the successful outcome of their superior’s plan. Mission analysis results in a clear statement of the commander’s mission and intent, and through clear commander’s guidance, provides the basis for all subsequent decision making and planning.

2.17 Mission analysis requires input from all supporting staff processes to provide the ‘situational awareness’ required to continue the JMAP. For example, the operations staff provides an awareness of current operational capability, dispositions and intent. Logistics staff will provide advice on logistics restrictions and freedoms of action affecting operations. Legal staff will indicate what legal constraints exist. The Intelligence staff provides the commander and staff with a clear picture of the battlespace through the JIPB. By analysing the COG, CC, CR, CV and potential DP of the enemy contained in the JIPB, the staff are able to identify the factors of their own forces time and space. This will emphasise logistic and personnel support issues and also help decide our own CC, CR, CV and COG. Mission analysis provides a platform to develop viable COAs, and also helps to focus planning on effecting the threat COG and CCs, while identifying and protecting our own.

A mission analysis aide memoire, including the briefing format, are in annex D and its steps are outlined in figure 2–3. A diagrammatic presentation of Mission analysis is in annex D, appendix 1.

2.18 Review the situation. Reviewing the situation involves the receipt of intelligence updates through the JIPB process. These updates take the form of intelligence briefs that include environmental and threat updates, threat courses of action and assessed threat COG. It also includes a review of own forces, COG, critical capabilities and a time analysis. Importantly, the commander should endeavour to identify gaps in knowledge that will affect the final decision:

- **Environment and threat update.** The environment and threat update draws on some key products from the JIPB. These products include a definition of the battlespace environment and a description of battlespace effects. This description and definition of the battlespace are combined to provide an Analysis of the Operational Environment. In addition the threat is evaluated and the adversary's COAs are determined. Further details on the environment and threat update are found in ADFP 2.0—*Intelligence*, chapter 5.
- **Own forces review.** This stage of the review of the situation examines the four aspects of own force capability. The first step is the analysis of the friendly COG and the determination of the CCs that characterise the COG. The next step involves an examination of own forces to determine the assets available, the disposition of those forces; that is where they are physically, and the capabilities the available assets can bring to the operation. Logistics capabilities focussing on supply, warehousing, distribution and maintenance engineering are also determined. The last step in this review is an assessment of own force capability. This assessment examines issues such as readiness levels, training levels achieved and morale of personnel. The Own Forces Review seeks to determine whether forces are at an appropriate level of readiness, with sufficient resources to conduct operations within a specified timeframe.
- **Time analysis.** Time is the most essential non-renewable resource able to be exploited by a commander. The aim of this analysis is to determine how to use the available time more effectively than the adversary and overwhelm the threat commander's decision-making process. The commander must balance the desire for the perfect plan against the need to act before the adversary can, in order to seize and retain the initiative. Therefore, the establishment of a planning timeline is one of the most important early decisions taken by a commander. It should address key timings, distances, assembly and preparation timings, the duration of the operation and allow time for component

commanders, subordinate JTFs, formations and units to undertake their own planning.

2.19 Identify and analyse superior commander's intent and mission.

The superior commander's intent provides direction and intentions. Identifying the superior commander's intent and desired end-state involves understanding the overall aim and purpose for the entire force, as well as the subordinate's specific role within it. At the conclusion of this analysis the subordinate must clearly understand the higher intent. From the superior commander's intent the staff should extract purpose, method and end-state. The purpose determines the reason for the force conducting the operation. The method portion is predominantly threat focussed. It clarifies the desired effects on the enemy in relation to the enemy COG and the critical capabilities that may be exploited. The end-state is the posture at the end of the operation to enable the force to transition to termination/reconstitution or the next operation.

2.20 The key output of this step is a mission statement. The mission statement provides a task with a purpose, and can usually be expressed using elements such as WHO, WHAT, WHERE, WHEN and WHY. Note that at the operational level of warfighting a clear enunciation of WHEN may not be possible and may be deleted from the mission statement if required. The mission statement may be given by the superior commander or may need to be derived from the superior commander's intent. An example mission statement is 'JTF 123 is to defend Norfolk Island by 01 April 2004 in order to protect AS Sovereignty'.

2.21 Identify and analyse tasks. Mission Analysis enables commanders at all levels to clearly identify the specified, implied and essential tasks required to satisfy the mission.

- **Specified tasks.** The superior commander directs these tasks.
- **Implied tasks.** These tasks are not specified by the superior commander, but are those that are necessary in order to meet the superior commander's intent. Not all implied tasks will be identified during mission analysis, some will be revealed later during COA Development and COA Analysis. However, an attempt to identify all implied tasks must be made during mission analysis as this provides the basis from which the COAs are developed.
- **Essential tasks.** These tasks are those that must be successfully conducted to achieve the mission and superior commander's intent. Essential tasks are identified from the list of specified and implied tasks and should be compared to the mission statement to ensure it is still the most appropriate expression of the superior commander's intent.

2.22 Identify and analyse freedom of action. Freedom of action involves identifying the parameters within which a commander can act to achieve the superior commander's intent. This will involve the consideration of factors, which may limit possible options. Considered as part of this step in the process will be the risks associated with the operation. This will include the development of what the acceptable risks are to the commander in terms of cost versus gain and measured against the operational requirements and mission. The limitations include restrictions and constraints.

- **Restrictions.** These are actions that a superior commander imposes, prohibiting activities, which affect the way a subordinate commander can conduct the operation. For example, a restriction could be non-violation of third-party airspace. It could also be a limitation on operations, such as not being allowed to complete a pre-emptive strike or only placing a small military footprint on an island. Restrictions may be represented back to the higher authority for change.
- **Constraints.** These are physical characteristics that cannot be changed that affect the conduct of the operation, such as distances, timings and the limitations of pieces of equipment for example the radius of action of an aircraft.

2.23 Identify and analyse critical facts and assumptions. The staff gathers two categories of information that will significantly affect the way in which they plan the mission. These are the facts and assumptions which the commander and staff identify using deductive reasoning to consider all the factors applicable to the situation.

- **Facts.** The facts are statements of known data (for example, the situation, threat and friendly force dispositions, available troops, unit strengths and materiel readiness). Mission and commander's intent are also key facts, included in this are staff projections and assessments of tangible and intangible factors. (For example, subordinate unit NTM, capability and sustainment).
- **Assumptions.** These are developed as substitutes for facts to allow planning to continue without delay. An assumption is only appropriate if it is valid. For example, 'assuming away' potential problems, such as poor weather or reasonable threat options and capabilities because these are too difficult to plan for (despite the likelihood) is an invalid use of assumptions. Valid assumptions are those that have a solid foundation and a strong likelihood of being confirmed as fact at a later date and will effect the way in which the plan is shaped. For example, the threat capability to sustain air superiority within a Targeted Area of Interest is a valid assumption unless there is a specific reason (fact) that will prevent this from occurring (such as a planned operation

against the enemy's critical requirement and vulnerability necessary to sustain that capability).

2.24 Assumptions critical to the planning process must be clarified as soon as possible. Any assumption made about the battlespace environment or the threat should be resolved by the Commanders Critical Information Requirements (CCIRs).

2.25 Commander's guidance. The commander is an integral part in the JMAP. Mission analysis clarifies commander's guidance early in the process. This is critical as it focuses the staff on the commander's intent and the timely and effective development of own COA and the threat COA to be developed. The commander will specify in planning guidance the critical capabilities to be exploited, IO objectives, the commander's priorities (intelligence reviews, capabilities, logistics etc), the acceptable degree of risk and the objectives to be achieved in arriving at the desired end-state.

You will enter the continent of Europe and in conjunction with the other Allied Nations, undertake operations aimed at the heart of Germany and at the destruction of her armed forces.

Directive of Eisenhower

2.26 Commander's guidance forms the basis of the commander's themes and should flow from the inputs shown in figure 2–3. The commander guides the coordinated application of force to achieve the desired military objectives by combining operational art, the warfighting concepts, the forces and capabilities available, and the prevailing time and space conditions applicable to the specific theatre or JFAO. A theatre concept will shape how a joint task force commander applies the forces within a JFAO.

2.27 The components of commander's guidance are:

- most likely and most dangerous threat COA to be developed, which will be further developed by the J2 staff into full threat courses of action;
- commander's intent (purpose, method, end-state) and mission (WHO, WHAT, WHERE, WHEN and WHY);
- commanders broad themes for the operations within the theatre or JFAO (core and supporting concepts within deep, close and rear);
- Information Operations (IO) Objectives, ie deception, OPSEC (consistent with superior commander's IO objectives);

- Commanders critical information requirements (CCIR), (given in order of preference to the staff);
- acceptable degree of risk (articulated usually from higher command, could be as simple as I will not allow a major fleet unit to be lost); and
- time plan for the planning staff and main operation; and type of order to be prepared.

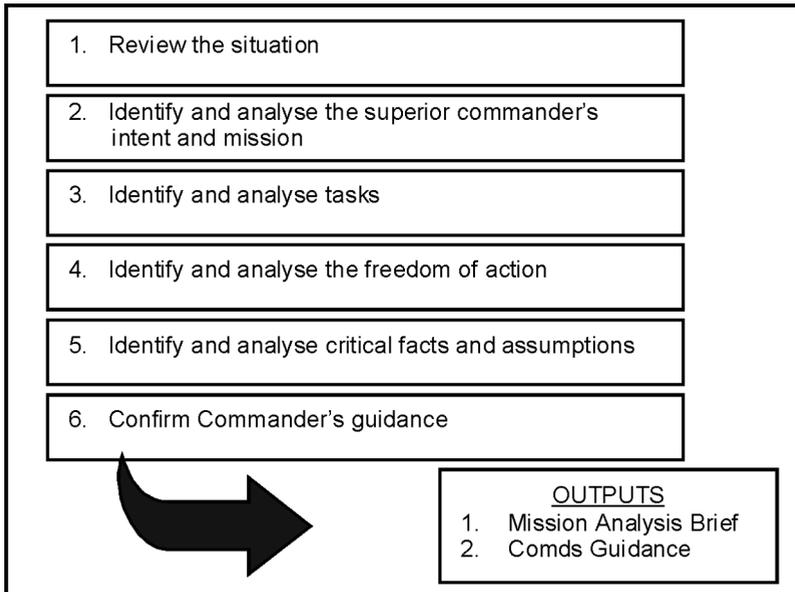


Figure 2–3: Mission analysis

STEP TWO JMAP—COURSE OF ACTION DEVELOPMENT

2.28 COA development is the part of JMAP where the planning staff have to use their military knowledge and experience to develop the commanders broad themes into a number of different COAs. The aim of COA Development is to create a number of identifiably different COAs that are achievable, meet the mission requirements and are detailed enough to be war gamed in the next phase of JMAP. The planning staff have already developed the mission, tasks, restrictions and constraints, own force and enemy force dispositions and the commanders broad themes. It is essential to use the products of mission analysis and Commanders Guidance when developing viable COAs. COA development must also consider the principle of Integrated Battlespace Planning. The products from the Mission Analysis phase of the JMAP that

must be used to allow this process to continue include the Comd's Guidance, the friendly and threat COGs, the CC Matrix and the AOE from the JIPB. A course of action development aide memoire, including the briefing format, are in annex D and its steps are outlined in figure 2–6. A diagrammatic presentation of course of action development is in annex E, appendix 1.

2.29 Confirm COG. The commander's intent must be related to both the enemy and friendly COGs. This is to ensure that we exploit the enemy operational level COG and protect our own COG. There is only one operational COG for the whole mission. The strategic level will have its own COG, which will have a number of critical capabilities (CCs). One of these CCs will transpose into the operational level COG.

2.30 Critical capability analysis. Endeavouring to directly target the threat COG may not be the most effective approach. Therefore, in order to effect the threat COG whilst avoiding the enemy's strengths and reducing risk, the CC of the adversary must be targeted. The planning staff analyses the Critical Capability matrix provided in the JIPB to determine which of the enemy CCs may be effected given indicative force assignment. They do this by first identifying what methods can be employed to effect adversary CCs. They then decide which indicative force elements could be employed to achieve these desired effects through attacking the enemies CR. CRs may then be further broken down into individual elements, which are called CV in order to allow detailed planning. Definitions are as follows:

- **Centre of Gravity (COG).** That characteristic, capability or locality from which a military force, nation or alliance derives its freedom of action, strength, or will to fight at that level of conflict. The centre of gravity at each level of conflict may consist of a number of key elements.
- **Critical Capability (CC).** A characteristic or key element of a force that if destroyed, captured or neutralised will significantly undermine the fighting capability of the force and its centre of gravity. A CC is not necessarily a weakness but any source of strength or power that is capable of being attacked or neutralised. A successful attack on a CC should aim to achieve a decisive point in an operation or campaign. A force may have a number of CC.
- **Critical Requirement (CR).** An essential condition, resource or means that is needed for a critical capability to be fully functional.
- **Critical Vulnerability (CV).** A CV is an element of a CR that is vulnerable or that can be made vulnerable.

2.31 The most important thing to note in the CC analysis is that the aim is to determine what enemy CCs can be effected. The effect on the CC is achieved by having a physical, functional or psychological outcome, event or consequence on the enemy's CVs and CRs as a result of a specific action. This action and desired outcome is considered and filtered through the Mission, forces available and limitations.

Critical Capability Analysis Example

The JIPB has determined the COG of an adversary may be Force Projection.

The CCs that make up that COG may include a number of capabilities such as amphibious and airborne forces, air defence, airborne, strategic strike, logisitcs and C4ISREW.

Further analysis of the airborne CC reveals that CAP is a CR of this CC. The CVs of CAP include POL, trained ground and aircrew, aircraft and airfields.

By then examining the CVs in light of the mission, forces available and limitations it is determined that the:

POL can be degraded by strike, SF, a naval task group, EW and offensive counter air;

air to air refuelling can be destroyed or prevented by strike, SF or offensive counter air;

the effectiveness of trained ground and aircrew can be degraded by IO and SF; and

aircraft can be destroyed or neutralised by SF, strike, offensive counter air or GBAD.

The outcome of this process is that the CC of airborne can be effected because the CR and CVs of CAP is can be acted upon by the forces assigned physically, functionally or psychologically in accordance with the friendly mission and limitations. These effected CCs form the basis for determining DPs.

A diagrammatic representation of this example is in figure 2-4.

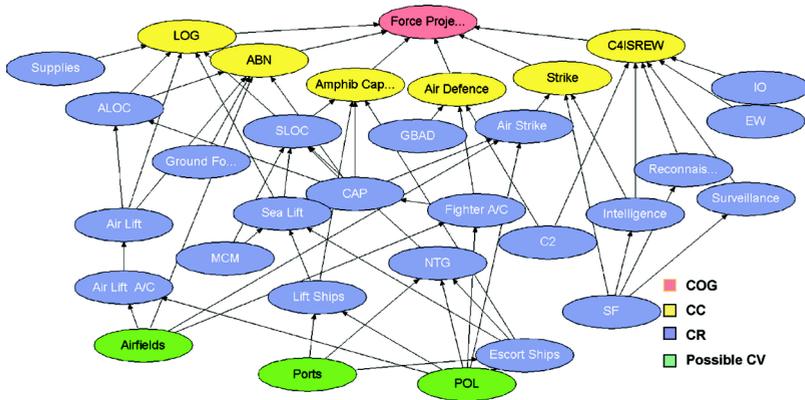


Figure 2-4: Critical Capability Analysis

2.32 Develop DPs. Identification of DPs, both friendly and adversary, is an important part of the planning process. DPs are achieved by successfully exploiting either single, or multiple CCs. DPs are defined by the effect they will have against a CC, are measurable and have a clearly articulated purpose.

2.33 Note that a DP **is not necessarily an event or events**, such as a battle. It may be the elimination or denial of a capability; or an achievement - such as obliging an adversary to engage in formal negotiations. A DP need not even be a physical effect; it could be an intangible such as the degradation of the enemy's will to fight. Of primary importance is the effect the commander is seeking to achieve, in attacking the COG and, ultimately, in reaching the end state. It follows that an enemy's capability is unlikely to be worth attacking unless it contributes to the elimination of his COG. When creating DPs, campaign planners should always:

- Define them in terms of their effect on the enemy, environment, or friendly forces.
- Ensure that they are measurable.
- Clearly articulate their purpose.

An example of a DP drawn from the examples developed in paragraph 2.29 is 'Air superiority is established.' This DP has an effect on the enemy's airlift capability, is measurable, and denies the enemy the airspace that they can conduct airlift operations and CAP and hence the COG of Force Projection is weakened.

2.34 Lines of operation. A Line of Operation is the linking of decisive points to achieve the required effect on the enemy centre of gravity. Lines of operation establish the interrelationship between DPs, in order to construct a critical path to the COG, and to ensure that events are tackled in a logical progression. That is a Line of Operation is a description of how military force is applied through time and space through the DPs. A Line of Operation may be expressed functionally for example as an IO Line of Operation or environmentally for example a land Line of Operation.

