

How PS TMMs 'plug into' Stage III of the OPP

AJP-5 STAGE III - Operational Planning Process Concept Development

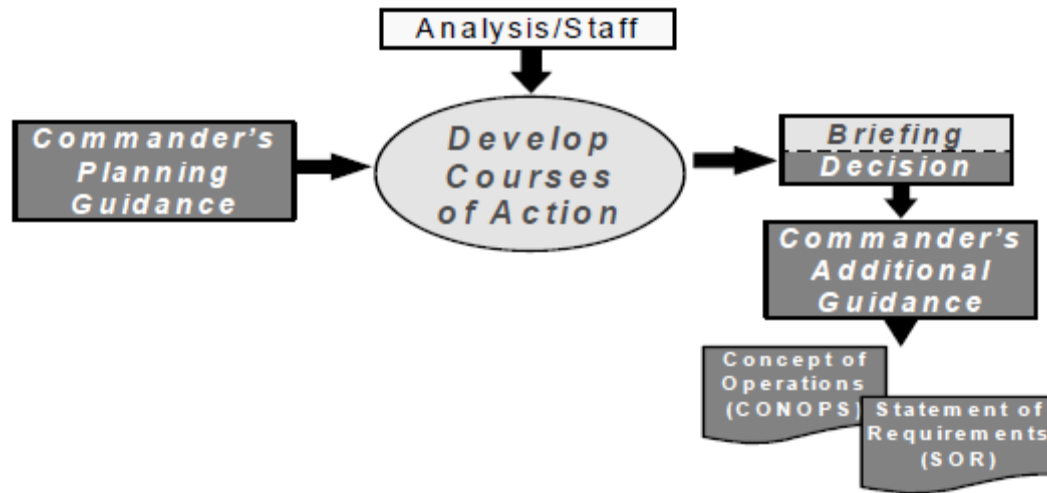


Figure 4.8 - Concept Development Stage

Stage III - Concept Development. Concept Development determines *how* to accomplish the mission most effectively and efficiently. It focuses on developing and analysing different possible courses of action (COA) for accomplishing the mission, including the means required, in order assisting the commander in determining the best COA. The commander’s selected COA provides the basis for the development of a Concept of Operations (CONOPS) and a supporting Statement of Requirements (SOR), which are the principal products of this stage.

Instruction	PS TMMs Input (how to use SAS 074 Cmap)
0431. Overview (“COAs are initially described in broad terms and tested for validity.”)	Re-state the operational objective in terms of the desired effect noting that either kinetic or non-kinetic means can lead to intended and unintended behaviours of the direct and indirect Human Target (HT). HT includes individuals, organizations, societies, religious, ethnic, tribal / national groups across the spectrum from

<p>c. Logistics d. Medical e. Movements f. Communications and Information Systems g. Finance and Contracting h. Civil-Military Co-operation (“A Civil-Military Co-operation (CIMIC) estimate provides an evaluation of the likely effects of the civil environment on the military operation as well as the potential consequences of the effects of the military operation on the civil environment.”)</p>	<p>iii) unintended negative effect (deterioration)</p> <p>Undertake analyses of civil HT(s) – direct and indirect. Identify key HTs using <i>Audience Segmentation</i> techniques.</p> <p>Baseline the current situation in the AOI and comparable countries / regions using <i>SMEs, Reachback, Socio-cultural data sources, Empirical Data Collection</i>.</p> <p>Examine characteristics of specific HT using <i>PS Guiding questions</i>.</p> <p>Develop PS data collection and assessment requirements (<i>Development of Empirical Knowledge</i>).</p> <p>Identify possible levers for PS change using <i>Causal maps, causal loop diagrams</i> and other <i>PSMs</i> (e.g., <i>Force Field Analysis</i>).</p>
<p>0434. Common Requirements and Alternatives</p>	
<p>0435. Development of Course of Actions a. Tentative Course of Actions</p> <p>(1) When, Who, What, Where, Why, & How (2) Brainstorming (“The OPG must be bold and open to new and different ideas in order to search for creative ideas on how to accomplish the mission.”)</p> <p>b. Initial Course of Action Viability Test (The OPG</p>	<p>Consider how each COA option will shape / change the PS environment to achieve the desired end-state.</p> <p>Develop a comprehensive range of COAs involving direct and indirect HTs, and military and non-military actions using <i>Categorisation PS Methods</i> (e.g., <i>PESTLE</i>).</p> <p>Examine various criteria to assess the viability of COA in</p>

