ARMY'S FUTURE LAND OPERATING CONCEPT

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FOREWORD

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It is with great pleasure that I re-release Army's capstone concept, *Adaptive Campaigning – Army's Future Land Operating Concept* (AC-FLOC)[1]. AC-FLOC provides the conceptual and philosophical framework for Army to accomplish its dual focus; to conduct adaptive campaigning to win the joint land battle of today while concurrently undertaking continuous force modernisation to ready and prepare Army to win the joint land battle of the future.

Army's two roles are considerable and enduring. As Chief of Army, I have no greater priority than to make certain that Army's soldiers are as fully prepared for today's operations as is possible. The operations of the past decade have informed much of our force development. Unlike some, who continue to suggest that our deployment of forces to East Timor, the Solomon Islands, Iraq and Afghanistan have been an aberration, I am convinced they are symptomatic of the changing character of war.

The principal goal that I have set myself as the Chief of Army is to lay the foundations for the Army of the third decade of this Century. Our fundamental force development principle is that military operations against a credible, technologically enabled opponent, possessing war fighting capabilities similar to our own, must remain the foundation of all planning. Mastery of foundation war fighting skills is the core competency that the Government demands of Army. That immutable precept will inform Army's modernisation program out to 2030. An army that can fight, manoeuvre and defeat a credible enemy can adapt to less demanding contingencies. The converse is not true.

Defence White Paper 2009[2] allocates tasks to the ADF according to a scale of priorities. All of these tasks make heavy demands on the Army. The thread binding all these tasks together is the direction that the ADF implement a maritime strategy in the Defence of Australia. In order to execute this strategy the ADF requires a comprehensive understanding of, and an ability to conduct decisive operations within, the Primary Operating Environment, the archipelagic approaches to Australia. This necessarily requires a focus on joint, inter-agency and whole of government operations, concepts that are articulated herein.

AC-FLOC builds on Army's previous documents, *Complex Warfighting 2004*[3] and *Adaptive Campaigning 2006*[4] and is supported by the companion document *LWD 1: The Fundamentals of Land Warfare, 2008*[5]. *AC-FLOC* also incorporates recent operational lessons and insights and is informed by current DSTO research, worldwide trends, domestic and international developments.

Australian soldiers must be confident and capable when facing an array of environments and threats, including an adversary as well equipped and trained as they are. Australian

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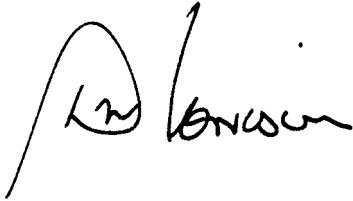[1] AC-FLOC was first released in Sep 09 following the release of DWP09.
[2] Australian Government 2009, *Defending Australia in the Asia Pacific Century: Force 2030, Defence White Paper 2009*, Department of Defence.
[3] Department of Defence 2004, *Complex Warfighting*, Australian Army, Canberra.
[4] Department of Defence 2006, *Adaptive Campaigning*, Australian Army, Canberra.
[5] Department of Defence 2008, *LWD 1: The Fundamentals of Land Warfare 2008*, Australian Army, Canberra.

soldiers must be ready and prepared to perform their role in defence of Australia and its interests in times of peace, crisis or war. To realise this, it is essential that Army understands the enduring nature of war, identifies and interprets relevant meta-trends and influences, and educates its soldiers and junior leaders on their roles and responsibilities to empower them to make informed decisions. *AC-FLOC* provides this conceptual framework and is equally relevant to Australian soldiers conducting adaptive campaigning today and to those focussed on continuous modernisation across Army. I commend it to you.

D.L. MORRISON AO
Lieutenant General
Chief of Army

April 2012

EXECUTIVE SUMMARY

The purpose of *Adaptive Campaigning-Future Land Operating Concept* (*AC-FLOC*) is to provide the conceptual and philosophical framework and force modernisation guidance to the Army in order to ensure that it remains postured to meet the demands of the future. It is developed firmly within the higher guidance and parameters provided by *Defence White Paper 2009 (WP 09).*[6]

AC-FLOC is divided into two parts. The first part titled *The Challenge*, outlines a vision of the future. The second part, titled *The Response*, outlines the Army's response to future conflict including a comprehensive description of how the future Land Force is to be modernised to undertake its directed and anticipated tasks.

The Challenge

AC-FLOC posits that the nature of conflict is enduring however the characteristics have, and will continue to change, and the pace of this change is likely to increase. Land warfare has historically been the decisive form of conflict. All indications are that this will be the case in the foreseeable future.

However, predicting the future is inherently difficult. The future operating environment will be affected by the interplay of state and non-state actors, be shaped by a number of strategic drivers, and will exhibit the characteristics of a *Complex Adaptive System*. Such a system involves the interplay of multiple, diverse actors all competing to influence the allegiances and behaviours of individuals, groups and societies. At each level there is learning and adaptation. Consequently the inter-connected character of future war is known as *Complex War*.

The Land Force will consist of task organised elements drawn from all Australian Defence Force services and the other Government agencies, including the Deployable Civilian Capacity (DCC), and potentially non-government agencies. The Land Force will be optimised for joint operations, operating in a joint environment, and relying on joint enabling capabilities for full effect. The Land Force is also required to be trained, equipped and resourced for effective interaction with Coalition partners and commercial contractors where applicable.

In order to be successful, the Land Force requires capabilities that are *persistent*, *pervasive*, and *proportionate*. The Land Force will also need to be designed for a range of contingencies and be optimised for close combat in the complex terrain typical of our Primary Operating Environment (POE).[7] Future conflict will display the trends of diffusion of lethality, the proliferation of technologies and ideas, disaggregation of the battlespace, and a retreat by our adversaries into complex terrain. As a result of these trends it is argued that three characteristics will emerge: detection and discrimination thresholds; the dominant narrative; and, operational uncertainty.

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[6] Department of Defence 2009, *Defending Australia in the Asia Pacific Century: Force 2030, Defence White Paper 2009*.
[7] *WP 2009*, p. 51, para 6.38. The POE extends from the eastern Indian Ocean to the island states of Polynesia and from the equator to the Southern Ocean. That area contains all Australian sovereign, offshore and economic territories, such as Cocos (Keeling) Islands, Christmas Island, Heard and McDonald Islands, Macquarie Island, Norfolk Island and also waters adjacent to the Australian Antarctic Territory. See Figure 2.

The Response

AC-FLOC identifies that in order to meet these future challenges a comprehensive concept is required that defines the actions taken by the Land Force as part of the military contribution to a Joint and Whole of Government approach to resolving conflicts and advancing Australia's national interests. This concept is known as *Adaptive Campaigning*.

Adaptive Campaigning aims to influence and shape the overall environment to facilitate peaceful discourse and stabilise the situation, noting that there may be no end state to an operation but rather an enduring set of conditions conducive to Australia's national interests.

The philosophical and conceptual framework for the conduct of *Adaptive Campaigning* is the five mutually reinforcing and interdependent lines of operations: Joint Land Combat; Population Protection; Information Actions; Population Support; and Indigenous Capacity Building. Underlying this philosophical framework are the four key elements essential to dealing with the complexities of the future battlespace: the Operational Tenets of Success; the Adaptation Cycle; the Human Dimension; and the Operational Art and Campaigning.

Finally, modernising the force will be achieved through a combination of the Force Attributes and Capability Development Principles for Force 2030 detailed in *WP 09* and the Chief of Army's Development Intent. This combination will provide a framework to generate a balanced Land Force within the Future Joint Force.[8]

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[8] *WP 2009*, p. 68, para 8.67.

CONTENTS

FIGURES

ABBREVIATIONS

5 LOO	Five Lines of Operation
ADF	Australian Defence Force
AFP	Australian Federal Police
ASDA	Act-Sense-Decide-Adapt (also known as the Adaptation Cycle)
C2	Command and Control
CADI	Chief of Army's Development Intent
CAS	Complex Adaptive Systems
CDF	Chief of the Defence Force
CIMIC	Civil Military Corporation
C-RAM	Counter Rocket, Artillery and Mortar
DCC	Deployable Civilian Capability
DFAT	Department of Foreign, Affairs and Trade
DSTO	Defence Science and Technology Organisation
ER	Emergency Relief
ERR	Emergency Rehabilitation & Reconstruction
GBAMD	Ground Based Air and Missile Defence
IDC	Inter-Departmental Committee
IDG	International Deployment Group
ISTAREW	Intelligence, Surveillance, Targeting, Acquisition, Reconnaissance and Electronic Warfare
MOE	Measures of Effectiveness
MOF	Measures of Failure
MOP	Measure of Performance
MOS	Measures of Success
NGO	Non-Government Organisations
NLOS	Non Line Of Sight
NSC	National Security Committee
OGA	Other Government Agencies
OODA	Observe, Orient, Decide and Act
SSR	Security Sector Reform
TTP	Tactics, Techniques, and Procedures
UAV	Unmanned Aerial Vehicle
UN	United Nations
US	United States
USJFCOM	United States Joint Forces Command
USMC	United States Marine Corps

GLOSSARY

A

Accepted Enduring Conditions – The ongoing set of conditions within an operational environment acceptable to Government and conducive to national interests which may involve the continued presence of the military and/or other elements of Government. (Developing definition)

Adaptation Cycle – The Adaptation Cycle comprises two key, interconnected components, *Adaptive Action* and *Mission Command*. It describes the characterisation of Land Force actions taking into account the complex adaptive nature of the modern battlespace: *Act – Sense – Decide – Adapt*. The Adaptation Cycle complements Boyd's OODA loop by explicitly drawing out the requirements to learn and adapt while integrating Mission Command. (Adaptive Campaigning, 2006)

Adaptive Action – Adaptive Action and Mission Command form the two interconnected components of the Adaptation Cycle. Adaptive Action describes an approach to Land Force operations that accounts for the dynamic nature of the complex battlespace. It comprises: *Discovery* and *Decisive Actions*; *Learning to see what is important* and *Learning to measure what is important; Understanding what the response means* and *Understanding what should be done; Learning how to learn, Knowing when to change and Challenging ones understanding and perceptions*. (Adaptive Campaigning, 2006)

Adaptive Army – The *Adaptive Army* initiative seeks to ensure that the generation and preparation of land forces is conducted more effectively and efficiently, and better aligned with the ADF's joint command framework. Under this initiative, the Australian Army will restructure its higher command and control arrangements. Ultimately, the *Adaptive Army* will develop the structures and culture to learn and adapt rapidly to changing circumstances. (CA Directive 22/08 dated 5 Nov 08)

Adaptive Campaigning – Actions taken by the Land Force as part of the military contribution to a Joint and Whole of Government approach to resolving conflicts and advancing Australia's national interests.