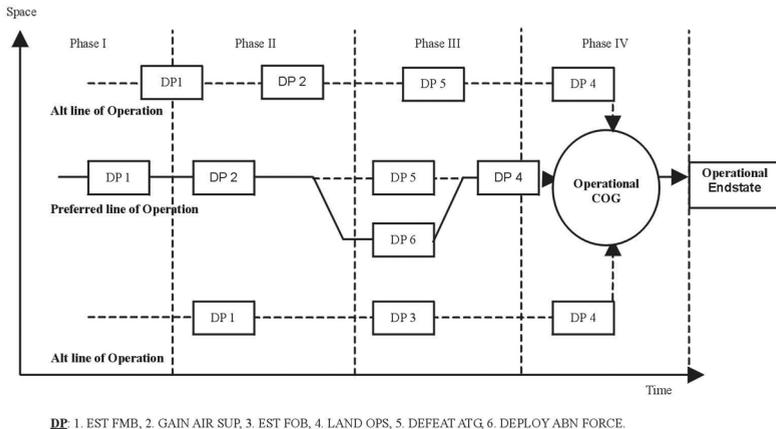


Figure 2-5: Decisive points and lines of operation

2.35 Figure 2-5 indicates a number of different ways that Lines of Operation could be developed. Note that DPs are not necessarily linear, do not have to be in numerical order, do not have to be conducted consecutively and there may be more than one order in which they can be sequenced. Also, some DPs may actually need to be achieved more than once during a line of operation. For example, it may only be possible to achieve local air superiority for a short period of time and space, but it may be a necessary precursor to an amphibious landing, a deep strike, achieving local sea control, and blocking enemy SLOCs. The forces necessary to achieve these tasks all at once may not be available, so the DPs are sequenced and local air superiority is achieved twice in the line of operation.

2.36 Develop broad courses of action (COA). Broad COAs are now scoped, using both direct and indirect approaches, taking into account the enemy's expected courses of action, wider aims and intent. Broad COAs are developed by filtering the various lines of operation through the broad themes articulated in the Commander's Guidance. Note that this may require the DPs to be resequenced into other lines of operations. Different COAs are developed by emphasising distinctions in three areas; the focus of the main

effort (ME), the time associated with prosecution and the management and acceptance of risk. These broad COAs create the framework that can be developed into a detailed COA.

2.37 Develop detailed courses of action. The planning team must now use the broad COA to develop detailed courses of action. This increase of detail is required for analysis to be conducted and the commander to make a decision. Once the overall sequencing of the operation has been determined, detail is added to a course of action by dividing the operation into phases.

2.38 Phasing. Phasing is a useful way of depicting an operation. It shows where an operation cannot be further developed until set activities are complete or a task organisation change is required. Phasing may also be required when insufficient forces are available to conduct all the required tasks at one time. Sequencing the phases helps commanders and subordinates focus on objectives, and understand how they can contribute to the higher intent. During operational planning, commanders should determine the conditions to be met before transitioning from one phase to the next. The aim in phasing an operation is to maintain continuity and tempo. The commander may designate a main effort in each phase.

2.39 Plans will normally contain lead up phases prior to attacking enemy CCs. These lead-up phases are used to shape the battlespace and prepare/position forces to commence the warfighting lines of operation. Termination actions should also be contained in a phased COA. Phasing could be based on time, achievement of DPs, a major change to C2 arrangements or the completion of a particular line of operation. See figure 2–5.

2.40 Further detail is added to the phasings by specifying tasks to be conducted in each phase, throughout DEEP, CLOSE and REAR. The Deep is that area in which the enemy draws its strength, the Close is the area in which the Area of Operations will be set and the Rear is the area in from which the friendly force draws its strength. This is conducted to help break up the battlespace and make it easier to work out the time and space problems and logistics. These tasks will need to be in accordance with the tasks determined during mission analysis, and are aimed at producing the effects that will lead to the achievement of Decisive Points. The main effort and supporting efforts for each phase are specified, with particular emphasis put on the logistic support required. This is shown in the Synchronization Matrix contained in annex F.

2.41 Further details in the COA are derived by:

- **Main effort.** Each phase should be identified by its main effort. This could be a DP, or the main line of operation during the phase, eg deployment or strike. It is what the commander thinks is going to be decisive and provides the focus for the activity that he considers crucial to success in the operation, or phase of the operation. In addition, triggers to the next phase, or to branches and sequels, should be determined.
- **Integrated battlespace planning.** To determine specific tasks to be carried out during the COA, the battlespace in each phase is normally divided into deep, close and rear areas. Tasks are then allocated and forces assigned to specific phases and areas according to the lines of operation developed. The requirement to protect own vulnerabilities, such as key installations, vital assets, and mission essential units must be considered here.
- **Logistic and other supporting efforts.** At the operational level of war, logistics involves force deployment and sustainment through lines of communication. These considerations will underpin any COA being developed. It is imperative that uninterrupted sustainment is achieved with each manoeuvre contingency that may develop during the operation. Other supporting efforts, such as health, offensive support, intelligence etc, must also be considered whilst developing the COA.
- **Command Control and Communications (C3).** C3 arrangements need to be determined for the entire COA, including points at which the organisation changes. In all circumstances the commander will require a HQ staff, including communications and logistic support systems, to enable him to discharge his responsibilities and to direct and monitor the execution of the plan in the most effective manner. The size and composition of the staff is dependent on the nature and scale of the operation. The choice of location should be made so as to optimise the commanders ability to influence the operation as it develops, whilst being mindful of the necessity of a secure location. He may also wish to collocate his HQ alongside, or close to, one or more of his component or force element commanders.
- **Area of Operation (AO).** In order to prosecute a successful operation the first essential is to establish discrete Areas of Operation (AO). These operating areas will have a sole coordinating authority and commander and have specific mission and tasks to be carried out in this area. It is a three-dimensional operating area, which is established to ensure unity of effort to enable the AO commander to exercise

control and coordination of all units operating within it. The spacial and temporal design of the AOs should ensure there are no gaps between the AOs and they are clearly deliniated. This will allow proper cueing and employment of all units, weapons and systems, balanced with sufficiency in C2 to maintain the optimum span of control to carry out that commanders mission.

- **Risk management.** The focus of risk management is force preservation through the identification, control and monitoring of threats relative to the commander's mission and plan. Risk management should allow the commander to maximise operational potential through an objective cost-benefit analysis balanced by intuition and experience. Throughout COA development the staff must consider the 'cost-benefit' that results in apportioning capabilities and rates of effort to achieve objectives and tasks. By assessing hazards and evaluating battlespace synchronisation, the level of risk for each COA can be determined and control measures identified to protect the force. For example, in the step, 'test COA criteria' when reviewing COA acceptability, identify and analyse the consequences of potential risks and how they may impact on own and higher missions.

2.42 Force assignment. Once the phasings are completed, and the COAs are fully developed, Indicative Force Assignment can be done. This will identify to the Commander any shortfalls, he may have and also highlight any critical force elements, timings and reserves. Command and Control arrangements can then be determined—remembering that they can change from phase to phase if necessary. Also, some C2 arrangements will only be transitory, for example a C130 Squadron may be under OPCON of the Land Force Commander, via the Airborne Force Commander, but only for the period of an Airborne operation.

2.43 End-state. The end-state is that state of affairs which needs to be achieved at the end of a operation either to terminate or to resolve the conflict on favourable terms and should be established prior to execution. The military end-state is the set of desired conditions beyond which the use of military force is no longer required to achieve national objectives. It is a crucial element of any plan, without it there is no focus to which campaign planning can be directed. The operational end-state is derived from direction or an order from the higher authority, thus there is a relationship between objectives and end-state.

Military End-state, Create conditions for economic renewal for all the people of Bosnia.

Gen Rose (UK)

2.44 Test COA criteria. COA Development strives to develop a range of courses according to criteria laid down by the commander. The principal test of a COA is therefore whether it meets the commander's intent and mission. Planning staff should not discount any discarded lines of operation as these could subsequently form branches to the plan. A list of subordinate test criteria are listed below:

- **Suitability.** Have all necessary tasks been accomplished? How likely is this COA to succeed? The COA is subjectively assessed as to whether it actually accomplishes the mission, meeting specified, implied and essential tasks derived from mission analysis.
- **Feasibility.** Do you have the time and means to achieve this COA? The COA is analysed against the following questions:
 - **Time.** Is there sufficient time to execute the concept as envisioned?
 - **Space.** Is there adequate ground and air space to conduct the operations?
 - **Means.** Are indicative force elements capable of deploying to and conducting the operation?
- **Acceptability.** The COA is assessed for acceptability, by comparing the probable risk versus the probable outcome of the COA, in fulfilling the superior commander's intent.
- **Sustainability.** The COA is assessed for sustainability during each phase by deep, close and rear areas. Has the planning staff allowed enough time for forces to prepare/deploy and reconstitute for subsequent operations? Is the logistic support for this COA realistic, or is it unattainable?
- **Distinguishability.** The COA is assessed on its uniqueness in comparison with other COAs. Each COA must be a viable alternative and substantially different from other COAs. For example is the commander being presented with different COAs? Or are they just variations on the same theme with different branches and sequels? Is there another way to approach this task that has not been considered?

2.45 COA brief. COA Development finishes with a brief to the commander, which details all COAs developed. The commander then assesses which COAs are to be further developed and wargamed during COA Analysis, and provides any further guidance on modifications to the selected COAs. The number of COAs developed depends on the time made available by the commander for the wargame.

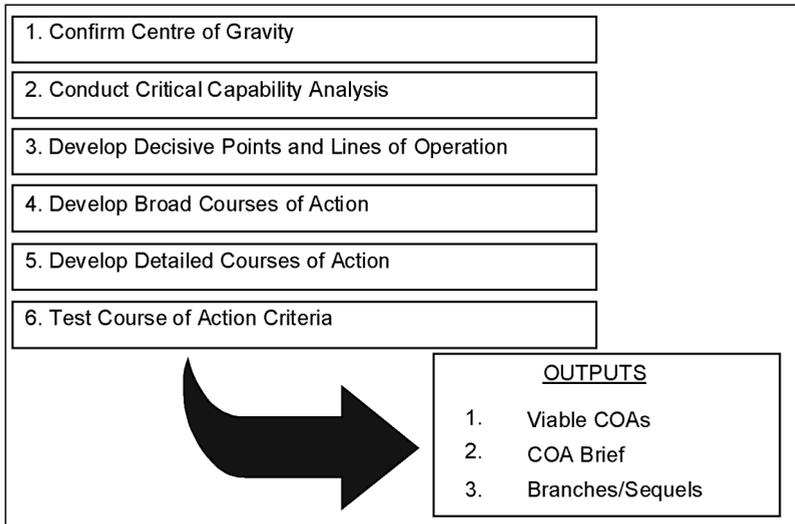


Figure 2–6: Course of action development

STEP THREE JMAP—COURSE OF ACTION ANALYSIS

2.46 COA analysis involves war gaming each friendly COA through to its intended end-state, progressively identifying the advantages and disadvantages of each COA, and improving them if required. It highlights the degree of risk associated with each COA, overlaid within each staff function, and enables a commander to make subsequent decisions based on a judgment of acceptable risk. The methods for war gaming vary depending on the level of analysis required and time available. Irrespective of the method chosen to conduct the war game, it should be conducted throughout the entire battlespace.

2.47 The war game process is complex. The more time and detail applied, the more useful are the results. This must be balanced with the reality that during the conduct of operations, normally; there will not be enough time to conduct in-depth war games for more than one to three friendly COAs, against one or two enemy COAs. This is where the commander's guidance is crucial; to focus the staff on which friendly and enemy COAs are to be war gamed.

2.48 War gaming identifies potentially critical points where the commander must make a decision to exploit or respond to developments. These points are known as Decision Points (DPT). A DPT is a point in time and space at

which a commander must make a decision in order to influence the operation in a particular target area of interest (TAI). DPTs must be offset from the point at which the action has taken place, in order to allow sufficient lead-time for action to be initiated. DPTs can also be known as commander's decision points to differentiate from decisive points.

2.49 The identification of DPTs assists the commander to synchronise the potential of all capabilities of the force. During the analysis the staff identify these decision points and position appropriate capabilities to support the decision process by identifying Named Areas of Interest (NAI) and Target Areas of Interest (TAI) in the battlespace. Synchronisation promotes forward planning across the entire force and focuses effort on the threat COG and critical vulnerabilities. An example of a synchronisation matrix is in annex F.

2.50 The products of COA analysis are workable and synchronised COAs, which meet the commander's mission and intent, with clear advantages and disadvantages. This step includes a COA analysis brief and the provision of further commander's guidance. A COA analysis aide memoire, including the briefing format, are in annex G and its steps are outlined in figure 2–8. Detailed explanations of the components of this step are at the appendices to annex G. A diagrammatic presentation of COA analysis is in annex G, appendix 4.

2.51 Risk assessment. During war gaming, key events are identified which incorporate risk to the success of the plan. Staffs plan to manage risk by developing options to synchronise the operation. This may take the form of planning branches or sequels within the plans and designating DPT required to initiate action. Associated with these DPTs are commander's critical information requirements (CCIR) which are those pieces of information required by the commander to make a sound decision and provide a clear insight into the risk involved in taking or not taking one of a variety of options. Note that the CCIRs are first developed during Mission Analysis and they must be constantly re-evaluated in line with the COAs being developed.

NAI—is an aspect, which will confirm or deny En intention. It serves to focus attention on areas where En must appear for a particular COA. NAI provides an objective basis for the employment of intelligence gathering assets.

TAI—is an area where a commander can influence the battle by destroying, delaying or disrupting the En.

- **Contingency planning.** A commander should never be without options, and planning of branches and sequels (as outlined below) could reduce the risks associated with transition between phases. In order to preserve freedom of action in rapidly changing circumstances, it will be important that the commander incorporates options into his plans. This process is known as 'contingency planning'. Careful consideration of the potential consequences of each phase will enhance the flexibility of the campaign plan.
- **Branches and sequels.** Inherent within the war gaming process is the identification and analysis of a range of branches and sequels which should be cross-referenced through the war game record to decision points on the COA to which they refer. Sequels, on the other hand, are significant shifts in focus. A sequel is the identification of a different line of operation.
 - **Branches.** Branches are options for a particular phase within a line of operation designed to anticipate DPT and provides the commander with the flexibility to maintain the initiative. In summary, a branch is a deviation from, then return to, the same line of operation.
 - **Sequels.** A sequel is the identification of a different line of operation.

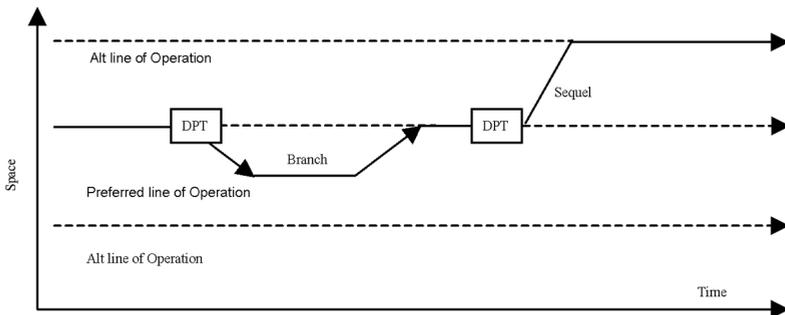


Figure 2-7: Branches and sequels

2.52 War game responsibilities. War gaming in its simplest form involves one staff member playing the friendly force, one playing the enemy force and one recorder capturing the results onto the war game record. Other staffs provide accurate input based on a detailed understanding of their respective service or specialisation. Normally the Chief of Staff (COFS) arbitrates to

ensure an unbiased approach. The commander normally maintains contact with the COFS to ensure that the staff maintains his direction. Staff responsibilities during war gaming are detailed in annex G, appendix 1.

2.53 Determine war game start states. This establishes the start state for the wargame and includes dispositions of friendly and enemy forces, critical assumptions remaining, known critical events and decision points and significant factors that will effect the conduct of the wargame. The majority of this information will be available from the JIPB, and Mission Analysis steps. It may be useful for the COFS to conduct a briefing to ensure all staff are conversant with the various COAs and how the wargame will be conducted. Detailed explanations of the requirements are contained in annex G, appendix 2.

2.54 Select a war game method. There are a variety of methods used to conduct the wargame, which can be used separately or in combination, depending on the time available. Explanations of the most commonly used methods are in annex G, appendix 2.

2.55 Select a war game record. War gaming results can be recorded and displayed using a matrix, narrative or the sketch note method, or a combination of these. It is important for the staff to identify and provide a method that suits a commander's analytical and decision-making style. Recording the results of the wargame ensures that information is displayed in a manner that later assists the staff to prepare the plan, Decision Support Matrix and Synchronisation Matrix. Examples of a War Game Matrix, Narrative and Sketch Note with supporting explanations are provided in annex G, appendix 2.

2.56 Conduct the war game. The key to COA Analysis is the war game process that validates each COA, determining workability, strengths and vulnerabilities. The war game is a disciplined process, for the commander and staff to visualise the flow of an operation and identify potential events and requirements. These may result in modifications to workable COAs and reveal unworkable COAs. The commander and staff must be cautious when assessing war game results. The process is a visualisation of the types of activities that could happen, not a prediction of what will happen. In all likelihood, the enemy and friendly subordinate units will not react exactly as the war game predicts. However, thinking through the operation reduces the chances of being caught by surprise by the enemy. Guidance for the conduct of the war game is in annex G, appendix 3.