<p>tests each tentative COA individually for its practicability to ensure only those COAs deemed likely to succeed are further developed.”)</p> <p>(1) Suitability (“Will the COA accomplish the mission-essential tasks and objectives of the mission?”)</p>	<p>terms of cost and complexity of achieving the desired PS effect(s), and to assess the quality of the desired PS effect(s) / behaviour in HT owing to a COA.</p> <p>Understand factors that could enable or inhibit <i>Behavioural change</i> of key individuals and groups. Consider unintended consequences/behaviour of both the adversary and non-combatants.</p> <p>Identify MOE and MOE collection approaches using <i>Empirical Data Collection</i> and employing <i>Ethnographic Principles</i>.</p> <p>Probability – How likely will the PS effect(s) occur?</p> <p>Onset – how long before the PS effect(s) is evident (related to overcoming system inertia)?</p> <p>Longevity – How “sticky”/ long-lasting is the PS effect(s); is it permanent or perishable (half-life)?</p> <p>Durability – How brittle or robust is the PS effect(s)? Are there pre-conditions for success? How susceptible is it to unplanned / uncontrollable events, competing initiatives, or interference?</p> <p>Impact – How likely will the PS effect(s) contribute to achieving the operational objective?</p> <p>Consider opportunities for development / use of dynamic TM&Ms (e.g., <i>Systems Dynamics</i> and <i>Simulation / Agent-Based models</i>) to examine impact of COA over time (<i>Analytical Overview, Empirical Data Collection, Reachback, TM&M Fitness for Purpose, Reference Sources (Model Catalogues)</i>).</p> <p>Complexity – How many steps (and/or options) are required</p>
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<p>(2) Feasibility (“Is the COA possible in terms of the time, space and resources likely available as well as the conditions and effects that must be achieved?”)</p> <p>(3) Acceptability (“Are the likely achievements from the COA worth the expected costs in terms of forces deployed, resources expended, casualties suffered, and levels of risk?”)</p> <p>(4) Exclusivity (“Is the COA sufficiently varied from other COAs being considered to clearly differentiate its comparative advantages and disadvantages?”)</p> <p>(5) Completeness (“Is the COA complete? Does the COA answer the when, who, what, why and how questions?”)</p>	<p>(available) to achieve the PS effect(s)? Are these steps/options subject to misinterpretation? What is the risk of mission drift?</p> <p>Cost – What is the investment of human and capital resources, and the time required to plan and execute the PS effect(s)?</p> <p>Visibility – How recognizable / noticeable will the PS effect(s) be?</p> <p>Synergy – Is the PS effect(s) an effectiveness multiplier or reducer due to interference / interaction when coupled with other effects and/or actions (i.e., synergistic or mitigated effects)?</p> <p>Consider development of <i>Bayesian Belief Models</i> to examine combined effects of alternative COA. Consider alternative perspectives of candidate COA using Elements of <i>Soft Systems Methodology</i> (e.g., CATWOE and Rich Pictures) and <i>Red Teaming</i>.</p> <p>Depth – How penetrating is the PS effect(s) with regard to HT understanding and will?</p> <p>Have ‘non-kinetic’ and non-military options been exhausted?</p> <p>Develop understanding of views of Own Forces from other people’s perspectives using <i>Societal CD CMaps</i>.</p> <p>Support development of Information / Strategic comms/ inter-personal Key Leader Engagement strategies using <i>influence and persuasion theories, modes of decision-making</i>, and involving social science and AOI <i>SMEs</i> and <i>Reachback</i> as required.</p> <p>Identify ways of achieving or inhibiting desired organizational</p>
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<p>c. Commander's Course of Action Update d. Course of Action Refinement e. Troops-to-Tasks Analysis ("Troops-to-Tasks' Analysis is a deliberate process to identify tasks that have to be accomplished, determine the scale of the task as well as any conditions demanding particular capabilities and determining the type and size force required.")</p>	<p>change using <i>Organisational metaphors</i>.</p> <p>Identify COA that may lead to, or inhibit, social and economic change using <i>Societal, Economic and Pol Sci CD Cmaps</i>.</p>
<p>0436. Analysis of Courses of Action a. Staff Checks (strengths/weaknesses) b. War Gaming (1) Preparing War Games (a) Determining the desired outcomes.</p> <p>(b) Deciding on the method and scope. (c) Acquiring the tools for manual or computer assisted simulation and analysis. (d) Preparing a suitable venue. (e) Organising friendly and opposing players including subordinate commands, if possible. (f) Organising referees, expert arbitrators and</p>	<p>Impact analysis of COA on the PS environment.</p> <p>Identify desired behaviour(s) of HT(s) as informed by TMMs and designed to influence / shape HT understanding and will (e.g., worldview, attitude, and/or intent).</p>