Adaptive Campaigning 2006 – Adaptive Campaigning 2006 was endorsed by the Chief of Army's Senior Advisory Committee on 1 December 2006 and agreed to by the Chief of Services Committee on 8 December 2006. It describes the Land Force response to the contemporary operating environment as described in *Complex Warfighting*. (Adaptive Campaigning, 2006)

Amphibious Operation – 1. (ADF) An operation in which land forces are landed and supported from the sea as a combat operation prepared to meet armed opposition. 2. (NATO) An operation launched from the sea by naval and landing forces against a hostile or potentially hostile shore. (ADFP-101)

Asymmetry – Asymmetry exists where there are notable differences between two things under comparison. Military asymmetry may be reflected by differences in intent, composition of forces, culture, technology or size. Conflict has always involved one side seeking an asymmetric advantage over the other by exploiting surprise, the creative use of technology or novel methods

of operation. Asymmetry is sought by conventional, special and irregular forces in an attempt to avoid an enemy's strengths and maximise their own advantages. All contemporary warfare is based on the search for an asymmetric advantage. (LWD 1–2008)

B

Battlegroup – A tactical grouping of more than one combined arms team and required support assets, based on the headquarters of a unit (Battalion or Regiment within an Australian context) selected on the basis of a specific combination of task, terrain and threat. (ADFP-101)

Battlespace – Those geographical, physical and virtual areas that include the traditional domains of land, air and sea, space, the electromagnetic spectrum and cyberspace, which are of concern to a commander. Note: It also embraces the social, political and temporal contexts in which conflict is waged. (LWD 1–2008)

C

Campaign – A set of military operations planned and conducted to achieve a strategic objective within a given time frame and geographical area, which normally involve maritime, land and air forces. (Australian Defence Glossary)

Centre of Gravity – Characteristics, capabilities or localities from which a nation, an alliance, a military force or other grouping derives its freedom of action, physical strength or will to fight. (ADFP-101)

Close Combat – Combat carried out with direct fire weapons, against identifiable individuals, supported by indirect fire, air-delivered fires and non-lethal engagement means. Note: Close combat defeats or destroys the enemy forces or seizes and retains ground. (Australian Defence Glossary)

Combined Arms Team – A case-by-case mix of combat, combat support, combat service support and command support elements selected on the basis of a specific combination of task, terrain and threat. (LWD 1–2008)

Complex Adaptive System – A complex adaptive system is an open system in constant interaction with its environment. Its capacity to adapt to environmental change emerges from the collective behaviour of all the parts in the system interacting locally in response to local conditions and incomplete information. Complex adaptive systems are proactive, innovative and learning systems that exhibit agility, flexibility and resilience (Developing definition).

Complex Terrain – The environment shaped by physical, human and informational factors that interact in a mutually-reinforcing fashion. It is terrain that limits the utility of technological intelligence, surveillance and reconnaissance and reduces opportunities for long range engagement with a consequent increased emphasis on close combat. (LWD 1–2008)

Complex War – War has always been complex however, the increased connectivity of a growing number of actors and influences, combined with the diffusion of traditional conflict boundaries, and an amalgamation of forms of conflict has resulted in the characterisation of the term 'Complex War'. (Complex Warfighting, 2004)

Complex Warfighting – *Complex Warfighting* was endorsed by the Chief of Army's Senior Advisory Committee on 7 May 2004 and the Chief of Services Committee on 31 March 2006. It describes the affects of the contemporary operating environment on the Land Force. (Complex Warfighting, 2004)

Counter-Command – Actions to attack and erode the enemy commander's will to fight, diminish their understanding of the situation and their ability to make timely and effective decisions. (Developing definition)

Counter Fire – Fire intended to destroy or neutralise enemy weapons. (ADFP-101)

Critical Mass – The minimum mass of security, supporting and enabling forces required to achieve the desired accepted enduring conditions. The size of security personnel required relates both to population density of the area of operations and enemy capabilities and capacity. The size of the supporting and enabling forces required will depend on the amount of effort needed to transition the operating environment to our accepted enduring conditions.[9] (Developing definition)

Culminating point – The point in time and location where a force will no longer be stronger than the enemy and risks 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. (Australian Defence Glossary)

D

Decisive Point – Decisive Points are those events, the successful outcome of which is a precondition to the elimination of the enemy's centre of gravity. (Australian Defence Glossary)

Detection Threshold – Conceptual boundary above which Land Force technical ISTAREW capabilities are able to detect the presence of a threat. (Adaptive Campaigning, 2006)

Deployable Civilian Capacity (DCC) – Once established, a national deployable civilian capacity will enable rapid deployment of civilian experts to assist in international disaster relief, stabilisation and post conflict reconstruction efforts. An inter-agency task force is being led by AusAID to undertake this work. The program will be sufficiently adaptable to allow Australia to tailor its response to a particular event or emergency and will improve Australia's integration into multilateral reconstruction and stabilisation operations. (Australia's Future Security and Prosperity in a Rapidly Changing Region and World – Responding to the Australia 2020 Summit–2009)

Distributed Manoeuvre – Distributed Manoeuvre seeks to close with and destroy the enemy without presenting a targetable mass. Importantly, it seeks to harness the synergies that come from combining precision joint fires and manoeuvre elements into small, agile combined arms teams that 'burrow' into complex terrain to detect, identify and kill or capture the enemy with precision, discrimination and an understanding of the potential second and third order consequences that may arise. (Developing definition)

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[9] Note that this definition is a developing definition which relates to a specific concept within AC-FLOC and does not relate to the authorised ADF definition, which defines critical mass in terms of nuclear fission.

Discrimination Threshold – The conceptual boundary resting above the *Detection Threshold*, above which, the Land Force is able to develop both <u>sufficient understanding</u> of the complex battlespace and <u>isolate enemies for targeting</u> by shaping the environment and or tailoring a response in order to minimise the undesirable consequences of action. (Adaptive Campaigning, 2006)

Dislocate – The result of actions to render the enemy's strength irrelevant by not allowing it to be employed at the critical time or place. In effect, dislocation separates the enemy's centre of gravity from the key capabilities that support or protect it. (LWD 1–2008)

Disrupt – The result of direct attack that neutralises or selectively destroys key elements of the enemy's capabilities. The aim of disruption is to reduce the enemy's cohesion and will to fight by neutralising or destroying parts of his force in a manner that prevents the force from acting as a coordinated whole. (LWD 1–2008)

Dominant Narrative - The fundamental story or perception that has been established as valid in the minds of members of one or more target audiences. (Developing definition)

E

Exhaustion, Strategy of – A strategy consisting primarily of the steady erosion of an adversary's military power and will to resist. (Developing definition)

F

Fragile State – A fragile state is a state significantly susceptible to crisis in one or more of its sub-systems. It is a state that is particularly vulnerable to internal and external shocks and domestic and international conflicts. (UK Department for International Development)

Failed State – States that face particularly difficult development prospects because of weak governance, policies and institutions. Fragility can be exacerbated by political economic and /or social instability, including conflict. There is no definitive list of failed states—many are fragile in only some respects and may move in and out of fragility. (AusAID)

Five Lines of Operation – The Australian Defence Glossary defines a line of operation as a line linking decisive points in time and space on the path to the enemy's centre of gravity within a campaign or operation. However, within the context of AC-FLOC, a line of operation is one of the five mutually reinforcing and interdependent lines of operation that comprise a philosophical conceptual framework for the conduct of Adaptive Campaigning in order to achieve accepted enduring conditions.

G

Globalisation – There is no official ADF definition of globalisation, however a widely accepted definition of globalisation is 'a process of increasing connectivity, where ideas, capital, goods, services, information and people are transferred in near-real time across national borders' This definition is not authoritative, but is a descriptive statement based on a compilation of academic and analytical sources. (Complex Warfighting, 2004)

Generalship – Generalship is the exercise by General (star-ranked) Officers, of military command and leadership in its widest connotation, in the planning, preparation and conduct of military campaigns. (Developing definition).

I

Indigenous Capacity Building – Actions to nurture the establishment of capacity within civil communities whilst simultaneously working to establish longer term governance and socio-economic capacity which meets the needs of the people. This may include; micro financial initiatives, local and central government reform — security, police, legal, financial and administrative systems. (Developing definition)

Information Actions – Actions that inform and shape the perceptions, attitudes, behaviour, and understanding of target population groups; assure the quality of our own information; while attempting to disrupt or dislocate[10] enemy command capabilities. (Developing definition)

Interagency – Within the context of Defence involvement, interagency means the contribution by other government agencies and or non government agencies for the purpose of achieving an objective. (Developing definition)

Intelligence, Surveillance, Targeting, Acquisition, Reconnaissance and Electronic Warfare – An activity that synchronizes and integrates the planning and operation of sensors, assets, and processing, exploitation, and dissemination systems in direct support of current and future operations. This is an integrated intelligence and operations function. (Dictionary of Military and Associated Terms, US Department of Defense 2005)

Irregular Forces – Armed individuals or groups who are not members of the regular armed forces, police, or other internal security forces. (Australian Defence Glossary).

J

Joint Land Combat – Actions to defeat organised resistance and secure the environment in order to set and sustain the conditions required for the other lines of operation. This is inclusive of the joint land battle. (Developing definition).

L

Land Force – The Land Force will consist of task organised elements drawn from all Australian Defence Force services and the other Government agencies, including the Deployable Civilian Capacity (DCC), and potentially non-government agencies. The Land Force will be optimised for joint operations, operating in a joint environment, and relying on joint enabling capabilities for full effect. The Land Force is also required to be trained, equipped and resourced for effective interaction with Coalition partners and commercial contractors where applicable. (Developing definition)

Land Power – The ability to exert immediate and sustained influence on or from the land on the land by an armed force (LWD 1 2008)

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[10] Disrupt applies to a direct attack that seeks to neutralise or destroy an enemy. Dislocation involves actions to render an enemy's strength by not allowing it to be employed at the critical time or place (LWD 1, 2008).

Laws of Armed Conflict – The international law regulating the conduct of states and combatants engaged in armed hostilities. It is often termed the 'law of war'. (ADFP-101)

Line of Operation – See Five Lines of Operation.