2.57 Results of war gaming. Results should be recorded immediately that they become obvious through the war gaming process. Products from war gaming are used in rehearsals and are included in the synchronisation matrix. War gaming outcomes will confirm and identify key aspects of a COA. These may include:

- modified and workable COAs;
- COA advantages and disadvantages;
- COA decisive points, ME and supporting effort operations;
- risks, possible branches and sequels, as well as requirements for IO and surprise;
- subordinate tasks and priorities;
- C2 measures including task organisations;
- synchronisation of manoeuvre;
- refined NAIs, TAIs and DPTs including known and additional critical events;
- enemy and friendly force casualty projections; and
- refined decision support and staff decision matrix.

2.58 Commander's critical information requirements (CCIRs). CCIRs are the critical information that the commander needs to make a decision. As a result of war gaming each COA, the DPTs, DPs, TAIs and NAIs will be confirmed. In addition, the critical information needed to support each DPT will be identified for collection. The information then becomes the CCIRs for the COA. Timely answers to CCIRs help the commander enter the decision-making cycle ahead of the enemy commander, thus improving the probability of gaining or retaining the initiative and reducing and controlling risk.

2.59 COA analysis brief. COA Analysis finishes with a brief, by the staff to the commander, which details the modified COAs and their advantages and disadvantages. Steps four to six of COA Analysis Brief should be repeated for each COA. The staff recommend and the commander confirms which COAs are to progress to the JMAP step four, Decision and Execution. If the commander has been involved in the conduct of the wargame, this brief can be informal (if it is required at all) or combined with the decision execution brief.

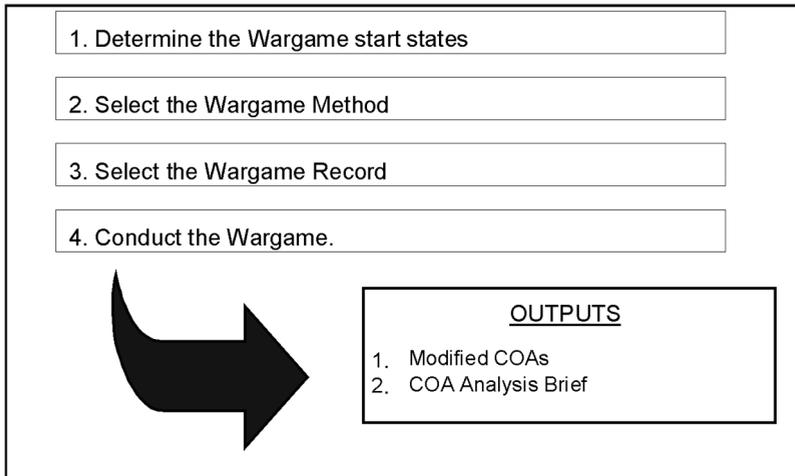


Figure 2–8: Course of action analysis

STEP FOUR JMAP—DECISION AND EXECUTION

2.60 In this step, the commander compares the strengths and weaknesses of each modified COA and decides which COA is to be developed into a plan and executed. Products from the decision step are the friendly course of action, contingency plans, supporting plans and orders. During execution of the plan, the commander and staff constantly review the situation, undertake decision making, adjust plans as required, and plan subsequent operations. The steps of the process are outlined in figure 2–9 and a decision and execution aide memoire and briefing format, are in annex I. A diagrammatic presentation of decision and execution is in annex I, appendix 1.

2.61 Termination. The commander and staff must remain focused throughout the conduct of the plan on bringing the campaign/operation to a close and ensuring that the desired end-states are achieved and can be maintained. Actions on achievement of the end state must also be considered, including, withdrawal, demobilisation if required or whether a force should remain deployed. Logistic and financial implications will need to be considered.

2.62 Compare COAs. The aim of comparing COAs is to determine the one that has the highest probability of success against the most likely enemy COA and the most dangerous enemy COA. In addition, the commander assesses the risk associated with each COA. The situation and the superior commander's intent will determine the elements of risk, and their relative

importance. An example of this risk assessment matrix is in annex H. COAs that are not selected may be kept as the basis for contingency plans and can be used as branches and sequels to support the execution phase, should changes to the plan be required. In comparing COAs key staff members firstly conduct their own COA comparison and then recommend a COA to the commander for approval. The actual comparison may follow any technique that allows the staff to provide the best recommendation and the commander to make the best decision. Examples of various techniques for COA comparison are in annex J.

2.63 Select the COA. The commander selects the preferred COA. If the commander modifies a proposed COA the staff must go back to COA Analysis. Once a COA has been selected, the commander's statement of intent and CCIR's may be refined. The selected COA is developed into a concept of operations (CONOPS), which is briefed in the format shown in annex K. Those COA not selected by the commander may become contingency plans or possible deception plans.

2.64 Develop and issue the plan. Based on the commander's decision and final guidance, the staff refines the COA, completes the plan and prepares to issue the order. Once the commander accepts the revised COA, the following activities occur:

- Preparation and issue of a confirmatory WNGO;
- Development of the Synchronisation Matrix; (Once the plan is identified, the information from the war game record is used to produce a detailed Synchronisation Matrix. The Synchronisation Matrix displays the detailed coordination of friendly activities across the battlespace, and confirms NAIs, TAIs and DPTs. An example of a Synchronisation Matrix is provided in annex F.)
- Development of the plan and supporting plans; (Once the Synchronisation Matrix is developed, the full plan and supporting plans are developed using the Synchronisation Matrix as the coordination guide. This ensures that all elements are synchronised and that the full combat power of the force will be prepared for utilisation in accordance with the commander's concept of operations.)

- Preparation and issue of orders; (Once the order is complete, the staff may conduct a CONOPS/OPORD Brief (if required). This brief ensures all headquarters staff (who may have been left out of aspects of the planning process) understand the plan and their commander's intent. This brief may also be used as a handover point from plans staff to operations staff. Handover points, if any, will largely be a function of individual headquarters structures and manning. Orders are then prepared and issued.

2.65 Execute the plan. Administratively the JIPB is continually updated, as is the Synchronisation Matrix. Both the commander and staff must continually review the situation to determine if there is a requirement to modify plans or orders. Dependent on the size of the headquarters involved, other staff may be allocated the task of preparing contingency plans (branches and sequels).

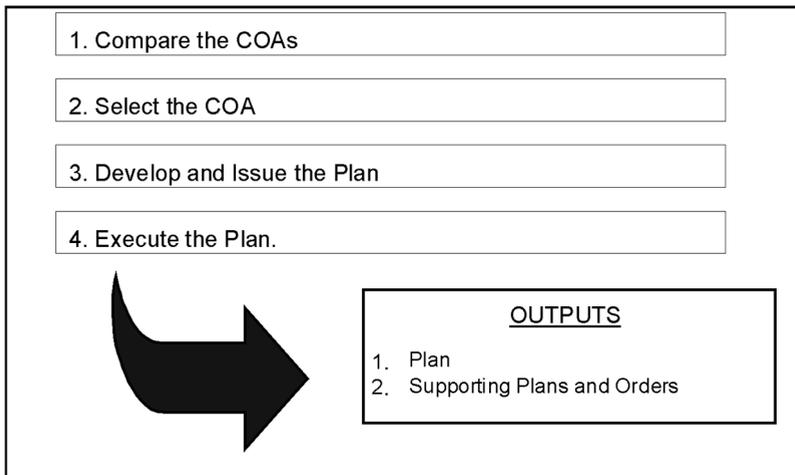


Figure 2–9: Decision and execution

Annexes:

- A. Joint Military Appreciation Process—Aide Memoire
Appendix 1—Risk management considerations
- B. Joint Intelligence Preparation of the Battlespace—Aide Memoire
Appendix 1—Joint Intelligence Preparation of the Battlespace—in detail
- C. Critical capability analysis matrix
- D. Mission analysis—Aide Memoire and briefing format
Appendix 1—Mission Analysis Diagram
- E. Course of action development—Aide Memoire and briefing format
Appendix 1—Course of Action Development Diagram
- F. Synchronisation matrix
- G. Course of action analysis—Aide Memoire and briefing format
Appendix 1—Staff responsibilities for war gaming
Appendix 2—War game—Starts, Method and Record
Appendix 3—Conduct of War Game
Appendix 4—Course of Action Analysis Diagram
- H. Risk Assessment matrix and Staff Decision matrix
- I. Decision and Execution Aide Memoire and Decision briefing format
Appendix 1—Decision and Execution Diagram
- J. Course of action comparison techniques
- K. Concept of operations briefing format

Enclosures:

- 1. Logistics Estimate
- 2. Extract from ADPP 3.13—*Information Operations*

JOINT MILITARY APPRECIATION PROCESS—AIDE MEMOIRE

INPUTS	STEPS AND ACTIVITIES	OUTPUTS
JIPB update.	1. Mission analysis: <ol style="list-style-type: none"> a. Review the situation. b. Identify and analyse the superior commander's intent and mission. c. Identify and analyse tasks. d. Identify and analyse freedom of action. e. Identify and analyse critical facts and assumptions. f. Draft commander's (comd's) guidance. 	Threat COA. Confirmed mission. Broad Themes.
Comd's guidance. Joint Intelligence preparation of the battlespace (JIPB) update.	2. COA development: <ol style="list-style-type: none"> a. Confirm own centre of gravity. b. Confirm critical capability analysis. c. Develop broad COA. d. Develop DP and lines of operation. e. Develop detailed COA. 	COG. CC, CR, CV. COA, DP and lines of operation. Viable COA.
Viable COA. IPB update. IPB event overlay. Comd's guidance.	3. COA Analysis: <ol style="list-style-type: none"> a. Determine the war game start states. b. Select war game method. c. Select war game record. d. Conduct the war game. 	Modified COA.

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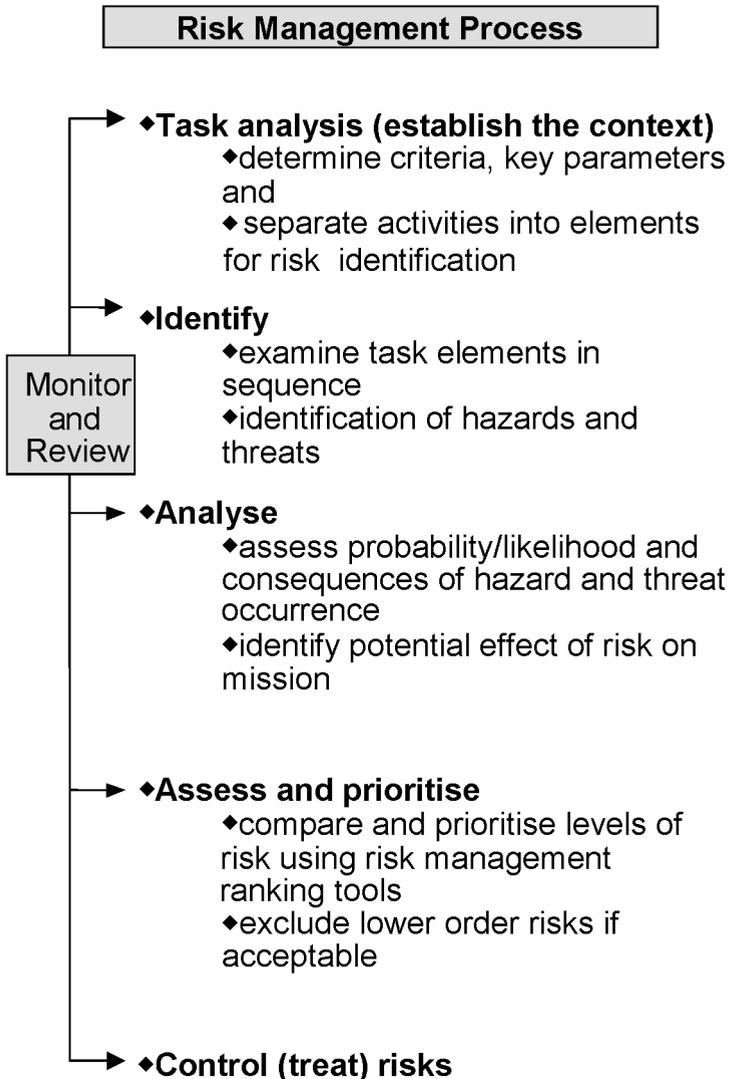
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INPUTS	STEPS AND ACTIVITIES	OUTPUTS
Modified COA. IPB update. Comd's guidance.	4. Decision and execution: a. Compare COA. b. Select the COA. c. Develop and issue the plan. d. Execute and monitor the plan.	Synchronised plan. Orders.

Appendix:

1. Risk management considerations

RISK MANAGEMENT CONSIDERATIONS



JOINT INTELLIGENCE PREPARATION OF THE BATTLESPACE—AIDE MEMOIRE

INPUTS	STEPS AND ACTIVITIES	OUTPUTS
	<p>1. Describe the Battlespace Environment</p> <ol style="list-style-type: none"> 1. Review the existing situation. 2. Scope the threats. 3. Identify significant characteristics of the environment: <ol style="list-style-type: none"> a. Stakeholders. b. Infrastructure—comms, power, fuel, etc. c. Lines of communications—roads, rail, pipelines etc. d. Social, religious, cultural and economic demographics. e. Terrain. f. Weather. 4. Determine Battlespace Limitations: <ol style="list-style-type: none"> a. Area of interest (AI). b. Area of intelligence responsibility. 5. Identify intelligence gaps. 6. IR and CCIRs. 	<p>AO and AI diagram</p> <p>Comd CCIRs</p>
	<p>2. Describe the Battlespace Effects</p> <ol style="list-style-type: none"> 1. Review surrounding factors. 2. Divide the AI into environments. Consider—land, maritime, aerospace, environmental hazards, international and political issues, weather. 	

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INPUTS	STEPS AND ACTIVITIES	OUTPUTS
Step 1 and 2 Combined	3. Analysis of the operational environment: <ul style="list-style-type: none"> a. Physical effects brief. b. Normalcy graphics. c. Psychological effects brief. d. Combination graphics. e. Weather effects matrix. 	Products Products Products Products Products
	3. Evaluate the Threat <ul style="list-style-type: none"> 1. Conduct adversaries mission analysis. 2. Threat modelling. 3. Adversaries capability overview. 	COG analysis Disposition of En Doctrinal Template Target systems model
Products from steps 2 and 3	4. Determine adversaries courses of action <ul style="list-style-type: none"> 1. Review adversaries mission analysis. 2. Identify adversaries COA: <ul style="list-style-type: none"> a. Friendly CC analysis. b. Develop En lines of operation. c. Identify means. 3. Test COA Criteria—suitable, feasible, acceptable, distinguishable, and sustainable. 	Analyse mission and intent

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INPUTS	STEPS AND ACTIVITIES	OUTPUTS
	<ol style="list-style-type: none">4. Detail development of adversaries COA:<ol style="list-style-type: none">a. Threat estimate.b. Situation overlay.c. Situation matrix.d. Adversaries CC matrix.5. Analyse audit trail.6. Indicators and Warnings (I&W).7. Collection Plan.	Adversaries COA Synchronisation Matrix CC Matrix I&W Audit Included in I&W

Appendix:

1. Joint Intelligence Preparation of the Battlespace—in detail

JOINT INTELLIGENCE PREPARATION OF THE BATTLESPACE—IN DETAIL

STEP ONE—JIPB—DEFINE THE BATTLESPACE ENVIRONMENT

1. This step of the JIPB outlines the broad situation in terms of environment, stakeholders and own forces and identifies, for further analysis, significant characteristics of the battle space. The outcome of this step is to determine the AI and to provide the commander and staff, background knowledge of the significant environmental characteristics that may effect both the adversary and friendly COA. These characteristics may include terrain, force capability, cultural, stakeholders, political, religious, infrastructure, economic, LOAC, laws of the sea, and psychological. Defining the battlespace involves the identification of characteristics of the environment and threat that may influence COA. It involves the following stages:

- a. **Review the existing situation.** This is either a wide-ranging examination of a new situation faced by a Headquarters or a simple objective examination at the end of one phase of the battle and the start of the next. The review will elicit the overall context in which the military action is being undertaken, determine the range of intelligence sources and agencies available to support JIPB, and address the validity of previous assumptions and estimates. Actions are taken to:
 - (1) Identify how much time is available for JIPB and the detail that can be achieved. This time is dictated by the timing of briefs supporting JMAP.
 - (2) Review start-point data and friendly force information.
- b. **Scope the threats.** An overview of likely threat sources is required. This will include identifying the broad nature of potential environmental hazards and operational adversaries. Where an adversary can be clearly identified with an intent that will create conflict with the friendly commander's likely mission, then the priority, nature and extent of staff work required in steps three and four of JIPB (threat estimates) can be ascertained.

- c. **Identify significant characteristics of the environment.** This involves identifying foci for the analysis of the operating environment (AOE). At the operational and strategic levels, factors will normally include, but should not be restricted to:
- (1) stakeholders;
 - (2) infrastructure:
 - (a) communications;
 - (b) power, fuel and water supplies;
 - (c) manufacturing/repair facilities;
 - (3) lines of communication:
 - (a) roads, railways and pipelines;
 - (b) maritime routes and ports;
 - (c) air corridors and operating bases;
 - (4) social, religious, cultural, economic, political and demographic patterns;
 - (5) terrain; and
 - (6) weather.
- d. **Determine battlespace limitations.** Aside from identifying the JFAO (normally given by higher command) this stage will also define the:
- (1) **Areas of interest.** Commanders will require intelligence about events in areas outside their allocated theatre or JFAO. The AI is determined by defining the reasonable limits within which the environment or stakeholders active outside the theatre/JFAO can impact on the commander's mission relative to the speed of the commander's observe, orient, decide, act loop. Since this area is usually not within the operational level commander's control, intelligence staff will be required to request information or intelligence concerning it from higher or flanking forces.