<p>recorders. (g) Establishing rules.</p> <p>(2) Conducting War Games (a) Setting Conditions. (b) Game Turns. (A series of ‘game turns’ considering the action - reaction - counter-action of opponents ...”) (c) Assessment. (“...probable results and outcomes ...”)</p> <p>(3) Recording Results (a) Advantages and disadvantages. (b) Deficiencies to be corrected. (c) Additional force/capability requirements. (d) Synchronisation requirements. (e) Significant risks and opportunities encountered against (most likely and most dangerous) opposing COAs (f) Decision points and supporting Commander Essential Information Requirements (CEIR). (g) Branch plan requirements.</p> <p>c. Synchronisation d. Force Availability</p>	<p>Identify culturally-relevant rules/code(s) of behaviour.</p> <p>Consider intended and unintended behaviour of HT(s). Check for concurrence/coherence of military and non-military COA.</p> <p>Use of modelling, gaming, synthetic environments and SMEs (experts on AOI + Human and Social Scientists) to analyse COA from wider PS perspectives (<i>Analytical Overview, SMEs and Reachback</i>).</p> <p>Assess the strengths and limitations of the techniques being used (<i>TM&M Fitness for purpose</i>).</p>
<p>0437. Comparison of Courses of Action a. Compare Friendly and Opposing Courses of Action (“Comparison of the relative effectiveness of</p>	<p>Prefixed by intended and unintended behaviour of HT.</p>

<p>each own COA against each opposing COA based largely on the results from war gaming.”)</p> <p>b. Commander’s Courses of Action Selection Criteria (“These criteria assist the staff in determining which COA best supports the commander’s intent.”)</p> <p>c. Compare Friendly Courses of Action (“Comparison of the relative advantages and disadvantages of each own COA against other own COAs.”)</p>	<p>Conduct an ‘Effectiveness’ evaluation of possible psychological / behavioural effect(s), which can be simplified to three possibilities:</p> <ul style="list-style-type: none"> i) intended effect (improvement) ii) no effect (no change) iii) unintended negative effect (deterioration) <p>Use of modelling, gaming, synthetic environments and SMEs (both experts on AOI and Human and Social Scientists) to compare COA (<i>Analytical Overview, SMEs and Reachback</i>).</p> <p>Conduct ‘what-if’ <i>sensitivity analysis</i> using models and games. Use <i>Red Teaming</i> to understand possible Opposition Forces and wider HT COA. Use <i>Risk Analysis</i> techniques (e.g. Probability - Impact grid) to support analyse risks and develop mitigation strategies. Use <i>Plan optimization</i> techniques to compare COAs.</p> <p>Consider impact/outcome on hearts and minds of HT – consistent with Cmdr’s intent?</p> <p>Use of pilot / probing actions (<i>Field experimental design principles, Development of Empirical Knowledge</i>) to test proposed COA.</p> <p>Estimate MOE as the sum of the products of ‘Impact’ and ‘Probability’ of the three simplified possibilities of intended effect, no effect, and unintended (negative) effect, whereby +ve MOE is desired (numeric value is only meaningful in a relative sense, i.e., by comparison with other COAs).</p> <p>Use of the dynamic modeling and gaming technique plus <i>Morphological Analysis, Futures methods (e.g. Field Anomaly Relaxation) and BBNs</i>, to examine combined effects of COA and forecast possible long-term as well as short-term consequences of</p>
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	action on HT.
0438. Commander's Courses of Action Decision	Select COA. Highest +ve MOE is the most effective COA to achieve the Mission Objective; however, choice must also consider efficiency, which can be equated as $MOE \div \text{cost}$ (i.e., conduct cost-benefit analysis), where cost was previously determined in Section 0435.
0439. Development of a Concept of Operations a. Commander's appreciation of the situation b. Commander's decisive points, risk analysis c. Commander's mission statement d. Commander's broad mission plan e. Major actions for specific objectives f. Force & capabilities requirements g. Inform supporting actors h. Administrative and logistical support i. Command and control arrangements j. Policies for objectives and messages	Ensure acknowledgement of resultant human behaviour.
0440. Statement of Requirements	
0441. Approval of the Concept of Operations a. NATO HQ level review of the CONOPS (essential, important, & misc comments) b. Reply matrix (agree, partially agree, disagree, or noted for above comments)	