M

Measure of Effectiveness – Measurable criteria that indicate the effectiveness of Land Force actions in relation to their intended consequences. (Developing definition)

Measure of Failure – Quantifiable criteria that indicate a negative trend away from achieving the accepted enduring conditions. Note a key determinant of the degree of success that can be achieved in a complex endeavour is the quality with which comprehensive multi-scale measures of success and failure can be articulated, and how well the Measures of Effectiveness correlate to both. (Developing definition)

Measure of Success – Quantifiable criteria that indicate a positive trend toward achieving the accepted enduring conditions. (Developing definition)

Measure of Performance – Relate to how well the Land Force, or elements of, carried out their assigned task - efficiency. (Developing definition)

Mission Command – A philosophy of command and a system for conducting operations in which subordinates are given a clear indication by a superior of their intentions. The result required, the task, the resources and any constraints are clearly enunciated, however, subordinates are allowed the freedom to decide how to achieve the required result. (ADDP-00.1)

N

NLOS (Non-Line of Sight) Fires/ joint offensive fires – These fires are the current method of indirect fire support where a sensor or decider directs a firing platform to engage targets in response to a requirement for fires. The soldier or sensor identifies a target and passes a fire mission through either radio or battle command system. The firing platform engages the target without seeing/sensing the target based on the sensing of the requestor. Based upon the commander's attack guidance and concept of fires, the optimum shooter or effectors is selected to engage the target. The designated unit receives target data, computes a technical firing solution, and fires the mission. (Developing definition)

Non-Government Organisation – A voluntary, non-profit making organisation that is generally independent of government, international organisations or commercial interests (Australian Defence Glossary).

Non-Lethal Capabilities – A weapon that is explicitly designed and primarily employed to incapacitate or repel persons or to disable equipment, while minimising fatalities, permanent injury and damage to property and the environment (NATO).

O

Orchestration – The arrangement of physical and non-physical actions to ensure their unified contribution to the mission. (LWD 1–2008)

Operational preparation of the battlespace – Operational preparation of the battlespace involves all (joint ADO and OGA) advance force operations and activities that seek to facilitate the achievement of operational objectives (by follow-on forces across the Joint combat functions). (Developing definition)

Operational uncertainty – Occurs as a consequence of enemies attempting to shelter below the *discrimination threshold*, the complexities of the battlespace, and increased lethality. It is characterised by fluctuations in the likelihood and intensity of rapid spikes in the level of violence. (Developing definition)

Other Government Agencies – Encompasses all non-ADF Federal, State/Territory and local government departments, agencies and authorities, which include police and emergency services. (Developing definition).

P

Persistent Conflict – A continuous and protracted period of violent confrontation between state, non-state, and individual actors (Developing definition).

Population Protection – Actions to provide protection and security to threatened populations in order to set the conditions to establish order and the rule of law. (Developing definition)

Population Support – Actions to relieve immediate human suffering by establishing, restoring, or temporarily replacing necessary essential services in affected communities. By doing so these actions seek to positively influence the population and their perceptions. (Developing definition)

R

Rules of Engagement – ROE are directions endorsed by Government and issued by commanders, which delineate the circumstances, and limitations within which military force may be applied to achieve military objectives. They do not inhibit or replace but are part of the command function. ROE may be framed to limit certain actions; alternatively, they may authorise actions to the full extent permissible under domestic and international law. (ADFP-101)

S

Self Empowerment – Self-empowerment is the process that enables one to gain the knowledge, skill-sets and attitude required to have decision-making ability of oneself in the workplace. (Developing doctrine)

Special Operations – Special Operations are highly specialised and focused operations, executed at the tactical level but designed to achieve wider operational and strategic effects. Special operations can target military, economic, social or political objectives and are carried out by highly trained and selected forces using unconventional military means. (ADDP 3.12)

Strategy – The art and science of developing and employing instruments of national power in a synchronised and integrated fashion to achieve theatre, national, and/or multinational objectives (Australian Defence Glossary).

T

Tactics – The ordered arrangement and manoeuvre of units in relation to each other and the enemy in order to utilise their full potentialities (Australian Defence Glossary).

U

Unconventional Warfare – In a military context, general term used to describe operations conducted for military, political or economic purposes within an area occupied by the enemy and making use of the local inhabitants and resources. (Australian Defence Glossary).

Unmanned Aerial Vehicle – A powered, aerial vehicle that does not carry a human operator uses aerodynamic forces to provide vehicle lift, can fly autonomously or be piloted remotely, can be expendable or recoverable, and can carry a lethal or non-lethal payload. Ballistic or semi-ballistic vehicles, cruise missiles, and artillery projectiles are not considered unmanned. (ADFP-101)

W

Web Applications – Ongoing technological development, such as widespread broadband access and wireless networking has enabled a change in the way software developers and end users utilise the web. The first generation of web focused on the search function, while the current generation of web development (Web 2.0) aims to facilitate communication, secure information sharing, interoperability, and collaboration. Web 2.0 applications enable social networking (such as MySpace and Twitter) video-sharing (YouTube, Flickr) and collaboration within communities of interest (wikis, blogs). The Australian Communications and Media Authority, (ACMA) posits that the future of Web applications will see the 'semantic web' (Web 3.0), applications that will anticipate and deliver information according to users interests, (such as location based services) followed by the "intelligent web" (Web 4.0) by 2020, where the use of metadata will enable web applications to construct meaning and logical relationships between data and concepts.

Whole of Government – Whole of government denotes public service agencies working across portfolio boundaries to achieve a shared goal and an integrated government response to particular issues. Approaches can be formal and informal. They can focus on policy development, program management and service delivery. (Connecting Government: Whole of Government Responses to Australia's Priority Challenges, 2004)

ARMY

MISSION

The Army's mission is to win the joint land battle.

VISION

The Army's vision is to become a world class, adaptive army, enabled to fight in order to win joint land operations in Australia's national interests.

ETHOS AND VALUES

The ethos of the Army is that of the soldier serving the nation: mentally and physically tough, and with the courage to win. We fight as part of a team, and are inspired by the ANZAC tradition of fairness and loyalty to our mates. We are respected for our professionalism, integrity, esprit de corps and initiative.

NINE CORE BEHAVIOURS

Every soldier is an expert in close combat.
Every soldier is a leader.
Every soldier is physically tough.
Every soldier is mentally prepared.
Every soldier is committed to continuous learning and self-development.
Every soldier is courageous.
Every soldier takes the initiative.
Every soldier works for a team.
Every soldier demonstrates compassion.

PART 1
THE CHALLENGE

CHAPTER 1
THE NEED TO ADAPT

Wars must vary with the nature of their motives and the situation which gives rise to them. The first, the supreme, the most far reaching act of judgement that the statesman and commander have to make is to establish by that test the kind of war on which they are embarking; neither mistaking it for, nor trying to turn it into, something alien to its nature. This is the first of all strategic questions and the most comprehensive.

On War, Carl von Clausewitz[11]

INTRODUCTION

1.1   Land warfare has historically been the decisive form of conflict. All indications are that this will be the case in the foreseeable future. Land power is the ability to exert immediate and sustained military effect on the land by an armed force.[12] Land forces are unique in their ability to seize and hold ground through close combat. This could be conducted in the defence of sovereign territory or national interests. The deployment of land power signals an intent that a Government is resolved to use force or threat of force to achieve an outcome conducive to the national interest.

1.2   The Australian experience of war and armed conflict has historically been the application of land power in expeditionary force on force engagements in a conventional setting of inter-state conflict. In the first decade of the twenty-first century the Australian Army has conducted expeditionary operations, mainly against irregular forces. In both these types of warfighting the Australian Army has proven equal to the task of adapting to the conditions.

PURPOSE

1.3   The purpose of *Adaptive Campaigning – the Future Land Operating Concept (AC-FLOC)* is to provide conceptual, doctrinal and force modernisation direction to Army, to ensure it remains postured to meet the demands of future operating environments.

1.4   Additionally, *AC-FLOC* forms the philosophical framework for change and provides development guidance for the Army of the future. This is to ensure that the Army is ready for the demands of operating in a future complex security environment. *AC-FLOC* provides a common lexicon and model for planners to analyse future challenges.

SCOPE

1.5   The *AC-FLOC* is the most fundamental of all Australian Army military concepts. Consequently, it is expressed in terms of broad precepts and assertions that apply across a wide range of possible futures. *AC-FLOC* is the Army's Future Land Operating Concept. It builds on, and extrapolates from, Army's previous conceptual documents, *Complex Warfighting*[13] and *Adaptive Campaigning.*[14] *AC-FLOC* also incorporates recent operational lessons and insights from other Departmental conceptual documents[15] and from current DSTO research. Most importantly, it describes a Land Force response, as part of a Joint, Whole of Government, and interagency approach to the demands of *'Complex War'*.[16,17]

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[11] Carl von Clausewitz (1976), *On War*, translated by Howard, M. and Paret, P. p 88-89.

[12] Department of Defence 2008, *LWD 1 the Fundamentals of Land Warfare 2008*, Australian Army, Canberra, p 17.

[13] Complex Warfighting was endorsed by the Chief of Army's Senior Advisory Committee on 7 May 2004 and the Chief of Services Committee on 31 March 2006.

[14] *Adaptive Campaigning* was endorsed by Chief of Army's Senior Advisory Committee on 1 December 2006 and agreed by Chief of Services Committee on 8 December 2006.

[15] *Future Joint Operating Concept (2007)*, *Future Maritime Operating Concept (2006)*, *Future Air and Space Operating Concept (2006)*, and *Draft Future Special Operations Concept*.

[16] War has always been complex however, the increased connectivity of a growing number of actors and influences, combined with the diffusion of traditional conflict boundaries, and an amalgamation of forms of conflict has resulted in the characterisation of the term 'Complex War'.

[17] In 2009, Army's Special Operations Command will seek endorsement of a *Future Joint Special Operations Concept* (FJSOC), which will include emerging concepts such as the development of Australian asymmetric -unconventional operations.

1.6   The *AC-FLOC* should be read in context with the overarching guidance of the
Defence White Paper 2009 (WP 09), the *Defence Capability Plan (DCP 09)*, and *Future Joint
Operating Concept (FJOC)*[18] and other higher guidance as issued. Its partner volume is
LWD 1: The Fundamentals of Land Warfare. It will be elaborated in subordinate Land Warfare
Doctrine. *AC-FLOC* is not a prescriptive manual describing methods of execution; rather
it is conceptual in its approach, aspirational in its purpose and dynamic in its guidance.
AC-FLOC is underpinned by assertions and assumptions of the future security environment as
we understand it now. As such, *AC-FLOC* should be regularly reviewed and the logic refreshed
to ensure its validity and relevance.

1.7   The *AC-FLOC* consists of two parts. Part 1 of *AC-FLOC* reviews global and regional
trends and projects these trends into the future to forecast the broad characteristics and
security implications of the future global security environment (Chapter 2). Part 1 concludes
by reviewing contemporary trends in warfare, combining these with the global and regional
trends, to extrapolate the characteristics of the future operating environment, particularly in
the Primary Operating Environment (Chapter 3). The analysis in Part 1 reveals that the future
operating environment is likely to be complex. Therefore, adaptability is essential for the Army
to be effective in the future. Part 2 of *AC-FLOC* articulates the Army's concept for dealing with
the anticipated future operating environment. This concept is known as Adaptive Campaigning.
Part 2 describes the key tenets of Adaptive Campaigning (Chapter 4), provides a framework for
achieving the Adaptive Army (Chapter 5), and outlines the Government's key capability priorities
for modernising and enhancing the Army (Chapter 6).