(2) **Area of intelligence responsibility (AIR).** A commander will usually be allocated an AIR and will require the effort of the intelligence staff to be devoted mainly to that area. The size of the area will depend on operational imperatives but every consideration should be given by higher authorities to ensure that the commander is given the necessary tasking priority on reconnaissance, intelligence, surveillance, and target acquisition assets to cover the area.

- e. **Identify intelligence gaps.** This includes the recommendation of IR for the commander. IR are those intelligence needs for which a commander has an anticipated and stated priority in the task of planning and decision making. They are the questions on the environment and the adversary that the commander must have answered for mission success. Prioritisation of IR will need to occur to meet resource and time constraints.

2. **IR and CCIR.** There are a number of key pieces of information that the commander will require to understand events in the battlespace and to prosecute operations. These are commonly referred to as CCIR. Together, CCIR constitute what the commander needs to know and the knowledge needed to be protected. The commander will derive CCIR but will be influenced by staff advice. CCIR generally incorporate three types of knowledge linked to potential decisive points and the commander's need for situational awareness:

- a. IR for the battlespace environment which are recommended by operations staff and managed by intelligence staff.
- b. Key aspects of the nature and status of friendly force capability. These are sometimes referred to as friendly force IR and are recommended and managed by operations staff.
- c. That information likely to be sought by the adversary that will provide knowledge of friendly force intentions and capability. These are termed essential elements of friendly information and are recommended by operations staff and managed by counter-intelligence staff.

3. Key products. The key products of define the battlespace environment required for JMAP are:

- a. a representation or definition of AI and AIR (if allocated);
- b. databases on the characteristics of the environment that may influence friendly or adversary COA; and
- c. the general characteristics of potential threats that may influence friendly intent.

STEP TWO—JIPB—DESCRIBE THE BATTLESPACE EFFECTS

4. This step analyses the environmental characteristics identified in step one to determine their effects on friendly and adversary operations in detail. The effect on forces may be noted in terms of application, lethality, mobility, intelligence, C2, sustainment and moral. This will result in products, indicating potential manoeuvre areas, health risks, impact to stakeholders, general approaches, operating bases, choke points and support infrastructure. Describing the battlespace effects takes those important characteristics of the environment, including infrastructure, terrain, population and weather, identified in step one and analyses their effect on military operations. The assessments made can be disseminated as graphics (with supporting notes or verbal brief) or as an analysis of operational environment (with supporting graphics). Major deductions will need to be included in written threat estimates if produced.

5. Aspects for analysis. It is important to note that the battlespace is not homogenous and certain areas, or sectors, will affect different types of operations to varying degrees. During the analysis, intelligence staff should identify areas that favour types of operations and specific balances of forces. This analysis must be conducted from a neutral perspective in that the assessments will provide similar deductions for friendly as well as adversary forces.

6. Methods. There are two methods to describe the battlespace effects:

- a. Review environmental factors identified in step one against: force application, survivability, lethally, mobility, intelligence, C2, sustainment (including potential for subsequent utilisation by friendly forces) and morale.

- b. Divide the AI into environments and consider the force elements, noted above, within those environments. (While the entire AI should be considered, the focus of analysis should be on the area of operation.)

7. Considerations. As a guide, the following aspects may be considered during analysis:

- a. **Land.** Military aspects of terrain should be considered based on their effects on battlefield operating systems which may include manoeuvre elements, C2, intelligence, logistics (transportation, supply and repair), terrorist operations and so on. Key terrain should be identified from a neutral perspective. The effect of obstacles on movement should be classified as either unrestricted, restricted or severely restricted.
- b. **Maritime.** Key considerations should include sea lanes of communication, restrictions on surface fleet manoeuvre areas (including choke points, shallow waters, laws of the sea, limits of air cover/range), restrictions on sub-surface manoeuvre, surveillance, port facilities (including roll-on roll-off capabilities, port infrastructure and so on), amphibious landing sites, and logistics.
- c. **Aerospace.** Consideration of the effects on aerospace can be ordered by the effects on: intelligence (including aerial and satellite observation), airpower (including control of the air, precision strike, precision engagement and rapid force projection), air support to land operations, air support to maritime operations, sustainment and security.
- d. **International and political issues.** Military operations will normally draw an international focus and hence the limitations imposed by that focus and moral obligations to allies, religious and cultural attitudes, law and the Australian population will affect the commander's ability to operate. Simple effects could be the restriction of movement through the territorial airspace and waters of neutral countries. The effects of national policy and the laws of armed conflict on friendly and adversary rules of engagement should also be considered. Local and international interest over cultural and religious sites or processes may require the restriction of military activity in certain areas and the placing of restrictions on psychological target audiences and the themes and symbols used in propaganda. Civilian commercial activity and interests may affect operations in the level of political pressure placed on

military commanders, economic effects, lack of available logistic and infrastructure support, or the necessity for military protection of civil interests.

- e. **Environmental hazards.** Step one may have highlighted the importance of issues such as hygiene problems, natural disasters, disease, and even population flows. These factors affect morale, the level of personnel and medical support required for operations and risks.
 - f. **Information.** Intelligence will be required on how information flows within domestic communications infrastructure, the political and economic spheres, and information-reliant structures such as the media, public confidence, finances, logistics and C2 systems. An analysis of the full psychological spectrum of the battlespace will require the development of basic and special PSYOPS studies (BPOS and SPOS) as detailed in ADDP 3.6—*Psychological Operations*.
 - g. **Weather.** Weather analysis at the operational level usually addresses the seasonal climatic effects on combat, combat support and service support operations of the friendly and adversary major force elements. Often weather is treated too superficially. For example, the interpretation of Australia's northern climate is usually 'wet' or 'dry', however, a more sophisticated analysis breaks the weather patterns up into approximately nine seasons, each with differing effects on surveillance, mobility, personnel endurance, and the availability of potable water.
8. **AOE.** By combining Step 1 and 2 we will achieve AOE.
9. **Key products.** The key products of the describe the battlespace effects step for JMAP are as follows:
- a. Physical effects briefs. Written, graphic or verbal representation of how selected individual environmental factors may affect operations will be provided. The most basic of such products are mobility overlays which depict where land, air and sea movement are unrestricted, restricted, or severely restricted. Examples of specific factors that may warrant separate representation are: maritime, air, land, terrain, communications, infrastructure, maritime routes, air corridors, operating bases, demographics, or weather. Where possible, the physical channelling effects of the battlespace should be represented diagrammatically as AA. Analysis of AA may lead

to deductions later in JIPB on the adversary's likely lines of operation. Choke areas within the AA are identified as 'movement corridors'.

- b. **Normalcy graphics.** Associated with physical effects are normalcy graphics. It may be pertinent to present the environment as patterns of assessed normalcy in such factors as tourist flows, population flows and demographics. Over these can be arrayed current activity in later JIPB steps to support assessments on the nature of adversary intent.
- c. **Psychological effects briefs.** Psychological aspects of the environment and its effects are normally produced as special PSYOPS assessments, which draw on BPOS and SPOS within the Australian Defence Force Intelligence System library of products. PSYOPS AA may be represented by line diagrams identifying key nodes that must be breached to achieve psychological success, such as: manipulating key communicators, legislating the protection of cultural and religious sites or processes, dominating communications facilities, achieving psychological consolidation targets, and the psychological impact of force element manoeuvre.
- d. **Combination graphics.** Key environmental factors that affect operations may be combined in the one graphic for further illustrative purposes.
- e. **Weather effects matrix.** Weather effects matrix is a graphic display of the assessed effect of predicted weather conditions on military operations as either FAVOURABLE, MARGINAL, or UNFAVOURABLE. These weather conditions may include visibility, wind, precipitation, cloud cover, temperature and humidity.

STEP THREE—JIPB—EVALUATE THE THREAT

10. This step involves the identification of the adversary capabilities and their doctrinal employment of those capabilities unconstrained by environment or other factors. The staff evaluates the strategies, operating procedures, organisation, equipment, training, morale, doctrine, tactics, behavioural patterns, and personalities of the adversary forces. Evaluating the threat involves two activities: clarifying the adversary's current force capability and disposition, and determining adversary operational habits.

11. General. Evaluating the threat involves two activities: clarifying the adversary's current force capability and disposition, and determining adversary operational habits. This step evaluates the strategies, operating procedures, organisation, equipment, training, morale, doctrine, tactics, behavioural patterns, and personalities of the adversary forces. Importantly, it is completed with no consideration of environmental or other factors. It seeks to portray how the adversary would like to conduct operations under ideal conditions or given limited constraints. Assessing the threat involves the actions noted in the following paragraphs.

12. Ascertain adversary current dispositions. Current intelligence will provide known or assumed adversary positions of force elements.

13. Conduct adversary mission analysis. This step is fundamental to the JIPB process and will require constant review, updating and development throughout JIPB. In step three, intelligence staff will review and fully develop the adversary mission analysis initiated in 'scoping the threat' in step one. The key element is to identify the level of command faced by the friendly commander and the likely adversary intent on which to base threat models. A number of mission analysis activities may be conducted based on levels of command operating or based on each of the stakeholders involved. Determination is required in respect to:

- a. The level of command faced by the friendly commander, that is, the adversary commander that will be able to target the friendly commander's COG.
- b. The adversary's wider aims and courses, including strategic military objectives and end states.
- c. The likely adversary commander's intent, mission, tasks and COG.
- d. The nature of limitations that will be imposed on the adversary. At the operational and strategic levels these will usually include:
 - (1) the attitudes and behaviour of the international community, neutral, hostile and friendly nations;
 - (2) attitudes to international laws including LOAC and laws of the sea;
 - (3) capability limitations; and

- (4) the relative influence on the adversary's decision-making process of the wider economic and political ramifications of the pursuit of military force.

14. Threat modelling. In this step, intelligence staff update or create threat models, including known strategies, warfighting concepts, order of battle databases, biographical data on key personnel, and doctrinal templates. Such models seek to portray how adversary forces normally execute operations and how they have reacted to similar situations in the past. Separate models may be produced on facets of the adversary's operational intent, such as: phases of a strategic offensive of a revolutionary group, likely deception operations, the adversary's logistics organisation and infrastructure in a theatre, or paramilitary harassment. Such models will incorporate general weaknesses, strengths and vulnerability's, and include an assessment of typical HVT. While all aspects of an adversary's capability are methodically examined, two aspects of analysis that initiate other processes are worth noting:

- a. **Targeting.** In the first instance, intelligence analysts will provide detail on an adversary's CC, requirements and vulnerability's, infrastructure and those tactical assets that the adversary commander requires for the successful completion of the mission or HVT. These can be ranked in relative importance to the threat model and intelligence staff will consider how the adversary will react to the loss of each HVT or reduction in infrastructure support. This assessment of CC, requirements, vulnerability's, and HVT and the effect on subsequent friendly force activities is an initial step in the targeting process.
- b. **Counter intelligence.** An important component of threat modelling and the intelligence estimate process is identifying the adversary's intelligence capability in terms of covert, clandestine, and overt collection. This capability will be important in deriving adversary COA in the last stage of JIPB (and within the intelligence estimate) and will also be fundamental to the CI staff's advice on the relative vulnerability of friendly force COA. It also has significant IO ramifications. Further refinement of the intelligence threat will occur in the CI estimate, which will be developed in close conjunction with COA development and COA analysis in JMAP to provide the commander with credible options to achieve decision superiority through surprise and security in the battlespace. It will also initiate CI activity to counter the covert threats from espionage, sabotage, subversion and terrorism.

15. Adversary capability overview. The assessment of the adversary's doctrine, training standards, past operations, and equipment capability will allow a general appraisal of the adversary's capability within the AO. A simple example of such an appraisal is:

'The ... (adversary commander) ... has the capability to conduct:

- a. up to divisional strength amphibious assaults but is limited in range to that of land-based air support;
- b. up to brigade strength airmobile operations from land-based forward operating bases;
- c. real-time satellite surveillance of the AO by day and night down to signature equipment detection;
- d. covert intelligence collection within the ADF and has potentially prepared extensive sabotage networks to affect ADF vital assets; and
- e. limited sea denial operations in one focal area.'

16. Key products. The products from the evaluate the threat stage of JIPB required for JMAP are:

- a. Current adversary force dispositions.
- b. Advice on adversary mission analysis.
- c. The identification of adversary capabilities in broad descriptive terms. Written detail is added to the intelligence estimate. Adversary intelligence capabilities will be used in the initiation of IO and operations security planning as part of the CI estimate and COA development process.
- d. Doctrinal template(s) or overlay(s) which may include historic data, biographical intelligence, and assessed adversary warfighting concepts. These may be in the form of written analysis, overlays, time-event charts or matrixes (such as a synchronisation matrix).
- e. Target systems models. For example, how infrastructure, power, or fuel flows impact on or are utilised by an adversary.

STEP FOUR—JIPB—DETERMINE ADVERSARY COURSE OF ACTION

17. In this step, the analysis and products of JIPB steps two and three are integrated. This step involves the greatest amount of inductive reasoning within JIPB and its products are fundamental to the development of sound operations plans.

18. **Review adversary mission analysis.** This forms part of the continual review of adversary and stakeholder mission analysis that allows intelligence staff to remain focused on the appropriate level of adversary command and also to counter any developing biases in interpretation. The assessed adversary mission and intent should be clearly articulated. Where adversary intent remains unknown, threat scenarios should be developed and prioritised according to likelihood. Each scenario may then generate a number of potential adversary COA. The inductive process used in this analysis should be articulated in the intelligence estimate.

19. **Identify adversary COA.** There are three key stages of the identification of adversary COA.

- a. **Friendly CC analysis.** An analysis of friendly force vulnerability and COG is conducted from the adversary perspective and in accordance with the adversary mission analysis.
- b. **Development of lines of operation.** The series of effects (decisive points) that the adversary could attempt to induce are sequenced on the lines of operation that affect the perceived friendly force COG. All possible adversary and stakeholder COA that will impact on the friendly commander's mission are identified in brief from the adversary perspective.
- c. **Identify means.** The options for the 'means' available to an adversary to achieve the 'ways' noted above are then deduced. This assessment will include likely organisations, objectives and tasks required to achieve decisive points.

20. **Test COA criteria.** Each COA developed is then tested against the following criteria:

- a. Is it suitable? Does it meet the intent stated in adversary mission analysis?
- b. Is it feasible? Is there sufficient time, space and means?
- c. Is it acceptable? Is it worth the risk or cost?

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- d. Is it distinguishable? Is it different to other assessed COA? (Where a 'combination' of COA is assessed as the 'most likely' adversary action, normally there is only the one real COA and analysis should begin again until a number of useful options can be presented.)
- e. Is it sustainable? Can he sustain this level of operational readiness or deployment for any length of time?

21. Detailed development of adversary COA. Each of the stakeholders' or adversary's potential COA is then prioritised based on likelihood and an assessment made as to the 'most likely'. Based on time available, selected adversary COA will be developed further. As a minimum, a COA statement, sketches or matrix should be produced that indicates objectives, main effort, major force elements, intelligence support plans, risk and control measures. The following tools may be used:

- a. **Threat estimates.** In the case of a specified adversary which may affect the commander's COG, an intelligence and CI estimate will normally be produced. Both are iterative documents, with the CI estimate developing in line with friendly COA development while the intelligence estimate develops in line with assessments of emerging adversary COA.
- b. **Situation overlay.** The situation overlay is a map-based graphic display of an adversary COA. Each potential COA is represented on separate overlays. The overlay shows, for a critical aspect of one COA, where the adversary forces are expected to be in the battlespace. At operational and strategic levels, the situation overlay may focus on culminating points, installations, and activities associated with the adversary's COG. Apart from showing where adversary force elements would be deployed in the battlespace, the situation overlay also includes a depiction of the assessed time line of adversary actions. The overlay can therefore graphically present those NAI where adversary force may be constituted or appear over a given time if the adversary adopted a particular COA. These NAI link the adversary COA to the I&W process detailed below.
- c. **Situation matrix.** Adversary COA may also be depicted in a matrix. This should include the objectives, broken into tasks required to achieve those objectives, and, subsequently, the means available to achieve those tasks. Such matrices may be used in concert with situation overlays, especially in the depiction of NAI.

- d. **Adversary CC matrix.** These CC are generally force characteristics central to the fighting capability of the adversary. The adversary COA will indicate which friendly CC are likely to be targeted but the adversary CC will not necessarily be apparent. Therefore, it may be necessary to produce a separate adversary CC matrix that may or may not change based on each adversary COA. This CC matrix may be displayed on situation overlays or attached to situation matrixes and are refined during any war gaming process. Such lists will assist the operations plans process in the development of COA development, especially in tasking requirements and priorities.

22. Analysis audit trail. A summary of intelligence deductions from steps three and four of JIPB is maintained in the intelligence estimate. These include COA advantages and disadvantages, and the adversary's strengths and vulnerability's.

23. I&W. I&W is an intelligence tool used to monitor and assess the development of threats as part of the warning function of intelligence. It has broad application within the wider intelligence staff process and is conducted by intelligence staff on an ongoing basis; even when they are not conducting JIPB to support planning for a specific operation. However, the output of ongoing I&W will still support the initiation of planning when appropriate levels of warning are reached. Additionally, I&W is incorporated in the JIPB process to assist the intelligence staff in monitoring the level of threat in an AO. I&W thereby provides the link between the identification of potential threats (this may be seen as part of adversary COA development) and the provision of warning to the commander and staff that a threat is actually developing. For application in the JIPB process, the basic actions of I&W are as follows:

- a. In the process of initiating the JIPB, the commander and J3/5 staff will indicate the type of warning problem required to be analysed. Generally, the identified problem is the point where a developing crisis may require action by commanders to direct particular ADF responses.
- b. Through the JIPB process, the J2 staff then postulates plausible scenarios through which the threat may manifest itself, referred to above as adversary COA. Scenario development will, in turn, identify key elements or triggers in the form of indicators that can be monitored. There will be a number of indicators relevant to each COA or threat scenario. While some indicators are the same for more than one COA, the intelligence collection focus should be directed towards those that prove or disprove a COA.

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- c. Specific collection requirements are then developed for each indicator and included in an all source collection plan. The commander and operations staff is briefed on key indicators and the probable time available for decisions once relevant levels of warning are reached.

- d. As the I&W part of JIPB is designed to provide commanders with advanced warning that a response may be required, operations planning staff are responsible for the determination of response options to the initiation of warning indicators for the commander's approval. During the JMAP (COA analysis phase) I&W outputs are linked to critical operational and campaign events from a friendly perspective such that I&W becomes a major cuing tool for the commander's decisions. Commanders decision-point information can be added to I&W outputs, as shown in figure 2B1-1. A commander's decision point should include:
 - (1) An agreed (war gamed) I&W trigger or warning level of possible adversary activity.
 - (2) Possible response options for the commander (which may be part of planned sequels or branches, or may be the commander's shaping of the battlespace).
 - (3) The amount of time available to make the decision. Time is dependent on adversary and friendly activity and the commander's decision cycle, and must include time for issue of a warning report to cue the decision.

Warning Problem:

Scenario 1 (COA 1)	Scenario 2 (COA 2)	Scenario 3 (COA 3)	Scenario 4 (COA 4)
(Indicator: What to look for, where [NAI] and when [no earlier - no later than])	(Indicator)	(Indicator)	(Indicator)
(Indicator)	(Indicator)	(Indicator)	(Indicator)
Commander's Decision Points			
Trigger/Level of Warning: Time available: Action:	Trigger/Level of Warning: Time available: Action:	Trigger/Level of Warning: Time available: Action:	Trigger/Level of Warning: Time available: Action:
Notes: 1. Critical Indicators directly link to decision points and either prove or disprove warning scenarios. They should be highlighted. 2. Indicators may be assessed against baseline normalcy with indicator activity assessed as routine, irregular, significant, extreme, or unknown. 3. Time available for decisions is taken from the time key indicators are triggered plus intelligence processing time, less time required for action. Action may be to target the adversary at a certain location in a specified way.			

Figure 2B1–1: An example warning or competing hypothesis matrix

- e. Thereafter, all source information is processed to determine the level of activity of each indicator and to make an overall assessment of indicator activity for each scenario and warning problem as a whole. Assessments are based solely on levels of activity. Indicator activity must not be dismissed as an aberration, as it is merely a record of an event that has actually occurred. The significance of an indication (activated indicator) can only be assessed in the context of the overall scenario activity level.

24. Collection planning. The identification of gaps in information and the prioritising of IR given I&W analysis is an ongoing activity throughout the JIPB process. Collection assets are focused onto the key indicators of adversary activity in order to support the commander's decision requirements. Surveillance assets are synchronised with other collection assets to avoid unnecessary duplication of effort and to ensure coverage at the time or in the sequence the indicator is expected to be triggered. These may be placed on a synchronisation matrix specifically held by the collection manager.

25. Key products. The products from the determine adversary COA step of JIPB required for JMAP are:

- a. Adversary COA depicted as situation overlays, situation matrices, text in threat estimates, or a combination of graphic and written products. These products are to include a CC/HVT matrix.
- b. Adversary COA reduced to one graphic (warning matrix) portraying those indicators specific to a single COA.
- c. A collection synchronisation matrix and/or updated collection plan.
- d. Targeting support products, which may include target systems analysis, nodal analysis, and BDA (in post targeting re-estimates).

JOINT INTELLIGENCE PREPARATION OF THE BATTLESPACE—INPUT TO THE JOINT MILITARY APPRECIATION PROCESS

26. This section describes how JIPB integrates with the decision-making process and summarises the JIPB inputs required at each stage of JMAP.

MISSION ANALYSIS J2 BRIEF

27. Pre-mission analysis J2 brief. JIPB is initiated by the identification of a problem that requires a JMAP. Hence, mission analysis will normally commence prior to a full analysis of the adversary and environment being completed. However, as much as is known may be provided prior to the initiation of mission analysis.

28. J2 input to the mission analysis brief. At the end of mission analysis, J2 staff will be required to provide an intelligence component of the mission analysis brief. This will include an assessment of the key issues affecting planning. Estimates of the effect of the environment and threat may not be complete and may require a number of assumptions to be made in order to stimulate further operations planning. Each assumption should be verified through the collection plan. J2 staff will be expected to provide:

- a. a review of the situation including threat activity over a given time frame;
- b. any assumptions made;

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- c. the AI and AIR (normally graphically displayed);
- d. the significant characteristics of the environment and their effects (including normalcy, weather, and other environmental graphics);
- e. adversary mission analysis, including level of command and intent;
- f. that characteristic or key element of the adversary's force from which they derives their freedom of action, strength or will to fight (COG);
- g. those characteristics or key elements of the adversary's force that if destroyed, captured or neutralised will significantly undermine their fighting capability (CC);
- h. those friendly CC that the adversary may potentially target to achieve decisive points;
- i. adversary COA, briefed by rationale, decisive points, objectives, tasks required to achieve the objectives, and the likely means required to achieve the tasks (presented as an overlay or matrix with written detail available as required);
- j. advantages and disadvantages of COA (from an adversary point of view);
- k. a judgment on the 'most likely' COA (**Note:** designating the 'most dangerous COA' is achieved through an interaction with J3 staff and Chief of Staff, after details of the range of adversary COA are made known);
- l. adversary intelligence collection capabilities, likely collection COA, covert attack options and vulnerability's, and their effect on friendly operations (including recommendations for EEFI and security policy); and
- m. a recommended list of intelligence requirements and IR.

29. As a result of this input the operations planning staff should create potential friendly tasks and objectives to deter or prevent the adversary from achieving their objectives or tasks, and to target CC leading to the adversary COG.

- 30.** The commander should:
- a. Confirm or modify any assumptions that have been made.
 - b. Note the effects of the environment on the development of adversary and possible friendly COA and use it in the development of commander's guidance.
 - c. Note advice on adversary intelligence and covert attack threats and provide:
 - (1) initial security guidance on personnel, materiel and information security;
 - (2) restrictions and guidance on operations designed to counter the covert threat; and
 - (3) EEFI and OPSEC direction (especially relating to deception, public information and PSYOPS activity).
 - d. Confirm or modify the IR; and confirm or modify the adversary COA, prioritising those that the intelligence staff is to develop further.

FRIENDLY COURSE OF ACTION DEVELOPMENT

31. Friendly COA development is completed with due consideration of the threat COA noted during the mission analysis brief. Close interaction between the operations, plans and intelligence staff will need to occur in the process of developing the force ratios at decisive points inherent in the COA development process. JIPB inputs into friendly COA development will generally include:

- a. a review of the situation and environmental characteristics, concentrating on those aspects which have changed since the mission analysis brief;
- b. a detailed description of each adversary COA; and
- c. risk analysis advice in that CI staff advice on the threat to security will include those indicators the developing COA is likely to trigger and therefore what knowledge the adversary will likely possess.

COURSE OF ACTION ANALYSIS

32. When forces are initially arrayed prior to war gaming, a baseline of what the adversary knows will need to be established. This may require the modification of friendly and adversary assessed COA and may establish the need for added security, surprise and tempo measures.

33. During war gaming, the J2 cell should provide an adversary, a friendly force J2, and a CI staff officer to advise on security issues. The war gaming of decisive points will indicate the requirement for command decisions on response mechanisms, branches and sequels. The requirement for commander's decision points will be linked by the J2 to the I&W process. As such, war gaming will help clarify for intelligence collection purposes 'when' to look, 'where' to look, and 'what' to look for to support the commander's decision requirements. (These are often called NAI). The I&W process will focus collection on those indicators that prove or disprove an adversary COA, branch or sequel. Hence the war game process will develop the intelligence collection plan and allow scarce collection resources to be synchronised and overlapped against the series of possible events.

34. During war gaming, operations staff will also state which adversary CC (including infrastructure targets and high value targets) they wish to strike. Targets are prioritised and agreed in a joint prioritised target list within the targeting cycle, and are subjected to further detailed intelligence analysis in support as directed by targeting boards and specific targeting staff officers.

35. COA analysis J2 brief. COA analysis brief is an internal staff check designed to clarify the results of war gaming and ensure records are maintained correctly. J2 input may include updates on JIPB covering:

- a. adversary operational activity,
- b. adversary intelligence activity,
- c. new issues in analysis of the operational environment,
- d. weather effects analysis, and
- e. war gamed adversary COA and developments in those COA.

DECISION AND EXECUTION

36. COA decision J2 brief. J2 brief to the commander within the COA decision brief should include:

- a. JIPB update;
- b. intelligence decision support mechanism—warnings matrix, warning problem, scenarios (COA, branches and sequels), key triggers and time available for decision;
- c. recommended IR and EEFI; and
- d. recommended security policy (OPSEC and deception briefed as part of the J3/5 brief) and CI operations (specialised operations designed to counter adversary covert operations and collect security intelligence).

37. Execution. Once the friendly COA is chosen and executed, the intelligence staff will monitor changes in the situation, update their JIPB products, and prepare intelligence staff work in support of the operation order (OPORD)/plan, including the collection plan and the intelligence annex to the OPORD and/or intelligence support plan.

CRITICAL CAPABILITY ANALYSIS MATRIX

1. In developing viable COA options, the commander and staff, as part of their Joint Intelligence Preparation of the Battlespace, need to identify CC and potential decisive points from the perspective of both the adversary and friendly forces. A critical capability analysis matrix enables staff to identify a range of direct and indirect, military and non-military factors that can be exploited in lines or matrices of operations which can be developed into friendly COA.

2. The intelligence staff should produce the adversaries' CC matrix. The planning staff will produce the friendly forces' matrix. Both intelligence and planning staffs will cooperate during the COA development to analyse the effects they wish to achieve against the enemies CC. An indicative force assignment must be done to ensure the desired effects can be achieved.

3. While there are a number of approaches to producing a critical capability analysis matrix (table 2C–1), the end product should identify:

- a. the enemy's COG;
- b. the CC that the enemy requires to maintain the COG;
- c. the critical requirement(s) that support that capability; and
- d. the CV essential to effectively operate that critical requirement.

4. From analysis of the above, a number of alternate approaches to the neutralisation of the COG can be identified together with the desired effects on each CV and the forces that are required and available to achieve that effect. Alternative lines of operation can then be developed which form the basis of the COA.

5. In table 2C–1, CAP is one example of a critical vulnerability essential to each critical requirement. The desired effects and indicative force assignment that could be assigned to achieve those effects are identified.

COG	CC	CR	CV	EFFECT	INDICATIVE FORCE ASSIGNMENT
FORCE PROJECTION	STRATEGIC LIFT CAPABILITY	TRANSPORT A/C	CAP	Interdict/Neutralise	FA18, A4, AAR
			AIRFIELDS	Cannot effect ROE	NIL
			PORTS	Blockade	NTG–FFH and SUBS
		AMPHIBIOUS SHIPS	CAP	Interdict/Neutralise	FA18, A4, AAR
			POL	Blockade	FFH/FFG
			MCM	Neutralise	FFH/FFG
		ALOC	CAP	Interdict/Neutralise	FA18, A4, AAR
			POL	Blockade	FFH/FFG
			SHIPS	Neutralise	FFH/FFG
		SLOC	CAP	Interdict/Neutralise	FA18, A4, AAR
			PORTS	Blockade	NTG–FFH and SUBS
			MCM	Neutralise	FFH/FFG

Table 2C–1: Critical capability analysis

MISSION ANALYSIS—AIDE MEMOIRE AND BRIEFING FORMAT

INPUTS	STEPS AND ACTIVITIES	OUTPUTS
<p>Intelligence (int) updates:</p> <p>Operational environment analysis.</p>	<p>1. Review the situation:</p> <p>a. Environment and threat update. (Factors and deductions) threat course of action (COAs), threat centre of gravity (COG).</p> <p>b. Own forces review:</p> <p>(1) Own COG and critical capabilities.</p> <p>(2) State of manoeuvre Force Disposition.</p> <p>(3) Logistic capabilities.</p> <p>(4) Level of force capability (Readiness, training and morale).</p> <p>c. Time analysis.</p> <p>(1) Key timings.</p> <p>(2) Distances.</p> <p>(3) Force concentration/ preparation timings.</p> <p>(4) Duration.</p> <p>(5) Planning time.</p>	<p>Most likely threat COA.</p> <p>Most dangerous threat.</p> <p>Own COG, critical capabilities.</p> <p>Own force capability.</p> <p>Initial time plan.</p>
<p>Superior commander's intent.</p>	<p>2. Identify and analyse superior comd's intent and mission.</p>	<p>Superior's intent and Confirmed mission.</p>
	<p>3. Identify and analyse tasks:</p> <p>a. Specified tasks.</p> <p>b. Implied tasks.</p> <p>c. Essential tasks.</p>	<p>Priority of tasks.</p> <p>Essential tasks.</p>

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INPUTS	STEPS AND ACTIVITIES	OUTPUTS
	<p>4. Identify and analyse freedom of action:</p> <ul style="list-style-type: none">a. Limitations:<ul style="list-style-type: none">(1) Constraints (affect our conduct of ops).(2) Restrictions (prohibit certain activities).b. Acceptable degree of risk (cost vs gain).	<p>Limitations. Constraints. Restrictions. Initial risk assessment.</p>
	<p>5. Identify and analyse critical facts and assumptions:</p> <ul style="list-style-type: none">a. Facts (known/measurable data, identify shortcomings).b. Assumptions (must be a viable substitute for facts).	<p>Key issues. CCIRs.</p>
	<p>6. Mission Analysis Brief.</p>	<p>Mission Brief.</p>
	<p>7. Draft comd's guidance:</p>	<p>a. Threat COAs (to be developed). b. Our comd's intent (purpose, method, end-state) and mission and broad themes. c. Outline theatre or joint force area of operations (JFAO) concept for operations (core and supporting concepts).</p>

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INPUTS	STEPS AND ACTIVITIES	OUTPUTS
		<p>d. IO objectives consistent with superior comd's IO objectives. (eg: deception, OPSEC).</p> <p>Comd's priorities (periodic intelligence reviews, morale, logistics, etc).</p> <p>Acceptable degree of risk.</p> <p>Time plan (when order is to be issued).</p> <p>Type of order to be prepared.</p>

MISSION ANALYSIS BRIEFING FORMAT

BRIEFER	SUBJECT
CofS/J3	<ol style="list-style-type: none">1. Purpose of the briefing.2. Condition of own force (COG, task orbat, capability).3. Time analysis.
J2	<ol style="list-style-type: none">4. Initial int estimate:<ol style="list-style-type: none">a. Brief on initially important factors.b. Brief on situation (threat COG, critical capabilities and potential decisive points).c. Threat COAs.d. Recommend most likely and dangerous threat COAs.