THE NATURE OF CONFLICT

*War is more than a true chameleon that slightly adapts its characteristics to the
given case. As a total phenomenon its dominant tendencies always make war a
remarkable trinity--composed of primordial violence, hatred, and enmity, which
are to be regarded as a blind natural force; of the play of chance and probability
within which the creative spirit is free to roam; and of its element of subordination,
as an instrument of policy, which makes it subject to reason alone.*

On War, Carl von Clausewitz[19]

1.8   The nature of conflict remains enduring; however its characteristics have and will continue
to change. *AC-FLOC* acknowledges the Clausewitzean view of war as being dynamic,
unpredictable, difficult to control and therefore chaotic. The chaos will be a result of the
complex interaction of friction, danger, uncertainty and chance. Additionally, the events will
be strongly influenced by human interaction. War is fundamentally a human, societal activity,
rather than a technical or engineering problem. In essence, war is a form of armed politics, and
politics is about influencing and controlling people and perceptions. War is therefore a free and
creative human activity, inextricably linked to human will, emotion and psychology.

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[18] Department of Defence 2007, *Joint Operations for the 21st Century: The Future Joint Operating Concept*, Australian
      Defence Force, Canberra.
[19] Carl von Clausewitz, (1976) *On War*, translated by Howard, M. and Paret, P., p 89.

1.9   Importantly, the effects of modern and emerging technologies, combined with the challenges of complex terrain, are such that the pace of change will continue to increase. The consequent challenge for the Australian Army is to ensure that it is able to adapt to these changes to position itself for success on the battlefields of the future.

1.10   Contemporary warfighting trends suggest future conflict will increasingly involve multiple, diverse actors and influences all those competing for the allegiances and behaviours of targeted populations. As a consequence, the outcome of conflict will increasingly be decided in the minds of these populations rather than on the battlefield. It is recognised that combat operations may no longer be seen as the decisive phase of an operation. However, successful combat operations alone are not a guarantee of mission success, failure in combat operations will almost certainly result in mission failure.

THE LAND FORCE

1.11   **Primary Role of the Land Force.** Australia's most basic strategic interest remains the defence of Australia against direct armed attack.[20] Consequently the principal task for the ADF is to deter and defeat armed attacks on Australia.[21] This includes the protection of the Australian people, infrastructure and resources from domestic or external threats and a wide range of active and passive measures to prevent, deter, defeat, and mitigate the effects of such threats, including selective projection of military power beyond the POE.[22]

1.12   The application of land power in the Australian context is the employment of the Land Force. The Land Force will consist of task organised elements drawn from all Australian Defence Force services and the other Government agencies, including the Deployable Civilian Capacity (DCC), and potentially non-government agencies. The Land Force will be optimised for joint operations, operating in a joint environment, and relying on joint enabling capabilities for full effect. The Land Force is also required to be trained, equipped and resourced for effective interaction with Coalition partners and commercial contractors where applicable. The non-Army elements of the Land Force may need to be trained, equipped and resourced to a level capable of effectively operating as part of the overall force. It has three distinguishing traits. It is *persistent* in its continuous application, *pervasive* in its presence and *proportionate* in its response. The Land Force has the capability to undertake a wide range of combat and non-combat roles both in Australia and overseas as required by *WP 09*.[23]

1.13   *AC-FLOC* acknowledges that war is a political instrument and notes our enemies will often attempt to apply tactical[24] pressure in order to achieve direct strategic[25] advantage. *AC-FLOC* attempts to describe contemporary conflict in its entirety. It focuses specifically on

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[20]   *WP 2009*, p 12, Executive Summary.
[21]   *WP 2009*, p 53, para 7.2.
[22]   *WP 2009*, p 52, para 6.46.
[23]   *WP 09* identifies four principal tasks for the ADF. These are: Deterring and Defeating Attacks on Australia; Contributing to Stability and Security in the South Pacific and East Timor; Contributing to Military Contingencies in the Asia Pacific Region; and Contributing to Military Contingencies in Support of Global Security, *WP 2009* p 13, Executive Summary.
[24]   Tactics is the ordered arrangement and manoeuvre of units in relation to each other and the enemy in order to utilise their full potentialities (Australian Defence Glossary).
[25]   Strategic advantage applies to the strategic level of war - the level of war at which a nation or group of nations determines national or multinational security objectives and deploys national, including military, resources to achieve them. (LWP-G 0-1-6).

the Land Force response within a theatre of operation, as part of a military contribution to a Joint and Whole of Government campaign. Importantly, the Land Force response should be developed and measured with a view to realising the required accepted enduring conditions of the campaign. To account for the changing dynamics of the battlespace, both the Land Force response and the accepted enduring conditions will need to be constantly reviewed to ensure they remain relevant.

1.14   Fundamental to *AC-FLOC* is influencing perception, a central and decisive activity of war. In the fight to win support, or at least acquiescence, from a population the Land Force must be capable of engaging with the population while conducting operations within the complex operating environment. Influencing people and their perceptions is fundamentally a human activity which requires personal contact, proximity and an enduring presence. The Land Force's unique ability to be **persistent**, **pervasive** and **proportionate** is fundamental to success in this environment and is itself founded on the ability to prevail in close combat.

1.15   Traditionally, the Army has deployed forces for a range of tasks including conventional war, counterinsurgency, stabilisation, peace support and humanitarian assistance operations amongst others. Each of these has been covered by separate tactical doctrines, and are collectively described as a 'Spectrum of Conflict' (e.g. Civil-Military Cooperation, Low Level Operations, Peace Support Operations and Counterinsurgency). As a consequence of the diffuse nature of conflict, the rising role of non-state actors, and advances in technology, even loosely organised militias can gain access to very advanced weapons, sophisticated communications and ideas, and complex and dispersed human networks. Therefore distinctions between low, medium and high-intensity conflict are becoming blurred at the tactical and operational level.

1.16   Regardless of technological advances, virtual theatres and improvements in communications, *WP 09* requires Army to be able to engage in conventional combat against other armed forces[26] and additionally have a greater ability to operate in proximity to civilian populations.[27] This requirement leads to the Land Force needing to conduct sustained close combat against a lethal enemy 'among the people'. Consequently, Land Forces deployed on any operation will need to have access to an appropriate array of lethal and non-lethal capabilities, be protected, equipped and structured to operate and survive in potentially lethal environments, while concurrently maintaining the potential to perform diverse humanitarian, counterinsurgency and peace support tasks. As a result, *AC-FLOC* as a single comprehensive concept integrates conventional combat, stabilisation, reconstruction, counterinsurgency, security, civil military cooperation, and humanitarian and peace support operations.

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[26] *WP 2009*, p. 22, para 2.19.
[27] *WP 2009*, p. 77, para 9.49.

CHAPTER 2
A VISION OF THE FUTURE

'The Hezbollah fighter wakes up in the morning, drinks his coffee, takes a rocket out of his closet, goes to his neighbour's yard, sticks a clock timer on it, goes back home and then watches CNN to see where it lands'.

LTC Ishai Efroni, Deputy Commander, Baram Brigade

INTRODUCTION

2.1   Future studies often rely upon past data to extrapolate trends in a linear manner to their natural conclusion. Some long term strategic trends are stable and can be predicted with a high degree of confidence. Many trends defy linear patterns and unexpected events can and do occur resulting in strategic shock. The HIV/AIDS epidemic, and the Global Economic Crisis are recent examples of historical discontinuities which were not foreseen and have had a major effect on world economies and societies. Therefore, despite the future being inherently unpredictable, trend analysis is sufficient to anticipate a future context with enough accuracy for the Army to adapt and modernise appropriately. This chapter reviews global and regional trends and projects these trends into the future to forecast the broad characteristics and security implications of the future global security environment.

THE FUTURE GLOBAL SECURITY ENVIRONMENT

2.2   The future global security environment represents a complex adaptive system. It will be affected by the interplay of state and non-state actors and shaped by a number of strategic drivers. The complexities of this system are such that it can only be adequately understood by interacting with the problem, learning from this interaction and adapting. An understanding of the relationships between actors and influences, and the trends that shape their interactions, will be critical to understanding the complexity of the operating environment and our application of *AC-FLOC*. There are a number of underlying assumptions which can be made about the future global security environment. Some of these assumptions can be made with confidence, others with some reservation.

2.3   **Globalisation**. A key influence on contemporary conflict is globalisation. A widely accepted definition of globalisation is 'a process of increasing connectivity, where ideas, capital, goods, services, information and people are transferred in near-real time across national borders'.[28] While globalisation is thought by many to be a stabilising influence on global affairs, during the last decade of the twentieth century and early part of the twenty-first century, globalisation has created both winners and losers. Poverty, disease and inequality remain major problems for much of the world, and the global economy has, in many cases, been seen as favouring Western ideals while failing many non-Western developing nations. Globalisation has therefore created enemies of the West, and given them unprecedented tools to further their cause. Globalised media, satellite communications, travel and commerce and the Internet facilitate the coordination of diffuse ideas that raise expectations, with the consequence of potential dissatisfaction. The free flow of capital, people and ideas allows the spread of ideologies inimical to globalisation, and provides the means for their further development. Additionally, while nation states and other actors are in a position to effectively extract economic, social and/or political gain from others, the threat of major conflict will remain.

2.4   **United States Conventional Military Primacy**. Our world is living in what has been described as a *unipolar moment*.[29] That is to say that one power is acknowledged to be

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[28] *Complex Warfighting* 2006.
[29] Charles Krauthammer, coined the term 'The Unipolar Moment' in a 1991 Foreign Affairs article. The Unipolar Moment, *Foreign Affairs*, Vol. 70, Iss. 1, 1990/1991, p. 23.

without peer. The United States has, since the demise of the former Soviet Union, enjoyed unprecedented dominance in conventional military power. Of note, a large proportion of that expenditure is in research and development which will continue to advance the already substantial technology edge of the US.

2.5   Due to its economic and technological prosperity, partly resulting from globalisation, the US has managed to build a military force without peer. As a result, conventional wars have tended to be brief, intense, and one-sided; resulting in rapid victory for the US, its allies, or the side in a conflict which best approximates US capabilities. US dominance has led to 'avoidance behaviour' by its opponents. Actors such as Al Qa'eda have thus adopted other strategies to achieve their ends. At the operational and tactical level these strategies are executed through a variety of means – terrorism, insurgency, subversion, and information operations – with a view to causing strategic exhaustion, rendering decisive military success problematic.