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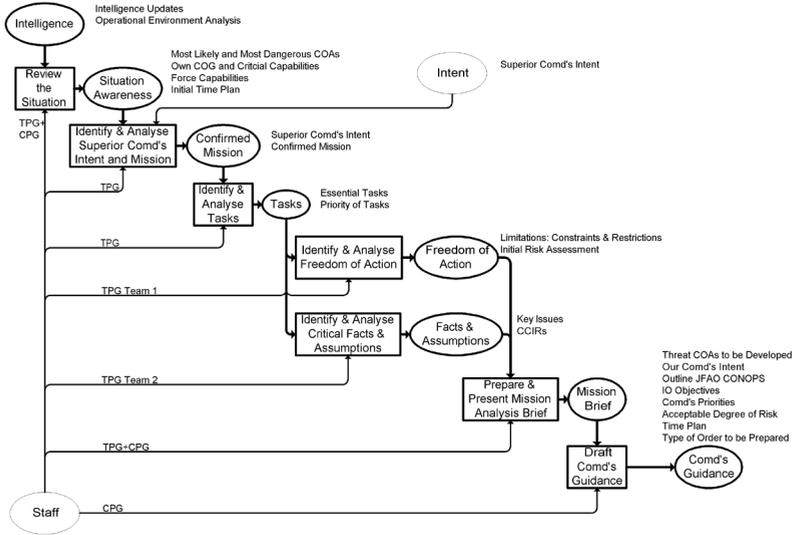
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BRIEFER	SUBJECT
J3/J5	5. Intent and mission of higher and next higher comd. 6. Critical facts and assumptions. 7. Limitations on the op. 8. Specified, implied and essential tasks. 9. Ops conclusions; capability shortfalls, and risk.
J1	10. Personnel assumptions (replacements, host nation support, other). 11. Pers conclusions; projected pers and shortfalls; financial considerations and risk.
J4	12. Logistics (log) facts (log requirement shortages, infrastructure and force capabilities). 13. Log assumptions (infrastructure capabilities, memorandum of understanding validity). 14. Log conclusions; potential logistics shortfalls and risk. 15. Health factors (capability shortfalls, force health requirements and risk).
J6	16. Communications information systems (CIS) facts. 17. CIS assumptions. 18. CIS conclusions—capability shortfalls and risk.
CofS/J3/J5	19. CofS recommends comd's guidance (Optional). a. Threat COAs to be developed. b. Confirmed comd's mission, intent and broad themes. c. Theatre or JFAO concept for operations. d. IO supporting objectives. e. Priorities. f. Time plan. g. Type of order to be issued.
Comd	20. Comd confirms comd's guidance (modifies/changes as required).

Appendix:

1. Mission Analysis Diagram

MISSION ANALYSIS DIAGRAM



COURSE OF ACTION DEVELOPMENT—AIDE MEMOIRE AND BRIEFING FORMAT

INPUTS	STEPS AND ACTIVITIES	OUTPUTS
Comd guidance JIPB update	1. Confirm COG: a. Enemy COG. b. Own COG. c. Relate to comd's Intent.	Own and enemy COG.
CC Matrix (JIPB)	2. Conduct CC Analysis: a. Identify enemy CC that can be exploited. b. Identify enemy CR and CV. c. Determine required effect through exploiting En CR and CV.	CC, CR and CV.
OPART, Warfighting Concepts Comd guidance	3. Develop Broad COA: a. Conceptualise direct/indirect approaches. b. Different COA are developed .	
Enemy COA (JIPB)	4. Develop DP and Lines of Operation: a. Identify DP which exploit enemy CC. b. Sequence the order in which DPs are achieved to ensure maximum leverage.	DP. Lines of Operation.

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INPUTS	STEPS AND ACTIVITIES	OUTPUTS
	<p>5. Develop detailed COA</p> <ul style="list-style-type: none">a. Phasing.b. Main Effort (ME).c. Integrated Battlespace Planning Deep, Close and Rear.d. Logistic and other Supporting efforts.e. Command, Control and Communications.f. Risk Assessment.	<p>Range of developed (COA).</p> <p>Triggers.</p> <p>Tasks allocated.</p> <p>Force Assignment. Supporting plans.</p> <p>C3 arrangements.</p> <p>Branches and Sequels.</p>
	<p>6. Test COA criteria:</p> <ul style="list-style-type: none">a. Suitability. (Comd's intent?)b. Feasibility. (Time, space and means?)c. Acceptability. (Cost/risk?)d. Sustainability. (Logistics by area and phase?)e. Distinguishability. (Is COA different?)	
	<p>7. COA Development Brief:</p> <ul style="list-style-type: none">a. Brief all COA.	<p>COA to be war gamed.</p>

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COURSE OF ACTION DEVELOPMENT BRIEFING FORMAT

BRIEFER	SUBJECT
COFS/J3/J5	<ol style="list-style-type: none">1. Intent of own and higher comd.2. Mission.3. Reconfirm own COG.
J2	<ol style="list-style-type: none">4. Updated intelligence estimate:<ol style="list-style-type: none">a. Changes to threat situation.
J3/J5	<ol style="list-style-type: none">5. Brief on each COA:<ol style="list-style-type: none">a. COA statement and Diagram:<ol style="list-style-type: none">(1) Detail:<ol style="list-style-type: none">(a) Close, deep, rear;(b) ME;(c) Branches and sequels; and(d) Risk deductions.(2) COA outline diagram.b. COA Battlespace Integration:<ol style="list-style-type: none">(1) Threat COA countered or exploited.(2) Deductions from critical capability analysis.(3) Reasons for force positions selected.(4) Reasons for JFAO and C2.
J1	<ol style="list-style-type: none">6. Support concepts assumptions and conclusions.
J4	<ol style="list-style-type: none">7. Support concepts assumptions and conclusions.
J6	<ol style="list-style-type: none">8. Support concepts assumptions and conclusions.
COFS/J3/J5	<ol style="list-style-type: none">9. Recommended COA for war gaming.

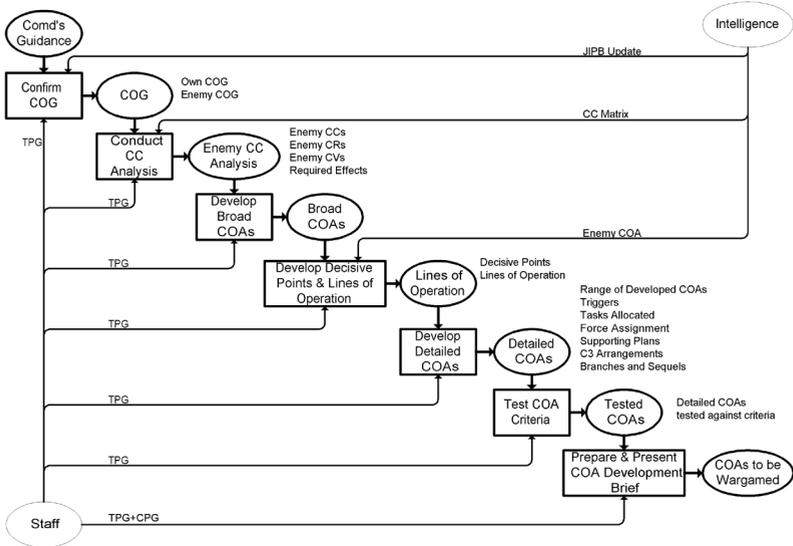
Appendix:

1. Course of Action Development Diagram

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2E-3

COURSE OF ACTION DEVELOPMENT DIAGRAM



SYNCHRONISATION MATRIX

BLUE	Phase	
	Main effort	
Red Action	Phase	
	Main effort	
Time		
B A T T	Deep	
L E S	Close	
P A C E	Rear	
Tasks	Specified (S) Implied (I) Essential (E)	
Sustainability		
Deductions		

Note: RED ACTION **ONLY** PHASE AND MAIN EFFORT NOT INPUTED UNTIL COA ANALYSIS.

SYNCHRONISATION MATRIX SAMPLE

BLUE	Phase	Shape
	Main effort	Strike/surveillance/early warning
Red Action	Phase	Shape
	Main effort	Air Defence
Time	 D+1	
B A T T L E S P A C E	Deep	Strike Kamaria TAI1, SF insertion NAI1, AEW radar NAI2
	Close	SF insertion AI NAI 2, PNG Is NAI3 subs LOC NAI4
	Rear	VAP and ATLS prep (mainland AS)
Tasks	Specified (S) Implied (I) Essential (E)	VAP in place (S,E) Surveillance of PNG waters (I)
Sustainability		High usage of PGMs
Deductions		Gained Air Superiority—DP 1

Note

- (a) There would be a separate matrix completed for each phase of the operation. Additionally, the J2 staff would produce a matrix for each enemy COA.

COURSE OF ACTION ANALYSIS—AIDE MEMOIRE AND BRIEFING FORMAT

INPUTS	STEPS AND ACTIVITIES	OUTPUTS
Viable course of action (COAs). Int update.	1. Determine the war game start state: <ol style="list-style-type: none"> a. Friendly forces (two levels down at start positions and C2). b. Critical assumptions. c. Known Decisive Points (DPs) and Decision Points (DPT). d. Significant factors. 	COA set up for war game.
	2. Select a war game method: <ol style="list-style-type: none"> a. Include all relevant staff. b. Method—dependent on time and required analysis. 	War game JFAO identified.
	3. Select a war game record: <ol style="list-style-type: none"> a. Include all relevant staff. b. Method—dependent on time and required analysis. 	Record selected.

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INPUTS	STEPS AND ACTIVITIES	OUTPUTS
	<p>4. Conduct the war game:</p> <ul style="list-style-type: none">a. Conduct war game.<ul style="list-style-type: none">(1) Friendly action (conducts initial COA).(2) Threat reaction (threat responds to friendly COA).(3) Friendly counteraction (responds to threat action).b. War game from COA start until end-state is reached.c. Modify COAs as needed.d. Discard unworkable COAs. (Unworkable COAs are those that cannot be modified).e. Ensure war game record confirms:<ul style="list-style-type: none">(1) Named Areas of Interest (NAI) and Targeted Areas of Interest (TAI).(2) DPT.(3) Decisive points.(4) Counterintelligence requirements.(5) Branches and sequels (contingency plans).(6) Relevant supporting plans.	<p>Workable and modified. COAs with: a. Clear advantage and disadvantages. b. Risk assessment. c. Contingency plan. d. Supporting plans.</p> <p>COA analysis brief.</p>

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COURSE OF ACTION ANALYSIS BRIEFING FORMAT

BRIEFER	SUBJECT
CofS/J3/J5	1. Intent of own and higher command. 2. Mission. 3. Own force status (position, condition). 4. Reconfirm own COG.
J2	5. Threat situation update. 6. Enemy COA war gamed.
J3/J5	7. Brief on each Friendly COA war gamed: a. Operation assumptions. b. War game technique used. c. COAs war gamed.
J2	8. Possible threat actions/reactions considered during the war game for each En COA.
J3	9. Results of the war game for each COA: a. Modifications to COA. b. C2 measures and Task Organisation. c. COA diagram. d. Priority for combat and service spt. e. Estimated (Est) time for op. f. Est threat losses. g. Est friendly losses. h. Advantage of COA. i. Disadvantage of COA. j. Degree of risk of COA.
CofS/J3/J5	10. Recommended COAs for consideration in step four.

Appendixes:

1. Staff responsibilities for war gaming
2. War game—Starts, Method and Record
3. Conduct of War Game
4. Course of Action Analysis Diagram

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STAFF RESPONSIBILITIES FOR WAR GAMING

1. Key staff responsibilities for war gaming are:
 - a. **Chief of Staff** coordinates all staff responsibilities and leads the war game effort in the absence of the command.
 - b. **J1:**
 - (1) Analyses the COA being war gamed to determine the casualty liability.
 - (2) Analyses the risk for each COA and determines measures for reducing risk.
 - c. **J2:**
 - (1) Develops the threat decision support overlay and synchronisation matrix for each friendly COA.
 - (2) Identifies information requirements to support DPT.
 - (3) Identifies NAI that support TAI and DPT.
 - (4) Refines the situation overlays.
 - (5) Assists J3/J5.
 - (6) Identifies reactions, projects enemy losses and verifies NAI and TAI determined by intelligence preparation of the battlespace.
 - (7) Identifies counterintelligence requirements.
 - (8) Analyses the risk for each COA and determines measures for reducing risk.
 - d. **J3/J5:**
 - (1) Manoeuvres friendly forces allocated for the COA in accordance with the theatre concept and scheme of manoeuvre.
 - (2) Develops the synchronisation matrix for the COA being war gamed.

- (3) Identifies NAI that support TAI and DPT.
- (4) Identifies information requirements to support DPT.
- (5) Identifies any shortfalls in rules of engagement.
- (6) Analyses the risk for each COA and determines measures for reducing risk.

e. **J4:**

- (1) Analyses each COA during the war game to determine potential logistics problems and shortfalls.
- (2) Identifies potential shortfalls and options to overcome them or reduce detrimental effects.
- (3) Analyses the risk for each COA and determines measures for reducing risk.

f. **J6:**

- (1) Analyses each COA to identify potential weaknesses in communications informations systems and probable solutions.
- (2) Analyses the risk for each COA and determines measures for reducing risk.

g. **J06:**

- (1) Analyses COA to determine compliance with applicable law.
- (2) Analyses the risk for each COA and determines measures for reducing risk.

WAR GAME—STARTS, METHOD AND RECORD

PHASE ONE—DETERMINE WAR GAME START STATE

1. The war game must commence at a known and identified point within the plan. The COFS or person responsible for the conduct of the war game will determine this point. To enable the war game to be conducted the following information will be required:
 - a. **Friendly forces.** Friendly forces are considered in terms of either indicative force assignment or as identified JTF. These forces need to be considered in terms of disposition, readiness and capability at the war game start point.
 - b. **Critical assumptions.** List all critical assumptions needed for the start of the war game.
 - c. **Identified enemy DP.** List all identified enemy key events and DP.
 - d. **Significant factors.** Significant factors that affect COA analysis are derived from commander's guidance and through staff analysis of the COA development. Significant factors may include areas such as acceptable risk, force protection and time analysis.

PHASE TWO—SELECT WAR GAME METHOD

2. A variety of methods are available to conduct the war game process. These options may be either manual or automated and include:
 - a. **The box method.** The box method focuses on one critical part or task of a COA. This method is useful if time is extremely limited and only the decisive points of the COA are war gamed. As it focuses on a single portion of the COA it may not fully take into account those activities occurring elsewhere in the battlespace.
 - b. **The time-event method.** This method allows for war gaming of the COA using a logical sequence of time driven events. This method is beneficial in that it highlights the sequencing of

activities throughout the battlespace in Deep, Close and Rear at any time during the COA allowing for ease of development of the synchronisation matrix on completion.

- c. **Computer simulation.** The conduct of the COA utilising a dedicated computer simulation system may be an option. Available systems allow for the 'play' of any portion of the COA any number of times with different inputs as required. As most systems are time dependant a scenario may be run at high speed several times with differing inputs to achieve a spread of results. Use of these simulation systems may be time intensive (development of plan, constructions of computer orders, development of system requirements etc) which may preclude their use for all but long term deliberate planning.

PHASE THREE—SELECT WAR GAME RECORD

3. War gaming results can be recorded and displayed using a matrix, narrative or the sketch note method, or a combination of these, a description of each method can be found below.

- a. **The war game matrix.** The war game matrix is a very effective method of recording results. It is useful to capture the time and space relationship of an operation and should ensure that all elements are incorporated. The War Game Matrix is based upon the Synchronisation Matrix (both matrixes are organised exactly the same way) and it provides the framework for the development of the Synchronisation Matrix. It may be organised according to JTF, Component, or area (Deep, Close, and Rear) and displays the detailed coordination required for the final plan and displayed on the Decision Support Matrix. As such the use of the War Game Matrix during war gaming may save time during Decision and Execution.
- b. **The narrative method.** The narrative method describes the operation in sentence form. It provides extensive detail and clarity, but is time consuming to design and read. Narratives are also more difficult to transfer data from, when designing the Synchronisation Matrix for the final plan. The narrative method is best used at higher levels in deliberate planning.

- c. **The sketch note method.** The sketch note method employs a sketch and brief notes outlining critical events and tasks. All pertinent data for each critical event is quickly recorded on a war game worksheet during the conduct of the war game. This method is a quick and effective recording technique, but it can be time consuming to use when transferring data, during the later design of the Synchronisation Matrix.

CONDUCT OF WAR GAME

1. **General rules.** The reliability and quality of products resulting from war gaming are dependent on adherence to some basic rules. These general rules are designed to ensure the integrity of the war gaming process and avoid bias. They include:

- a. Always remain objective and impartial. Do not let personalities have undue influence over the process. It is critical that representatives remember this when they are war gaming their area for both friendly and enemy COAs. Do not become emotionally attached to any particular COA.
- b. Ensure each COA remains credible. If at any time during the war game a COA becomes implausible, stop the war game and remove the COA as an option or modify it to ensure that it becomes suitable.
- c. Avoid drawing premature conclusions and presenting facts or assumptions to support them.
- d. Each friendly COA must be war gamed against each enemy COA separately and should not be compared prior to this.

2. **War game process.** The commander confirms and directs which enemy COAs will be war gamed. The process involves war gaming each critical event in turn, this is usually done using agreed time increments. The war game allows staff to analyse selected events and identify the activities the force must accomplish. This identifies strengths and weaknesses of COAs and also enables staff to make adjustments. The war game for each COA may begin with a briefing of the staff, focussing on each phase of each COA in a logical sequence.

3. War gaming relies heavily on judgement and experience. The war game consists of an action/reaction/counteraction sequence for each critical event. This process quickly identifies strengths and weaknesses for each event within each COA. COAs are modified as weaknesses are found. This ensures force assignment is appropriate and allocated tasks are realistic. To save time only workable COAs are completely analysed, normally through to end-state.

4. **Branches and sequels.** Inherent within the war gaming process is the identification and analysis of a range of branches and sequels which should be cross-referenced through the war game record to decision points on the COA to which they refer. A branch relates to the options available to a commander to achieve the same objective. Major branches usually lead to

different COA to be war gamed, however, within each COA, there are opportunities to achieve an objective with minor variations to the basic theme. These areas should be identified as (Commanders) Decision Points and should be war gamed to ensure a satisfactory outcome when analysing each friendly force COA. Sequels, on the other hand, are significant shifts in focus. Enemy COA sequels potentially stand to invalidate our assessment of his COAs. It is important that these be identified because, if our own plans are predicated upon the enemy seeking a particular objective when in reality he seeks a different orientation, we risk being upstaged with our planning. With sequels, the staff attempt to identify the critical information requirements that indicate such a shift and this will lead to our own contingency planning to defeat the enemy reorientation. In summary, a branch is a deviation from, then return to, the same line of operation. A sequel is the identification of a completely different line of operation.

5. Sequencing of war gaming. It is crucial that the COFS coordinates and adjudicates this process. It is important that each staff member brings to the analysis a thorough understanding of the capabilities and limitations of their respective component or cell, which are crucial to a realistic appreciation of each COA. Representatives who are also war gaming their component or cell for the enemy must also be aware of the enemy's capabilities and doctrinal procedures. The war game is conducted using action/reaction/counteraction drills. The sequence is determined by whoever has the initiative going first and conducting the initial 'action'. The war game is continued for each critical event until a decisive outcome is achieved, including identification of possible branches and sequels. These branches and sequels should be noted for detailed war gaming once the commander has decided upon the final COA, if time permits. The requirements for each drill are addressed according to the following headings:

- a. **Action.** The J3 or the J2 position the respective force elements onto their start locations at the selected war game start time. The representative states what action the forces will take at this point, using purpose, method and end-state. This is done by visualising, as accurately as possible, the events that those units will be conducting. These events are recorded on the synchronisation matrix.
- b. **Reaction.** The respondent (J3 or J2) positions their forces in accordance with the selected COA and describes the effect they will have on the battlespace in response. All possible reactions should be stated. This includes forces outside the AO which could influence the battlespace. All the assets which will be required to carry out the counteraction must be identified

and how they were positioned in the battlespace explained. Actions and assets are recorded on the war game record, which is later refined to become the synchronisation matrix.

- c. **Counteraction.** This is the final stage which details the response to the action/reaction sequence of events:
 - (1) If friendly forces have the initiative, the aim of this stage is to identify the friendly response to enemy reaction and determine the assets the friendly commander will require to carry out the counteraction. The friendly counteraction and asset requirements are recorded on the war game record.
 - (2) Alternatively, if the enemy has the initiative, the aim is to identify possible enemy responses to friendly reactions. Once again, all possible reactions should be stated. This includes forces outside the AO which could influence the battlespace. All assets required to carry out the counteraction must be identified and how they were positioned in the battlespace explained. Actions and assets are recorded on the war game record.
6. During these drills, the COFS and the staff identify the assets that each action and counteraction will require. If the demand for assets exceeds the available forces, then the COFS must establish priorities for their use and re-examine the forces allocated to that activity. Conversely, it may be determined that the force allocation is more than ample and excess forces should be moved to support another decisive point. Experience with these drills will result in individual staffs perfecting their own methods of refining this process.

7. **War game recording.** A member of staff should be appointed as the recorder. Continuing attention must be given to the requirement to accurately record the war game as it progresses. Details omitted from the war game record may lessen the utility of the subsequent synchronisation matrix when used to monitor the battlespace activities. Functions requiring attention may include:

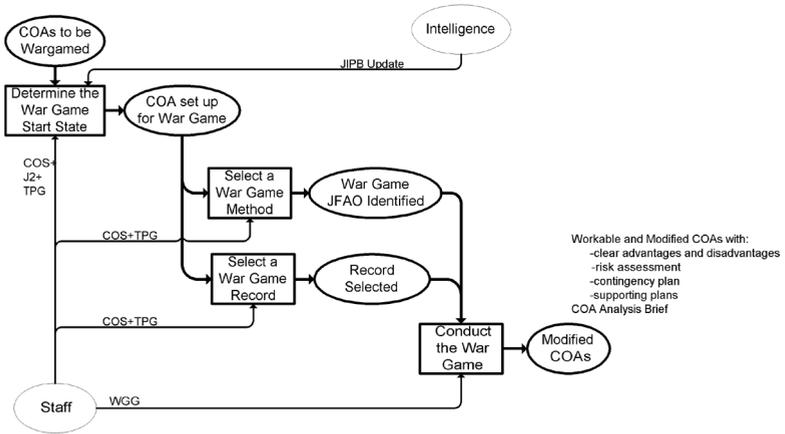
- a. the relevance of actions to the future production of a Synchronisation Matrix,
- b. force organisations for tasks,

- c. use and locations for NAIs and TAIs, and
- d. decisions taken and Decision Points, both own and enemy forces.

8. Results of war gaming. Results should be recorded immediately that they become obvious through the war gaming process. Products from war gaming are used in rehearsals and are included in the synchronisation matrix. War gaming results in identifying:

- a. modified and workable COAs;
- b. COA advantages and disadvantages;
- c. COA decisive points, ME and supporting effort operations;
- d. risks, possible branches and sequels, as well as requirements for deception and surprise;
- e. subordinate tasks and priorities;
- f. C2 measures including task organisations;
- g. synchronisation of manoeuvre;
- h. refined NAIs, TAIs and DPTs including known and additional critical events;
- i. enemy and friendly force casualty projections; and
- j. refined DSM and Synchronisation Matrix.

COURSE OF ACTION ANALYSIS DIAGRAM



RISK ASSESSMENT MATRIX AND STAFF DECISION MATRIX

RISK ASSESSMENT MATRIX

Risk Assessment	COA 1	COA 2	COMMENTS
Loss of capability			
Sustainability			
Loss of personnel			
Effect on the environment			
Humanitarian and social implications			

STAFF DECISION MATRIX

	COA 1	COA 2	COA 3	COMMENTS
J1				
J2				
J3				
J4				
J5				
J6				
J06				
Components				

DECISION AND EXECUTION AIDE MEMOIRE AND DECISION BRIEFING FORMAT

INPUTS	STEPS AND ACTIVITIES	OUTPUTS
Decision support matrix. Modified COA. Joint Intelligence preparation of the battlespace. JIPB update.	1. Compare COA: <ol style="list-style-type: none"> a. Individual key staff comparisons and recommendations. b. Combined staff comparison applying core and supporting concepts (led by COFS). c. Staff recommend COA. 	Staff recommended. COA. Decision Brief.
	2. Select the COA: <ol style="list-style-type: none"> a. Commander selects a COA as the plan. b. Comd selects other COA as contingency or deception plans. 	Outline plan.
	3. Develop and issue the plan: <ol style="list-style-type: none"> a. Prepare and issue confirmatory WNGO. b. Develop decision support and synchronisation matrix: <ol style="list-style-type: none"> (1) Develop synchronisation matrix and confirm: <ol style="list-style-type: none"> (a) NAI. (b) DP and DPT. (c) TAI. (d) Branches and sequels (contingency plans). c. Develop the plan and supporting plans. d. Prepare and issue orders. 	Confirmatory WNGO. Decision support matrix. Synchronisation matrix. Developed plan. Supporting plans. Orders.

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INPUTS	STEPS AND ACTIVITIES	OUTPUTS
	<p>4. Execute the plan:</p> <p>a. JMAP used to monitor execution of the plan:</p> <ul style="list-style-type: none">(1) Operations staff evaluate the current operation.(2) Plans staff subsequent planning.(3) Comd and staff coordinate capabilities and assist the comd's decision making.(4) Mission analysis constantly reviewed.	<p>Branches and Sequels.</p> <p>Monitoring of change.</p>

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DECISION BRIEFING FORMAT

BRIEFER	SUBJECT
COFS/J3/J5	<ol style="list-style-type: none">1. Intent of own and higher comd.2. Mission.3. Own force status (position, condition).4. Confirm own COG.
J2	<ol style="list-style-type: none">5. Threat situation update:<ol style="list-style-type: none">a. Modified COA diagram (after war game).b. Recommended Comd Critical Information Requirements.
J3/J5	<ol style="list-style-type: none">6. Brief on each COA:<ol style="list-style-type: none">a. OPS assumptions.b. Results of Ops staff decision matrix.c. COA advantages and disadvantages.d. COA degree of risk.7. Recommended COA.8. J06 endorsement of COA.
J1	<ol style="list-style-type: none">9. Brief on each COA:<ol style="list-style-type: none">a. Personnel (PERS) assumptions.b. Results of PERS staff est.c. COA advantages and disadvantages.d. COA degree of risk.e. Finance (costs).10. Recommended COA.

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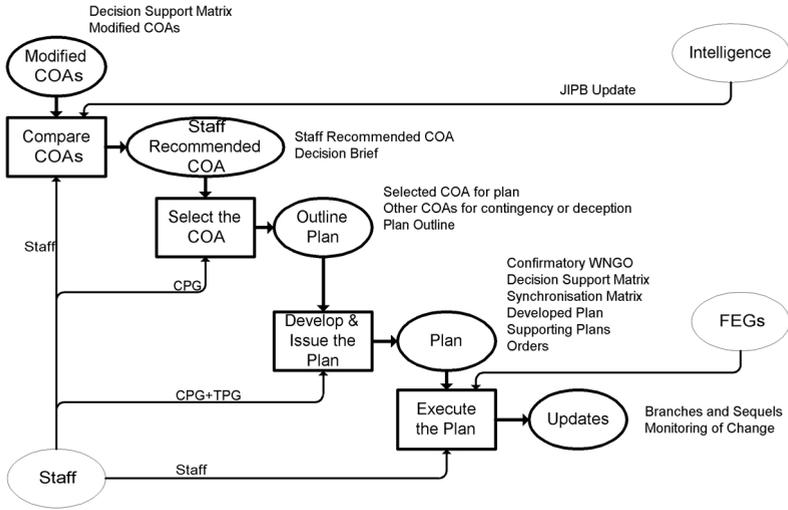
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BRIEFER	SUBJECT
J4	11. Brief on each COA: a. Log assumptions. b. Results of log staff est. c. COA advantages and disadvantages. d. COA degree of risk.
	12. Recommended COA.
J6	13. Brief on each COA: a. CIS assumptions. b. Results of CIS staff est. c. COA advantages and disadvantages. d. COA degree of risk. 14. Recommended COA.
COFS/J3/J5	15. Combined staff recommended COA.
Comd	16. Comd selects COA as plan.

Appendix:

1. Decision and Execution Diagram

DECISION AND EXECUTION DIAGRAM



COURSE OF ACTION COMPARISON TECHNIQUES

1. **Numerical analysis.** This takes the form of the matrix shown as table 2J–1. The matrix contains the following three components:

- a. **COA.** These are the modified COA remaining after war gaming.
- b. **Criteria.** The criteria are usually identified by the commander as priorities during COA development. They may be refined by the commander or the COFS and may include:
 - (1) achievement of the mission and essential tasks,
 - (2) achievement of Decisive Points,
 - (3) adherence to the principles of war,
 - (4) adherence to the theatre warfighting concepts (table 2J–1 example),
 - (5) adherence to the doctrinal principles and fundamentals for the kind of operation being conducted, and
 - (6) the level of risk against perceived payoff that the commander is prepared to accept (cost versus gain).
- c. **Weighting.** The weight of each criterion is usually determined by the COFS based on the relative importance of the criterion to the commander's intent and priorities.

2. Each COA is then compared and numbered in order of priority against each criterion. The COA ranking for the criterion is then multiplied by the weighting factor to produce a numerical score for the selected criterion. The numerical scores for each COA are then totalled, with the highest score indicating the strongest COA. The benefit of a numerical analysis is that it provides a relatively simple means of determining a preferred COA based on the given criterion. The disadvantage of this method lies in the fact that commanders will often require more substantial justification than a numerical score before they select one COA over another. For this reason, advantages and disadvantages may have to be used to support the staff's recommendation.

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3. Each COA is numbered in order of priority of advantage for each criterion. The best COA for each criterion receives the highest score. For example, in table 2J-1 for Decision Superiority, COA 1 is rated a '2', COA 2 is rated a '1' and COA 3 is rated a '3' (the best COA with regard to the selected criterion). Each COA rating is then multiplied by the criteria weighting. Again using the Decision Superiority criteria example, the weighted results are: COA 1 = 6, COA 2 = 3 and COA 3 = 9. This results in two scores for each COA (one raw score and one weighted score). The scores are then totalled giving a raw and weighted order of priority for the COA. In the example in table 2J-1, all raw scores are the same, but the weightings reveal a priority order of COA 3, 1 then 2. COA 3 is identified as potentially being the strongest COA.

Criteria	Weight	COA 1	COA 2	COA 3
		Raw/Weighted	Raw/Weighted	Raw/Weighted
Decision Sup	3	2 / 6	1 / 3	3 / 9
Security	2	2 / 4	3 / 6	1 / 2
Sustainment	2	2 / 4	1 / 2	3 / 6
Moral Auth	1	2 / 2	3 / 3	1 / 1
Total		8 / 16	8 / 14	8 / 18
Rank		2	3	1

Table 2J-1: Numerical analysis decision matrix

4. Broad categories analysis. The advantage of the broad categories method is that it is simple and relatively quick. Unlike the numerical analysis, this approach does not give weightings to criteria. The assessment for each criterion is simply expressed as a positive (+), neutral (0) or negative (-). Against each criterion, COA are compared to provide a broad awareness of the merits of one COA over another. This approach is useful in indicating each COA strengths and weaknesses and is particularly useful if the staff is uncertain how to weight criteria or feel the weighting will unrealistically skew the comparison result. Like the numerical analysis, this method alone will rarely provide the commander a comprehensive argument as to why one COA should be selected over another. Table 2J-2 shows a broad categories analysis decision matrix.

Factor	COA 1	COA 2	COA 3
Decision Sup	+	-	+
Security	0	+	-
Sustainment	0	-	+
Moral Auth	+	+	0
Total	2+	0	1+
Rank	1	3	2

Table 2J-2: Broad categories analysis decision matrix

5. Advantages and disadvantages. An additional method of analysis is to list the advantages and disadvantages of each COA against all or a selection of criteria. This method is particularly useful when combined with other methods. This matrix allows the staff to expand upon those criteria which the commander indicated as the most important. Additionally, it may be used to summarise each COA. An example of this method is shown in table 2J-3.

COA	Advantages	Disadvantages
1	<ul style="list-style-type: none"> • Surprise • Compensates for some tactical weaknesses • Decision Superiority • Less casualties 	<ul style="list-style-type: none"> • Potential loss of domestic and international support • Jeopardises moral authority • May compromises alliances
2	<ul style="list-style-type: none"> • Pre-positioning • Strengthens moral authority • Flexibility 	<ul style="list-style-type: none"> • Long-term sustainability • Vulnerability of forward deployed forces • Highly dependent on Host nation support
3	<ul style="list-style-type: none"> • Moral authority and international acceptance • Domestic support 	<ul style="list-style-type: none"> • Cedes military initiative • Lacks decision superiority • Potentially attritional

Table 2J-3: Advantages and disadvantages decision matrix

6. Subjective analysis. Subjective Analysis is simply the use of the other matrices to analyse criteria by individual staff members. Individual staff conduct subjective analysis prior to the staff's combined comparison brief.

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7. Each commander and staff will work out the comparison method that suits them. It should be stressed that the use of any method is simply a means to differentiate between COA based on criteria that has been established by the commander prior to COA development.

8. **Commander's decision briefing.** After completing the analysis and comparison, the staff identifies the preferred COA and makes a recommendation to the commander. If required, the staff conduct a formal briefing for the commander to obtain a decision, allowing the selected COA to be developed into a plan. The format for the briefing is in annex I.

CONCEPT OF OPERATIONS BRIEFING FORMAT

Concept of operations

The general concept of operations is to improve all presently occupied forward air bases; occupy and implement air bases which can be secured without committing large forces; employ air forces from these bases to soften up and to gain air superiority over the initial attack objectives along the two axes; neutralise with appropriate aviation supporting hostile air bases and destroy hostile naval forces and shipping within range; move land forces forward covered by air and naval forces to obtain first objectives (existing and potential hostile air bases) and consolidate same; displace aviation forward onto captured aerodromes. This process is repeated to successive objectives, neutralising by air action, or by air, land and sea action, intermediate hostile installations which are not objectives of immediate attack. The entire movement will be covered by air attack on Japanese air and sea bases along the perimeter Buka, Rabaul, Kavieng and Wewak with the objective of interrupting and denying sea supply and/or support or reinforcement of objectives under attack.

Colonel E.G. Keogh

2. The commander's CONOPS is a verbal or graphic statement, in broad outline, of their intent in regard to an operation (OP) or a series of operations (OPS). The CONOPS is frequently embodied in a campaign plan and OP plan, particularly when the plan covers a series of connected OPS to be carried out simultaneously or in succession. The concept is designed to give an overall picture of the OP. It is included primarily for additional clarity of purpose.
3. Once the CONOPS has been approved, the campaign and or an operational plan can be developed. A CONOPS may be oral, written and/or graphic.