2.6   The long term strategic outlook will inevitably change. The United States will however remain the most powerful and influential strategic actor over the period to 2030.[30] China, India, Russia, Japan and the European Union will continue to exercise both global influence and in their respective regions in differing degrees.[31] There is likely to be tension as a result of these dynamics. In the coming decades, the potential to move from a uni-polar to multi-polar world is likely to present a range of challenges and opportunities. As a result of changes to the perceived balance of power, the possibility for miscalculation remains a concern and the potential for a confrontation between states remains a small but realistic possibility.[32] The potential for strategic miscalculation over Taiwan and between India and Pakistan represent such possibilities.[33] The pace and scope of China's military modernisation will have an effect within the region and is a cause of concern if confidence building measures are not established.[34]

2.7   **Intra-State Conflict**. The potential of major inter-state combat operations on traditional sovereignty issues will still be possible in the future. The most likely form of conflict over the coming decades however, is assessed to be smaller scale regional or intra-state conflicts. These types of conflicts may or may not involve state actors and/or their proxies. The key drivers in these conflicts will be cultural, ethnic and religious divides.

    a.   **Culture.** These divides risk being further accentuated by the intensity and breadth of outside Western influence on conservative cultures arising from globalisation and Western demands for respect for such issues as human rights, democracy, and freedom of speech to name but a few. This has fostered a growing resentment toward the West, to include Australia's region, as it is blamed for perceived inequalities and social decline. The choice of a bombing a Bali nightclub in 2002 for example, was also sending a message on the values and behaviour of Western tourists.

    b.   **Ethnicity.** Similar to cultural tensions, ethnic tensions tend to rise when identities are challenged by the kinds of major social changes that accompany modernisation, globalisation and migration. While current ethnic fault lines tend to be geographically centred, in the next twenty years globalisation will further unite ethnic diasporas around

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[30] *WP 2009*, p. 32, para 4.14.
[31] *WP 2009*, p. 32, para 4.14.
[32] *WP 2009*, p. 33, para 4.19.
[33] *WP 2009*, p. 34 para 4.24, p. 37 para 4.42.
[34] *WP 2009*, p. 34, para 4.26.

the world, including in the POE. Evidence of this can be seen in the UK where all of the extremists responsible for the London Underground bombing were ethnic Pakistanis born and raised in Britain. In the future, understanding and recognition of the ethnic makeup of a given environment and its ties to a global community will be even more critical.

c. **Religion.** Religion is an aspect of society that has historically caused division, creating friction and conflict. Many Western nations are now secular in belief, pluralistic in makeup and tolerant in outlook. In developing nations religious-based ideology motivates oppressed, impoverished, or culturally adrift populations. Those who seek national, regional, or even global goals of dominance are likely to increasingly employ religion, particularly in an extreme and often violent form to achieve their aims. The rise of religious radicalism, particularly radical Islamists has been of concern in the recent past and all indications are that this will continue in the future.[35]

2.8 **Population Growth Patterns.** The world population is anticipated to reach eight billion by 2030. The overwhelming majority of this increase (95%) will be in what is classified as the developing world.[36] In the majority of the developed world (with the notable exceptions of the US and Australia) the situation is the opposite with neutral or negative population growth. The broader impacts of this population growth and resultant changing demographics will vary greatly across the globe. Wealthy nations with decreasing and aging populations are likely to be pressured to respond to crises in less developed and overpopulated nations. Indicative pressures may be mass migration, humanitarian crises and natural disasters as stressed populations in poor nations seek a better life elsewhere.

Major Urban Environments

URBAN POPULATION 2030

5 to 8 Million | 8 to 10 Million | Over 10 Million
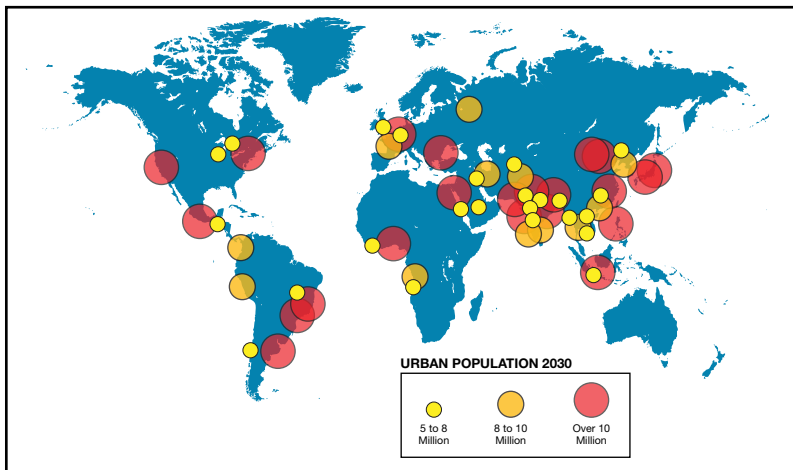
- In 2007, 50% of the world's population lived in cities.
- By 2030, 65% of humanity will live in cities -5.5 billion human beings.
- Megacities are located near the oceans, and subject to severe environmental, social, and political pressures

Source: United Nations World Urbanization Prospects

Figure 1. Urbanisation and Global Population Growth Forecasts

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[35] *WP 2009*, p. 37, para 4.47.
[36] UN World Urbanization Prospects 2005.

2.9   **Resource Competition.** Economics and the natural resources required to sustain economic activity and standards of living around the world are central to an understanding of instability, war, and the will and ability of states, organisations, and individuals to be involved in conflict. Climate change, increasing energy demands, competition for fossil fuel resources and market fluctuations are all likely to have wide-ranging economic and resource impacts on Australia, its region, and globally.

2.10   The outlook for a guaranteed water supply in various regions of the world is of concern. By 2015 nearly half the world's population—more than 3 billion people—will live in countries that are "water-stressed"—mostly in Africa, the Middle East, South Asia, and northern China, not to mention Australia. Water shortages occurring in combination with other sources of tension are potential sources of conflict, particularly in the Middle East. By way of perspective, over 300 water-management related treaties exist between nations.[37]

2.11   **Urbanisation.** The twentieth century has witnessed rapid urbanisation of the world's population. According to the 2005 revision of the U.N.'s *World Urbanisation Prospects*, over half of the world's population now live within urban centres.[38] By 2030 this is expected to grow to 60%, and the rate of urbanisation in the Oceanic region is predicted to remain amongst the highest in the world.[39] Providing for these growing urban populations will challenge regional governments and their public infrastructures. If these governments are unable to provide for the basic needs of their people, the potential for chaos and civil unrest will be heightened. One of the other potentialities arising from urbanisation, accompanied by overcrowded and unhygienic living conditions, is the heightened risk of disease and epidemics.[40]

2.12   Operating in urban terrain, in combat or not, absorbs larger numbers of ground troops than operations in any other type of terrain. Moreover, urban combat tends to produce heavier military casualties among ground forces than combat in other types of terrain. It can also produce high civilian casualties and severe collateral damage, especially when the enemy is a home-grown irregular force willing to deliberately exploit protection from detection and attack afforded by concealment 'among the people'.

2.13   **Technological Advances.** Advances in science and technology over the next 15 years will generate dramatic breakthroughs in such fields as agriculture, health, communications and commerce, with many uneven repercussions for the Land Force. Technology has enabled land forces to deliver tremendous precision firepower, travel swiftly in helicopters, communicate data and images securely while intercepting adversary's communication, and operate effectively at night. While this is a strength, an overreliance on technology can also create a vulnerability for our opponents to exploit. It can be noted that despite miniaturisation and the development of lightweight materials, the modern soldier's load still differs little in weight and volume from his predecessor.

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[37] USJFCOM Joint Operational Environment, Nov 2008.
[38] The United Nations, *World Urbanisation Prospects: The 2005 Revision*.
[39] USJFCOM Joint Operational Environment.
[40] Australian Government Department of Health and Ageing, http://www.health.gov.au/internet/main/Publishing.nsf/Content/pubhlth-pandemic-healthcare-cmoletter.htm.

2.14   These technical advances ensure that the Land Force will tend to be superior in combat power to most intra-state opponents, however the state no longer has the monopoly on advanced weaponry. Terrorists groups and irregular forces with world wide links and financial resources are able to acquire the means and knowledge of increased lethality through rapidly exploiting new and/or 'dual use' technologies.[41] Use of dual use technologies means that the possibility of irregular forces or a terrorist group gaining control of Weapons of Mass Destruction (WMD) cannot be discounted.[42] Additionally, commercially available technology can also be exploited by such forces and groups to enable their operations. Technologies such as mobile phones can be used to activate improvised explosive devices with the results captured on digital cameras, transmitted via satellite phones and posted on internet chat rooms for a world wide audience.

2.15   **The Global Economic Crisis.** The Global Economic Crisis will have strategic impact across the globe, dependant on the duration, and depth of the crisis. Significant shifts in relative economic power between nations may occur over time, due to the differing degrees of potential economic damage from nation to nation.[43] Developing nations will suffer the largest reductions in growth, leaving them easier targets for foreign influence, and exacerbating existing social instability presenting the potential for a rise in extremism.[44]

THE FUTURE REGIONAL SECURITY ENVIRONMENT

2.16   **Impact of Global Trends in the Region.** The global trends outlined continue to play out in our region. Globalisation has seen the development of strong economic interdependence particularly amongst the South East Asian countries. This should help build a sense of shared purpose[45] which will assist with stability and security in this region. At the same time East Timor and the South Pacific have seen limited economic benefit outside the commodity markets, but have felt the impacts of globalised media and communications. The interconnected nature of economies especially in South East Asia has exacerbated the effects of the Global Economic Crisis. Conversely, this crisis is also likely to accelerate the shift of economic weight to the Asia Pacific Region.[46]

2.17   Population and subsequently urban growth will continue to stress traditional society structures and the ability of the state to provide basic services and law enforcement. To illustrate this trend, the population in the Pacific will double in the next fifty years. In Melanesia[47], a significant 'youth bulge'[48] has resulted in a high rate of unemployed youth, estimated at 15.8%.[49] Jakarta already qualifies as one of Asia's mega cities, with a population of over 10 million, future urban growth within the region is illustrated in Figure 3. Resource distribution

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[41] *WP 2009*, p. 23, para 2.25.

[42] *WP 2009*, p. 38, para 4.49.

[43] *WP 2009*, p. 31, para 4.8.

[44] *WP 2009*, p. 31, para 4.9, para 4.10

[45] *WP 2009*, p. 33, para 4.18.

[46] *WP 2009*, p. 31 para 4.12.

[47] Pacific 2020 Project 2006, *Pacific 2020 Challenges and Opportunities for Growth*, www.ausaid.gov.au, p. 27.

[48] AusAid 2009, *Australian Aid: Promoting Growth and Stability*, www.ausaid.gov.au /publications/whitepaper p. 5.