OPERATION ORDER/PLAN BRIEFING FORMAT

BRIEFER	SUBJECT	EXPLANATION
Comd/Chief of Staff	I. Intent of higher and next higher Commander, including intended end-state.	I. Conveys the military end-state. Intent should reflect the vision and convey the thinking of the comd.
	II. Critical assumptions.	II. These are listed and checked before forces are committed. Thus a need to vary the plan can be identified quickly.
J2	III. Updated intelligence estimate: Environment. Situation—Updated threat course of action planned against. Assessed En COG and associated DP and DPT.	III. This will be drawn from the JIPB, based on the listed likely enemy (En) OPS. This list allows identification of the need for changes due to unexpected developments. It should also include an assessment of the En COG and CC which provides a focus for all planning.
Comd/COFS	IV. Comd's intent	IV. This describes the comd's mission. It allows subordinates to analyse their allocated tasks in context of the overall operation. Tasks are linked with specific units and described. Responses to alternative En actions are stated. The comd's intent for the mission is included.
	V. Outline CONOPS: A broad indication of how the mission is to be achieved and an outline of the line of OP chosen highlighting the DP, DPT and objectives.	
	VI. The general grouping of forces.	
	VII. The effect(s) to be produced on the En.	

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BRIEFER	SUBJECT	EXPLANATION
J3/5	<p>VIII. Detailed CONOPS. Scheme of manoeuvre (close, deep, rear) by phase.</p> <p>IX. Main effort for each phase. Phase boundaries, whether time or trigger governed, taking into account critical timings. Specified tasks and groupings of forces, possibly zone oriented (close, deep, rear etc), and scheme of execution, including use of deception. Phase command and control, based on responsibility for tasks, and delineating degrees of authority. Rules of engagement for each phase. Critical cross domain considerations, including: Offensive support (spt). Targeting. Command and control. IO. Employment of special forces. Pre-planned contingency/alternate lines of action.</p>	

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BRIEFER	SUBJECT	EXPLANATION
J1/4	X. Concepts of personnel, logistics and health spt. Outline concept of spt to zones of OP. Outline spt phase, matched to OPS phases. Key locations. Next highest comd's spt priorities. Our spt priorities. Higher spt provided. Summarise spt issues (significant, critical, unusual functions, internal and external priorities): Before OPS. During OPS. After OPS. Significant pers/log/health risks.	
J6	XI. Communications information systems details.	
COFS/J3/J5	XII. Comd and signal.	
Comd/COFS	XIII. Vulnerabilities (state how they are to be minimised).	

LOGISTICS ESTIMATE

EXTRACT FROM

ADDP 3.13

INFORMATION OPERATIONS

GLOSSARY

administrative order

An order covering traffic, supply, maintenance, evacuation, personnel and other administrative details.

administration

The management and execution of all military matters not included in tactics and strategy, primarily in the field of logistics and personnel management.

battlespace

The battlespace includes all aspects of the environment that are encompassed by the area of influence and the area of interest. This includes the operational environment (oceanic, continental, littoral and electronic) and those relevant aspects of society, politics, culture, religion and economy.

campaign

A controlled series of simultaneous or sequential operations designed to achieve an operational commander's objective, normally within a given time or space.

campaign planning

Campaign planning integrates both deliberate and immediate planning processes and seeks to orchestrate the ways for tactical means to achieve strategic ends.

centre of gravity

That characteristic, capability or locality from which a military force, nation or alliance derives its freedom of action, strength or will to fight at that level of conflict. The centre of gravity at each level of conflict may consist of a number of key elements.

coalition operation

An operation conducted by forces of two or more nations, which may not be allies, acting together for the accomplishment of a single mission.

combined operation

An operation conducted by forces of two or more allied nations acting together for the accomplishment of a single mission.

commander's intent

A formal statement, usually in the concept of operations or general outline of orders, given to provide clear direction of the commander's intentions.

commander's critical information requirements

The critical information that the commander needs to make a decision. Commander's Critical Information Requirements (CCIR) will normally be identified during the wargaming process and they relate to decision points, target area of interest and named area of interest. Timely answers to CCIR assist the commander to enter the decision cycle ahead of the adversary commander, thus improving the probability of gaining or retaining the initiative.

concept of operations

A clear and concise statement of the line of action chosen by a commander in order to accomplish the mission.

contingency plan

A plan for contingencies which can reasonably be anticipated in an area of responsibility.

counterintelligence

That aspect of intelligence devoted to identifying, assessing and counteracting the threats to security posed by hostile intelligence activities and organisations or individuals engaged in covert activity such as espionage, sabotage, subversion or terrorism.

critical capabilities

A characteristic or key element of a force that if destroyed, captured or neutralised will significantly undermine the fighting capability of the force and its centre of gravity. A critical capability is not necessarily a weakness but any source of strength or power that is capable of being attacked or neutralised. A successful attack on a critical capability should aim to achieve a decisive point in an operation or campaign. A force may have a number of critical capabilities. For example, a critical capability could be considered an adversary's air defence.

critical requirement

Is an essential condition, resource or means that is needed for a critical capability to be fully functional. For example, a critical requirement for an adversary's air defence could be fighter aircraft.

critical vulnerability

Is an element of a critical requirement that is vulnerable or that can be made vulnerable. For example, a critical vulnerability of an adversary's fighter aircraft could be POL, pilots, airfield etc.

culminating point

A culminating point is the point in time and location where a force will no longer be stronger than the enemy and risk losing the initiative. This may be due to reduced combat power, attrition, logistics, dwindling national will or other factors. To be successful, the operations must achieve its objectives before reaching its culminating point.

decision point

Decision points (DPT) are points in time and space at which a commander must make a decision in order to influence the operation in a particular target area of interest (TAI). DPT must be offset from the point where the action has to take place, in order to allow sufficient lead-time for action to be initiated.

decisive points

A major event that is a precondition to the successful disruption or negation of a centre of gravity of either combatant. A decisive point is created normally by successfully attacking or neutralising a critical vulnerability. Operational level planning aims to exploit an enemy's critical vulnerabilities in a sequence or matrix of decisive points known as lines of operation.

decision support overlay

A graphic and tabulated display depicting named area of interest (NAI), TAI and DPT associated with the plan. It also displays, in tabulated format, the proposed synchronising of friendly combat power.

deliberate planning

The start of a process for the development of considered military strategic guidance for the employment of the Australian Defence Force (ADF), to achieve an end-state, in support of Government national strategy. The process is generally free of time constraints. It relies on a mix of assumption-based planning against current strategic guidance and future analysis to account for possible future strategic environments.

directive

A military communication in which policy is established or a specific action is ordered;
a plan issued with a view to putting it into effect when so directed, or in the event that a stated contingency arises; or
broadly speaking, any communication which initiates or governs action, conduct or procedure.

directive control

A philosophy of command and a system for conducting operations in which subordinates are given clear direction by the superior on their intentions—that is the result required, a task, the resources and any constraints. It includes the freedom to decide how to achieve the required result.

end-state

End-state is identified at the national and military levels as follows:
The national end-state is the set of desired conditions, incorporating the elements of national power that will achieve the national objectives.
The military end-state is the set of desired conditions beyond which the use of military force is no longer required to achieve national objectives.

essential elements of friendly information

Those elements of friendly information which, if known by an adversary, would compromise friendly plans or operations through indicators of dispositions, capabilities and intentions.

high value target

High value target are those assets, which are likely to be required for the completion of the enemy commander's mission.

immediate planning

The time-sensitive planning for the employment of assigned forces and resources that occurs in response to a developing situation that may result in military operations. This planning is informed by the products of deliberate planning, with assumptions and projections replaced with facts as the situation unfolds.

information operations

Actions taken to defend and enhance one's own information and information systems and to affect adversary information, including the information itself.

joint

Connotes activities, operations, organisations, etc in which elements of more than one Service of the same nation participate (when all Services are not involved, the participating Services shall be identified, eg Joint Army–Navy).

joint force

A general term applied to a force which is composed of significant elements of Navy, Army and Air Force, or two or more of these Services, operating under a single commander who is in turn directly responsible to the Chief of the Defence Force.

joint intelligence preparation of the battlespace

Joint intelligence preparation of the battlespace (JIPB) is a systematic, dynamic process for analysing the threat and the environment, considered in the dimensions of space and time. It is designed to support staff planning and prepare the foundations for informed military decision making. JIPB is a processing medium with which intelligence staff provide an assessment of environmental effects on operations and an estimate of adversary capability and intent.

lines of operation

Lines of operation describe how military force is applied in time and space through decisive points on the path to the enemy's centre of gravity.

mandate

The terms of a United Nations Security Council or United Nations General Assembly authorisation.

named area of interest

A NAI is an aspect which will confirm or deny enemy intentions. It serves to focus attention on areas where the enemy must appear for a particular course of action. NAI provide an objective basis for the employment of intelligence gathering assets.

national contingent

National forces of one or more Services including civilian personnel, under the command of a single national commander, which are committed to United Nations or other internationally organised operations.

operation

A military action or the carrying out of a strategic, tactical, Service, training or administrative military mission; the process of carrying on combat, including movement, supply, attack, defence and manoeuvres needed to gain the objectives of any battle or campaign.

operational command

This is defined as:

- a. *The authority granted to a commander to specify missions or tasks to subordinate commanders, to deploy units, to re-assign forces and to retain or delegate operational control, tactical command and/or tactical control as may be deemed necessary. It does not of itself include responsibility for administration or logistic support.*
- b. This is the highest degree of authority which can be assigned to the commander of a joint force operation and is usually retained for the duration of the operation or campaign. It would be normal for the national military strategic authority to place assigned forces under operational command of a national commander who will then have the requisite authority to assign, deploy or reassign forces. For ADF operations, operational command may be delegated to a subordinate commander and will normally include responsibility for administration and logistics.

operational control

This is defined as:

- a. *The authority delegated to a commander to direct forces assigned so that the commander may accomplish specific missions or tasks which are usually limited by function, time or location; deploy units concerned and retain or delegate tactical control of those units. It does not include authority to allocate separate employment of components of the units concerned. Neither does it, or itself, include administrative or logistic control.*
- b. This degree of command gives a nominated commander the authority to direct forces assigned to achieve a specific mission within agreed limitations, usually related to function, time or location. The commander may delegate operational and tactical control to another commander but does not have the authority to assign separate employment to components of the formation or units concerned. It does not include responsibility for administration or logistics.

operational instruction

An operation instruction indicates the commander's intention and possibly the overall plan but leaves the detailed course of action to the subordinate commander.

operational level of conflict

The operational level of conflict is concerned with the planning and conduct of campaigns. It is at this level that military strategy is implemented by assigning missions, tasks and resources to tactical operations.

operational objectives

These are the objectives that need to be achieved in the campaign to reach the military strategic end-state. Correct assessment of operational objectives is crucial to success at the operational level.

operation order

A directive, usually formal, issued by a commander to subordinate commanders for the purpose of effecting the coordinated execution of an operation.

operation plan

A plan for a single or series of connected operations to be carried out simultaneously or in succession. It is usually based upon stated assumptions and is the form of directive employed by higher authority to permit subordinate commanders to prepare supporting plans and orders. The designation 'plan' is usually used instead of 'order' in preparing for operations well in advance. An operation plan may be put into effect at a prescribed time, or on signal, and then becomes the operation order.

supporting plan

A plan, complementing the main plan, which provides detailed information concerning specialised and discrete aspects of an operation. Supporting plans may cover areas such as communications, electronic warfare, movement, administration, public information, intelligence collection, etc. Subordinate formation or unit plans may also be incorporated as supporting plans.

tactical command

This is defined as:

- a. *The authority delegated to a commander to specify tasks to forces under his command for the accomplishment of the mission specified by higher authority.*

- b. This degree of command allows a commander to assign tasks to forces under his command for the accomplishment of the mission assigned by higher authority. The commander may delegate tactical control of the asset.

tactical control

This is defined as:

- a. *The detailed and, usually, local direction and control of movements or manoeuvres necessary to accomplish missions or tasks assigned.*
- b. A force assigned to a commander under tactical control allows local direction and control of movements or manoeuvres necessary to accomplish missions or tasks as directed by the assigning higher commander.

target area of interest

A TAI is an area where a commander can influence the battle by destroying, delaying or disrupting the enemy.

warning order

A preliminary notice of an order or action which is to follow.

ACRONYMS AND ABBREVIATIONS

AA	avenues of approach
ABCA	American, British, Canadian and Australian (Armies)
ACC	Air Component Commander
ACP	Australian Campaign Plan
ADF	Australian Defence Force
ADFCC	Australian Defence Force Command Centre
ADHQ	Australian Defence Headquarters
ADMININST	administrative instruction
ADMINORD	administrative order
AI	area of interest
AIR	Area of Intelligence responsibility
ALI	Area of Logistics Interest
ALIO	Area of Logistic Interest Overlay
AO	area of operations
AOC	Australian Defence Force Operational Concept
AOE	analysis of the operating environment
AOP	Australian Defence Force Operational Plan
APM	ANZUS Planning Manual
AS	Australia
ASA	Australian Support Area
AST	Australian Theatre
ASTJIC	Australian Theatre Joint Intelligence Centre
CA	civil affairs
CAP	Close Air Protection
C2	command and control
CC	critical capability
CCIR	Commander's Critical Information Requirements
C3	command, control and communications
CDF	Chief of the Defence Force
CEOI	Communications Electronic Operating Instructions
CFC	combined forces commander
CFHQ	combined force headquarters
CI	counter intelligence
CINCPAC	Commander-in-Chief Pacific
CIS	communications informations systems
COA	course of action
COG	centre of gravity
COLS	concept of logistic support
COMAST	Commander Australian Theatre
COMASC	Commander Australian Contingent (used in a United Nations context)

COMASCRP	Commander Australian Contingent Reconnaissance Party
COMNORCOM	Commander Northern Command
CONOPS	concept of operations
COSC	Chiefs of Staff Committee
COSF	Chief of Staff
COMDSF	Commander Special Forces
CPG	Commander's Planning Group
CR	critical requirement
CSIG	Corporate Services Infrastructure Group
CV	critical vulnerability
DP	decisive point
DPT	decision point
DoD	Department of Defence
DSO	decision support overlay
EA	engagement areas
EEFI	essential elements of friendly information
EW	electronic warfare
FE	force elements
FEG	force element group
FMB	forward mounting base
FOB	forward operating base
HQ	headquarters
HQ1JMOVGP	Headquarters 1 Joint Movements Group
HQASC	Headquarters Australian Contingent
HQAST	Headquarters Australian Theatre
HPGA	Head Policy Guidance and Analysis
HQNORCOM	Headquarters Northern Command
HQSO	Headquarters Special Operations
HSO	Head Strategic Operations
HVT	high value targets
IO	Information Operations
IR	information requirements
ISP	intelligence support plan
I&W	indications and warning
J	When prefixed to an abbreviation generally indicates 'joint'
JEPG	Joint Exercise Planning Group
JIPB	Joint Intelligence Preparation of the Battlefield
JF	joint force
JFAO	joint force area of operations
JFC	joint force commander(s)
JFHQ	joint force headquarters

JHPG	joint health planning group
JIS	joint intelligence staff
JLPP	Joint Logistic Planning Process
JMAP	joint military appreciation process
JSLPC	joint services local planning committee
JTF	Joint Task Forces
LAOE	Logistic Analysis of the Operational Environment
LCC	Land Component Commander
LO	liaison officer
LOAC	law of armed conflict
LOCSTAT	location statement
LofC	lines of communication
LOTS	logistics over the shore
LSA	logistic support agreement
MA	mission analysis
MAP	military appreciation process
MCC	Maritime Component Commander
ME	main effort
MGI	Military Geographic Information
MHE	materials handling equipment
mil	military
MOA	memorandum of agreement
MOE	measures of effectiveness
MOU	memorandum of understanding
MRO	Medical Review Officer
MSO	military support operations
MSE	Military Strategic Estimate
MSPG	Military Strategic Planning Guidance
NAI	named area of interest
NATO	North Atlantic Treaty Organisation
NATPOL	national policy
NBC	Nuclear Biological and Chemical
NCA	national command authority(ies)
NCMM	National Crisis Management Machinery
NEO	Non-combatant Evacuation Operations
NSCC	National Security Committee of Cabinet
NTM	notice to move
OPCOMD	operational command
OPCON	operational control
opconcepts	operational concepts
OPSDIV	Operations Division
OPINST	operation instruction

OPORD	operation order
OPPLAN	operation plan
OPSEC	operations security
ORBAT	order of battle
PGA	policy guidance and analysis
PI	public information
PLANO	planning order
POD	point of departure
POE	point of entry
POL	petrol, oils and lubricant
PR	public relations
PSYOPS	psychological operations
RAS	replenishment at sea
RFI	Requests for Information
ROE	rules of engagement
SASR	Special Air Service Regiment
SCG	Strategic Command Group
SF	special forces
SIPG	Strategic Intelligence Planning Group
SITREPS	situation reports
SLPG	Strategic Logistics Planning Group
SOCC	Special Operations Component Commander
SME	Strategic Military Estimate
SOFA	status of forces agreement
SPG	Strategic Planning Group
SOP	standing operating procedures
SSA	supply support agreement
STRAPP	Strategic Planning Process
TACOMD	tactical command
TAI	target area of interest
TACON	tactical control
TAPG	Theatre Administrative Planning Group
THPG	Theatre Health Planning Group
TIOPG	Theatre Information Operations Planning Group
TLPG	Theatre Legal Planning Group
TIPG	Theatre Intelligence Planning Group
TPG	Theatre Planning Group
VCDF	Vice Chief of the Defence Force
WNGO	warning order