[49] International Labour Office 2006, *Global Employment Trends for Youth*, International Labour Organsiation Switzerland www.ilo.org/asia/info/public

remains problematic. Papua New Guinea has rich resources to extract but is limited by lack of infrastructure and social cohesion. Climate change and the rise of sea levels threatens the long term viability of some island nations. Although Indonesia has proven to be a strong partner in the fight against terrorism,[50] we know that terrorist cells continue to operate in the country. The continuing internal instability of East Timor, and many South Pacific island nations are of concern.[51]

POPULATION CONCENTRATIONS IN THE POE
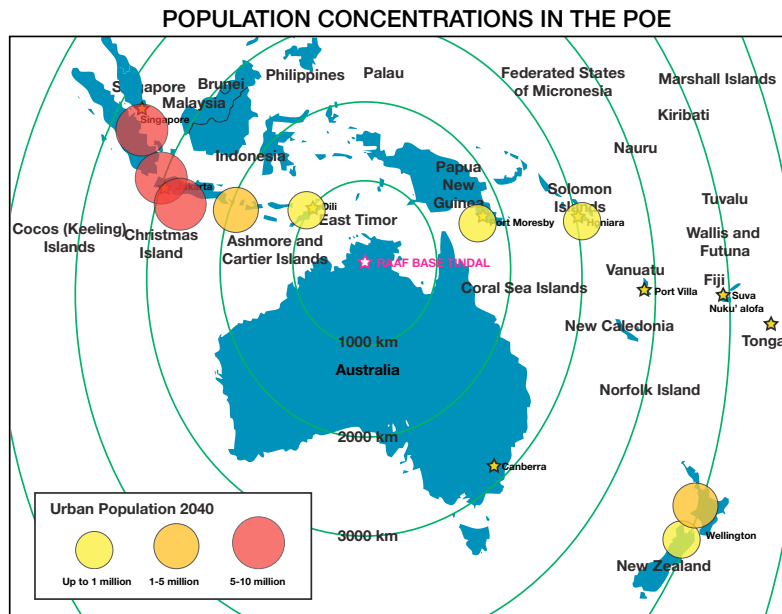
Figure 2. Regional Urban Growth Forecasts

2.18 **Security Implications.** The overall stability of our region is underpinned by the continued presence of forward deployed US forces. While this situation is likely to continue in the foreseeable future Australia, must be prepared to provide "active assistance" in the maintenance of regional security arrangements. In the worst case, we must be prepared to defend the nation without the assistance of coalition partners. Strategically, this requires the ADF to control the sea-air approaches to Australia.[53] At the operational level this requires an expeditionary orientation and the ability to power project.[54] Given the increasing trend of urbanisation within Australia's region, the future Land Force will need to be capable of conducting operations within complex urban environments. Additionally, due to the combined trends of population growth and urbanisation, the range of the future contingencies the Land Force may be required to respond to is likely to increase.

2.19 **The Primary Operational Environment (POE).** To guide defence planning, the Government has delineated a geographical area on which to focus. As demonstrated in

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50 *WP 2009*, p.35, para 4.32.
51 *WP 2009*, p.35, para 4.35
52 *WP 2009*, p. 33, para 4.17.
53 *WP 2009*, p. 51, para 6.41.
54 *WP 2009*, p. 52, para 6.42.

Figure 2 the POE is large and diverse and encompasses Australia's large land mass and long coastline to the archipelagic waters of our northern neighbours and the remote island nations of the South Pacific. Moreover, the land environments range from the tropics to the tundra and from sparsely populated desert to the densely populated cities. The primary physical characteristics of the POE are its littoral nature, vast spaces between areas of human habitation, and the presence of complex terrain. The broad range of land environments tend to coalesce such that urban areas exist in close proximity to a mix of agricultural land, coastal planes, steep mountains, thick tropical vegetation, and coastal waterways. Yet, they tend to be isolated by expanses of ocean or sparsely populated arid areas. The region also exhibits wide socio-ethnic diversity both between nations, and more significantly, within nations. Religious and cultural divides continue to form a basis for separatist movements in nations with weak internal bonds of national cohesion. The ethnic diasporas also represent a political and economic force within the nations of the POE, including Australia. The physical, human, and informational terrain found in the POE is as complex and challenging as any that the Army has operated in the past or present.
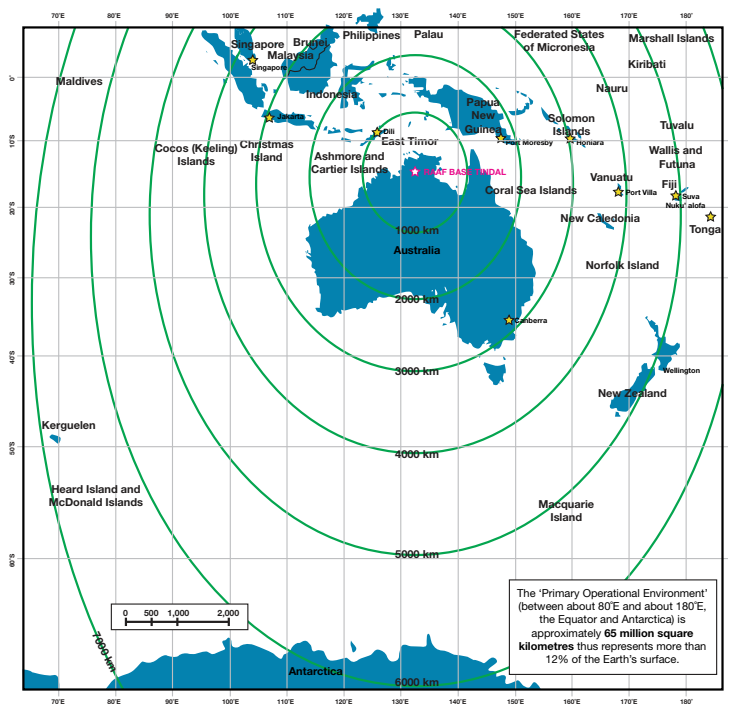
Figure 3. The Primary Operational Environment

2.20   Australia will need to continue to be prepared to contribute to the stability and security of the South Pacific and East Timor,[55] and to intervene in failed or fragile states as these have the potential to be vulnerable to adverse influences.[56] Other security issues within the POE which could require potential security assistance include regionally based terrorism and other transnational security issues such as people smuggling, piracy, illegal drug distribution and separatist insurgency.

[55] *WP 2009*, p. 59, para 8.12.
[56] *WP 2009*, p .35-36, para 4.34.

CHAPTER 3
THE COMPLEX OPERATING ENVIRONMENT

The Land Force will need to be designed for contingencies in complex environments, and optimised for a diverse range of operations in complex terrain.

INTRODUCTION

3.1   Change in warfare is a product of technological and social change. The social and technological trends outlined in the previous chapter are likely to have a parallel impact on the character of future warfare. This chapter reviews contemporary trends in warfare and combines these with global and regional trends to extrapolate the characteristics of the future operating environment, particularly in the POE. This analysis reveals that the future operating environment is likely to be complex. Therefore, adaptability is an essential quality for the Army to be effective into the future.

3.2   **The Three-Block War.** In 1997, General Charles Krulak, then Commandant of the US Marine Corps, first introduced the concept of the 'three block war'. This concept predicted that:

> *'in one moment in time soldiers could be providing humanitarian assistance. In the next moment, they will be holding two warring tribes apart – conducting peacekeeping operations – and finally, they will be fighting a highly lethal mid-intensity battle – all on the same day… all within three city blocks'[57].*

3.3   The reality of the modern battlespace since that time is that rather than the diverse range of activities occurring at separate times, on separate blocks, they are likely to occur all at once, on the same block. In other words, the *One Block War* or *Complex War*.

3.4   **Complex War.** While globalisation has seen growing interdependence between states it is considered premature to rule out future high intensity wars between states, including the major powers.[58] While recognising the potential for major state-on-state conflict, *WP 09* states that intra state conflict will be an enduring feature, and the most common form, in the period to 2030.[59] This intra-state conflict will demonstrate a mixture of conventional and unconventional forces using a combination of violence and non-violence. It will include conventional firepower and manoeuvre, abductions and assassinations, subversion and insurgency. It will entail attacks on infrastructure to produce economic paralysis, but also against military targets to induce exhaustion or provoke overreaction leading to the killing or abuse of civilians. Resistance will also include popular mobilisation and protest, social services and legitimate political activity and propaganda.

3.5   Resistance may include criminal activity, Molotov cocktails, suicide bombers and roadside bombs combined with latest generation artillery and antitank missiles. Moreover, it will also include distributing aid to those in need and running for elective office. Clausewitz argued that war needed to be viewed as a whole rather than as a sum of its parts. *Complex War* demands such a comprehensive approach. In *Complex War* everything is connected and little separates the tactical from the strategic. It involves the interplay of multiple diverse actors, all competing to influence the allegiances and behaviours of individuals, groups and societies, creating a

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[57] Address by Charles C. Krulak, General, Commandant of the Marine Corps delivered to the National Press Club, Washington, D.C., October 10, 1997.
[58] *WP 2009*, p. 22, para 2.17.
[59] *WP 2009*, p. 22, para 2.20.

complex system.[60] The nature of this system is such that at each level, individuals, groups and societies are learning and adapting – *a Complex Adaptive System*.[61]

3.6 **Trends of Future Warfare.** The future security environment is characterised by its complexity, diversity, diffusion and lethality. This characterisation is premised on three connected and enduring warfare trends. These trends are:

a. **Diffusion of Lethality.** The lethality of battlefield weapons has been improving steadily since prehistory. These advances have both substantially increased the lethality of the battlespace and imposed a number of tactical adaptations. Napoleon described *'the interchangeability of shell and bayonet'*. In this he recognised that large amounts of offensive support can reduce the demand for manoeuvre forces and vice-versa. The lethality of modern offensive support has altered the balance point in favour of fires. Additionally, unprecedented levels of lethality are now available to individuals not just larger organisations. High levels of lethality are no longer restricted to nation states and regular armed forces. High lethality does not necessarily come with a detectable 'tactical signature'. This means land forces can encounter individuals or groups with extremely high lethality, without warning, in any type of operation.

b. **Disaggregation of the Battlespace.** Due to increasing lethality modern combatants have been forced to disperse. Rapidly improving Intelligence, Surveillance, Targeting, Acquisition, Reconnaissance and Electronic Warfare (ISTAREW) capabilities have further accelerated this trend by forcing ground forces to manoeuvre in force packages that are small enough to shelter from detection in complex terrain. Conversely, the same technological trends, properly harnessed, have enabled individuals and small groups to develop significant increases in combat power. While traditionally these trends were thought to apply only to the side of the irregular enemy, it applies equally to combat between peer competitors and/or conventional forces. As a result, there are no longer any fronts and flanks or forward or rear areas on the modern battlespace - it is now disaggregated and largely devoid of any identifiable framework.

c. **The Myth of the Empty Battlefield.** From the time of the WWI to the present the troop density or force to space ratio on the battlefield has continued to fall. Increased weapon ranges and lethality have forced land forces to disperse for survivability. As a result of more capable sensors, targeting and fire control systems a contemporary unit

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[60] Complex systems need to be approached in a fundamentally different way to complicated systems. Complicated is a word which includes the Latin ending "plic", meaning "to fold". Thus a system which is complicated can be unfolded into simpler components which can be more easily understood. Even when interactions between components occur, the effect of multiple interactions can be considered separately and then recombined in any order: linear superpositionality holds. Complex on the other hand ends in the Latin "plex", meaning "to weave". A crucial element for a system to be considered complex is the presence of nonlinear interacting feedback loops between variables. The presence of these feedback loops means that knowing all the components of a system and how they interact with one another does not mean you can predict how the entire system will behave as a whole.

[61] Complex Adaptive Systems (CAS) are fluidly changing collections of distributed interacting components that react to their environments and to one another. They are complex in that they are diverse and interconnected and adaptive in their capacity to change and learn from experience. CAS research and its application to defence has allowed us to develop a deep understanding of how living systems are able to exploit the power of adaptation to display agility, flexibility, resilience, responsiveness, robustness and innovation in the face of complex challenges, and more importantly, continue to improve their ability to do so. These are the same properties we'd like to foster in our own systems, organisations, teams and processes, so this research provides useful and important insights into how to do that.

can control ten times the ground than an equivalent size unit in the First World War. This gives rise to the myth of the empty battlefield. In reality the battlefield may be appear less populated but given advanced sensors and precision stand-off weapons it is definitely more complex and dangerous.[62]
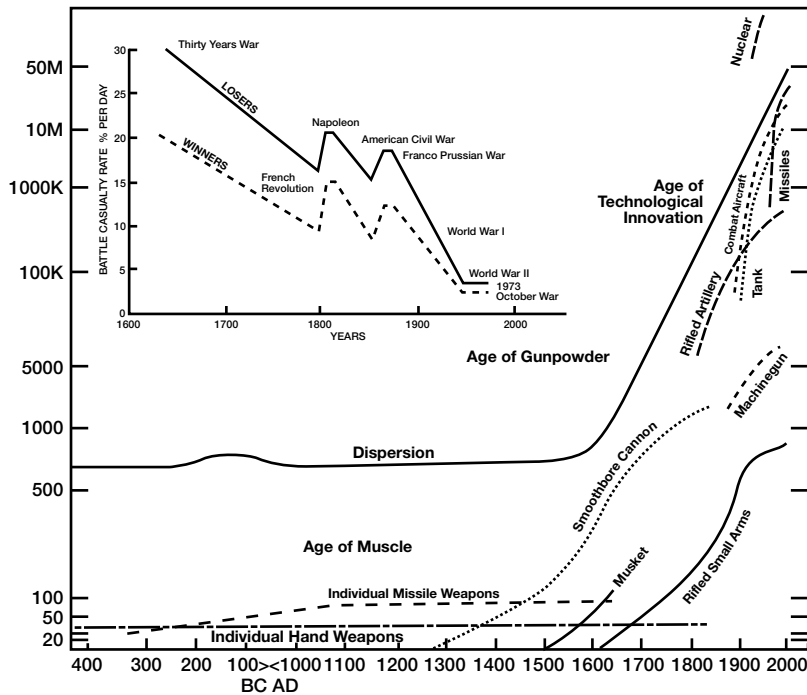
Figure 4. Increase of Weapon Lethality and Dispersion over History

COMPLEX TERRAIN

3.7 **Retreat into Complex Terrain.** As ISTAREW technologies continue to improve, enemies are increasingly seeking to shelter in complex terrain. Complex terrain includes complex physical terrain, complex human terrain and complex informational terrain:

    a. **Complex Physical Terrain.** Examples of complex physical terrain include urbanised areas, littoral regions, crop cultivation, swamps and estuaries, jungles and mountains.[63] Such terrain typically comprises a mosaic of open spaces and patches of restricted terrain which prevent movement and deny observation. This means that without warning, forces can find themselves in close combat.

    b. **Complex Human Terrain.** Complex human terrain is where numerous population groups coexist in the same physical space – complexity of human terrain increases

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[62] Max Boot, *War* (2006), Cambridge University Press Cambridge.

[63] Complex terrain, in the physical sense, is defined by DSTO as terrain where weapon range exceeds sensor range – hence, forces cannot achieve unobstructed situational awareness to maximum effective range of their weapons. The categorisation of complex terrain is linked to a function of the Land Forces ISTAREW capabilities.

as a function of population density. Human complexity might include ethno-linguistic groups, political factions, tribes or clans, religious sects, or ideological movements and their agendas and propensities. These groups may coexist peacefully, ignore each other, or compete (with or without violence). When military forces operate in this terrain, distinguishing between population groups is extremely difficult and requires sophisticated societal, cultural and linguistic understanding.

    c.   **Complex Informational Terrain.** Complex informational terrain describes the multiple sources for the exchange of information exist in an operating environment. This includes more traditional language mediums but increasingly involves modern technologies for communications, data or information transfer. A force operating in such an environment will be unable to control all information flows in its area of operations.

> *The realities of the modern battlespace are such that it represents an amalgam of complex physical, human and informational terrain.*

3.8   The implications of these trends are such that for the foreseeable future, the Land Force needs to be structured and prepared to fight 'wars amongst the people', at short notice, in close cooperation with the interagency and other services, from over the horizon, and across the shore.[64] In this paradigm, the Land Force will normally find itself fighting for and not necessarily with all of the information it requires. This gives rise to three emerging characteristics of *Complex War*.

3.9   **Detection and Discrimination Thresholds.** While modern ISTAREW capabilities often allow us to readily detect the presence of a potential threat, even in complex terrain, the Land Force needs to be capable of discriminating between enemy combatants and the multitude of other actors that are likely to be present within the battlespace in terms of both sensing and acting. In terms of sensing, this implies knowing who should and should not be targeted. In contrast, acting is about achieving the required outcome. It involves the ability to appropriately tailor the response and, if necessary, shape the environment to minimise collateral damage and undesirable consequences. Ideally, with the application of appropriate strategic, joint, and land ISTAREW assets, the detection and discrimination thresholds in Figure 5 will become fused or barely separable to near real-time.

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[64] General Sir Rupert Smith (2007), The Utility of Force, Penguin, London.

What can be discriminated can be targeted!

The Land Force must have the capabilities to discriminate in relation to both sensing and acting
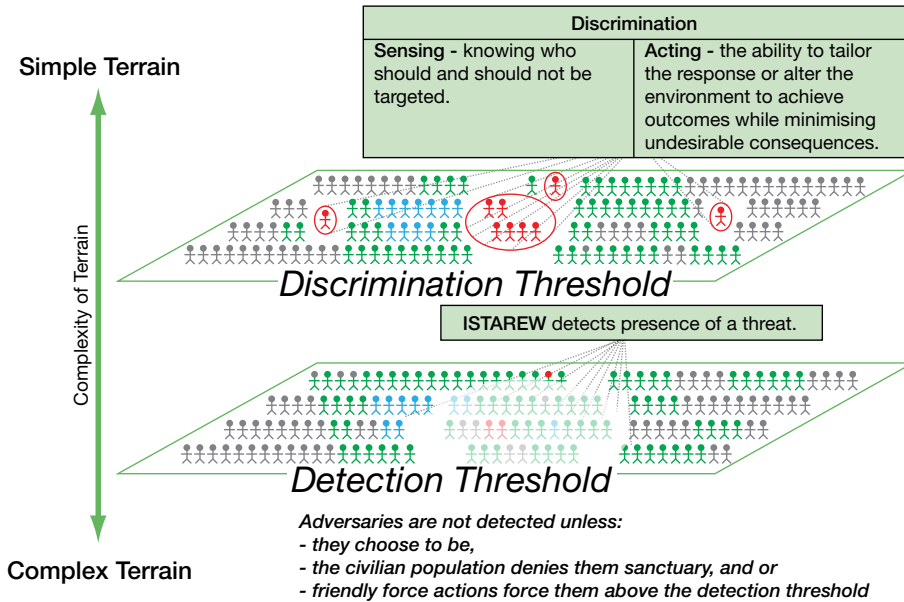

Figure 5. The Discrimination Threshold

3.10   The Dominant Narrative.   Future conflict must not only be won on the battlefield but in the minds of people. Perception management is a vital component of not only winning but to be seen to be winning. The means of dissemination is through the *dominant narrative*. The *dominant narrative* is the fundamental 'story' or perception that has been established as valid in the minds of the one or more target audiences. It will be established by Government prior to deployment and based on strategic guidance developed through a Whole of Government process.

3.11   Potential adversaries have already recognised the strategic importance of the *dominant narrative* battle and will continue to develop and employ increasingly sophisticated methods in that battle. Influencing public perceptions of battlefield and strategic events will become both more important and more difficult. Commanders even at lower levels may find themselves as concerned with shaping the narrative of those events as with planning and conducting the operations that produce them.

3.12   The requirement for transparency, within the bounds of operational security, will put greater pressure than ever before on commanders at all levels. Every decision and action will be scrutinised in real time by a media whose independent access to information will be virtually impossible to restrict. As a function of globalisation the information environment is increasingly connected and accessible. The net effect of proliferation of mobile and digital technologies, combined with the internet has led to a democratisation of the media where anyone with a laptop, almost anywhere in the world, can publish their own account of the news and upload it available for global consumption all within seconds.

3.13   The public demand for information and concomitant rise in capability of communication technology has seen media outlets adapt to meet that demand. This has seen the introduction of the 24 hour news cycle and the pervasive nature of media representatives who transcend borders and allegiances. Western media were present both in Baghdad awaiting the arrival of US forces in 2003 and also embedded with assaulting US forces. The evolving nature and impact of technology in the decentralisation of media is illustrated in Figure 6.

3.14   The Land Force's ability to manage the content and flow of information entering the public domain is more limited than ever and this trend is more likely to continue that not. The rise of social-networking sites such as Facebook and MySpace, sanctioned and unsanctioned weblogs, and digital technology sites such as YouTube are all harbingers of the future 'infoscape'. This technology is freely available for any combatant to use and exploit, and enables the production and distribution of content without reference to traditional media outlets. It is difficult to control and therefore its power should be managed and leveraged to support the *dominant narrative*. The enemy's ability to counter our narrative and cast doubt on our veracity and even disseminate their own narrative will need to be guarded against. Current social networking sites and the future development of semantic networks may also produce 'closed' communities of interest, where individuals only 'subscribe' to the information they wish to receive and access that information when it suits them, thus limiting opportunities for timely and broad based dissemination of our narrative.

3.15   Establishing the dominance of our narrative over that of the threat is the overriding aim in the battle for the minds of people and is essential to the overall success of the campaign. To this end, the strategic communications plan must be synchronised across all agencies and all levels of operational command.

3.16   The success of the *dominant narrative* will be contingent upon it being based on a strong ethical and moral foundation. Conversely, the dominant narrative can be easily undermined by the perceptions of the target population as a result of the inappropriate actions of individuals who fail to act within the ethical and moral framework of the Army as articulated in the nine core behaviours of the Australian Soldier.
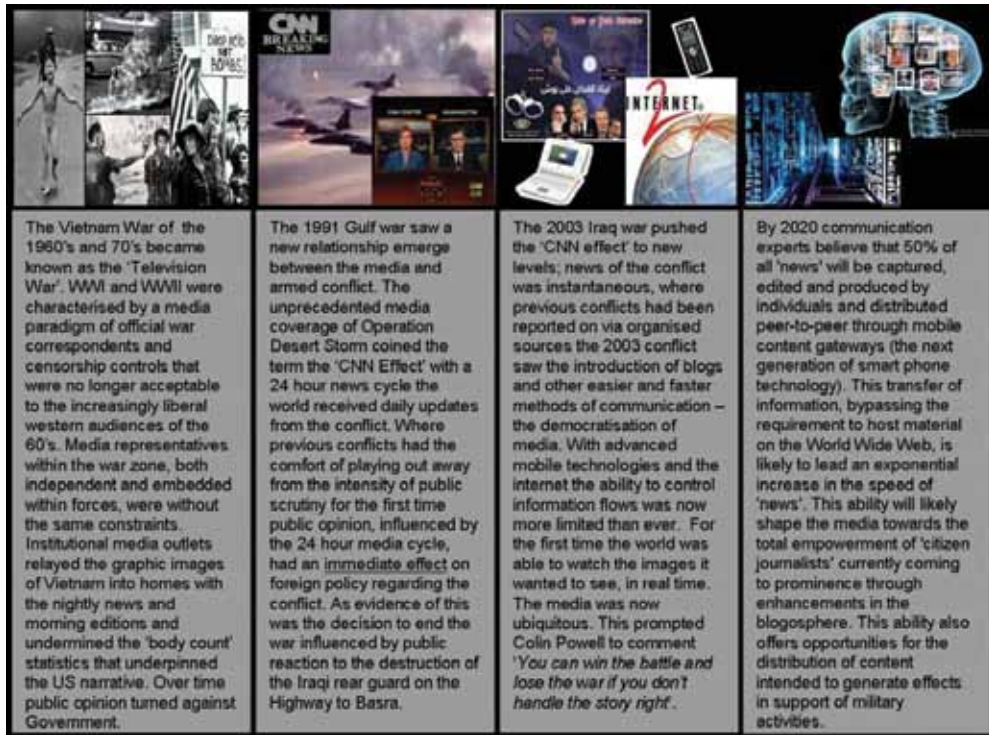
The Vietnam War of the 1960's and 70's became known as the 'Television War'. WWI and WWII were characterised by a media paradigm of official war correspondents and censorship controls that were no longer acceptable to the increasingly liberal western audiences of the 60's. Media representatives within the war zone, both independent and embedded within forces, were without the same constraints. Institutional media outlets relayed the graphic images of Vietnam into homes with the nightly news and morning editions and undermined the 'body count' statistics that underpinned the US narrative. Over time public opinion turned against Government.	The 1991 Gulf war saw a new relationship emerge between the media and armed conflict. The unprecedented media coverage of Operation Desert Storm coined the term the 'CNN Effect' with a 24 hour news cycle the world received daily updates from the conflict. Where previous conflicts had the comfort of playing out away from the intensity of public scrutiny for the first time public opinion, influenced by the 24 hour media cycle, had an immediate effect on foreign policy regarding the conflict. As evidence of this was the decision to end the war influenced by public reaction to the destruction of the Iraqi rear guard on the Highway to Basra.	The 2003 Iraq war pushed the 'CNN effect' to new levels; news of the conflict was instantaneous, where previous conflicts had been reported on via organised sources the 2003 conflict saw the introduction of blogs and other easier and faster methods of communication – the democratisation of media. With advanced mobile technologies and the internet the ability to control information flows was now more limited than ever. For the first time the world was able to watch the images it wanted to see, in real time. The media was now ubiquitous. This prompted Colin Powell to comment 'You can win the battle and lose the war if you don't handle the story right'.	By 2020 communication experts believe that 50% of all 'news' will be captured, edited and produced by individuals and distributed peer-to-peer through mobile content gateways (the next generation of smart phone technology). This transfer of information, bypassing the requirement to host material on the World Wide Web, is likely to lead an exponential increase in the speed of 'news'. This ability will likely shape the media towards the total empowerment of 'citizen journalists' currently coming to prominence through enhancements in the blogosphere. This ability also offers opportunities for the distribution of content intended to generate effects in support of military activities.

Figure 6. The Dominant Narrative - time compression and democratisation of media

3.17 **Operational Uncertainty.** As a consequence of enemies attempting to shelter below the *discrimination threshold*, the complexities of the battlespace, and increased lethality, *Complex War* is characterised by unpredictable rapid spikes in the level of violence – *Operational Uncertainty*. As a result, Land Forces which have traditionally focused on warfighting, at least early in a campaign, are likely to be required to take on a range of additional responsibilities. This is because the Land Force is better placed to cope with *Operational Uncertainty* than are Other Government Agencies (OGA) and Non-Government Organisations (NGOs). Consequently, the Land Force needs to establish enduring relationships with all stakeholders to ensure that they are prepared for tasks early in a campaign. The effects of *Operational Uncertainty* are further compounded by the adaptive nature of the enemies who will attempt to exploit Land Force capability gaps and/or limitations. This concept of uncertainty is diagrammatically represented at Figure 7.
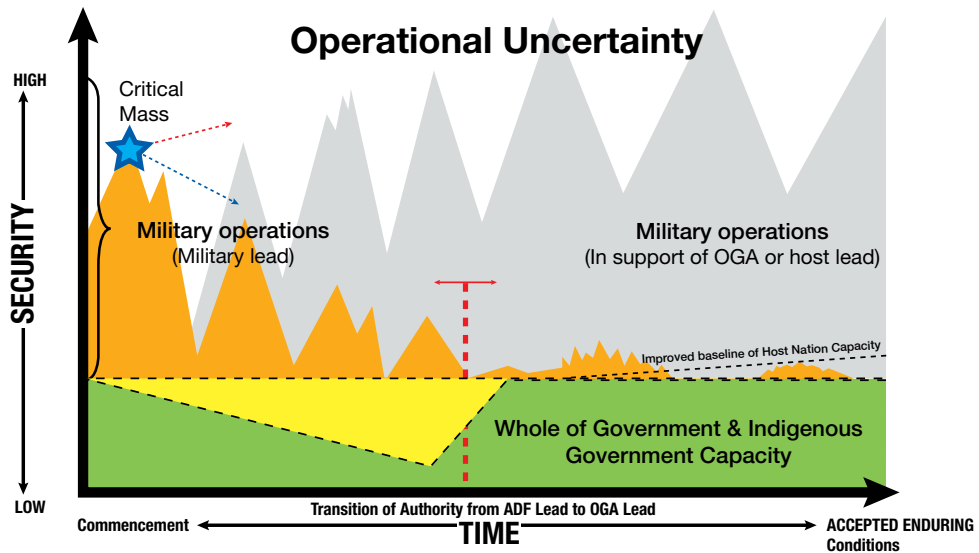
**Operational Uncertainty – ** fluctuations in the likelihood and intensity of rapid strikes in violence. Note: Threat spikes in violence are likely to reduce in severity provided the Land Force is able to reach critical mass in terms of numbers of security personnel in relation to both population density and adversary numbers. However, over time the threat is likely to adapt to exploit the capacity gap that traditionally exists between military and policing operations. The diagram depicts that even after operations have commenced it will still be a period of time before the level of violence is reduced. This has significant impact on WOG and Indigenous Government Capacity.

Figure 7. Profile of a generic operation in a Complex Environment depicting Operational Uncertainty

Critical Mass - while it is difficult to anticipate the force size and the time required to restore and maintain order in a failed or failing state, the RAND study by J.T. Quinlivan titled 'The Painful Arithmetic of Stability Operations'[65] states that the required force size is related closely to the population in the failed or failing state. Although numbers alone do not constitute a security strategy, successful strategies have required force ratios either as large as, or larger than, 20 security personnel per thousand inhabitants. This figure is roughly 10 times the ratio required for simple policing of a tranquil population.

The analysis in Part 1 reveals that the future operating environment is likely to be complex. While war has always been complex, the complexity of future wars will take a new form, necessitating greater adaptability from those actors that wish to be successful. Therefore, adaptability is an essential quality for the Land Force to be effective into the future. Part 2 of *AC-FLOC* articulates the Army's concept for dealing with the anticipated future operating environment – Adaptive Campaigning.

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[65] J.T. Quinlivan (2003), *The Painful Arithmetic of Stability Operations RAND Corporation*, www.rand.org/publications/randreview/issues/summer2003

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PART 2
THE RESPONSE

CHAPTER 4
ADAPTIVE CAMPAIGNING

INTRODUCTION

4.1   The Land Force response to the complexities of the future security environment is Adaptive Campaigning. Adaptive Campaigning is defined as: **'Actions taken by the Land Force as part of the military contribution to a Joint and Whole of Government approach to resolving conflicts and advancing Australia's national interests.'** Adaptive Campaigning aims to influence and shape the overall environment to facilitate peaceful political discourse and to stabilise the situation with conditions conducive to Australia's national interests as described in *WP 09*.[66]

4.2   The Future Joint Operating Concept (FJOC) defines six joint warfighting functions. These are: force application; force deployment; force protection; force generation and sustainment; command and control (C2), and knowledge dominance. Adaptive Campaigning derives a number of broad elements from these warfighting functions that support Land Force operations within a Joint and Whole of Government construct. These elements and the Joint Warfighting function that they are associated with, are listed below:

  a.   **Shaping actions.** (C2; knowledge dominance; force deployment). Effective shaping operations may reduce or remove the requirement to conduct armed intervention and/ or reduce response times. Shaping actions include, but are not limited to, cooperative regional engagement, force preparation, pre-positioning, amphibious manoeuvre, and Special Operations.

  b.   **Mandate for interventions.** (C2; knowledge dominance; force deployment; force protection). Establishing a mandate for intervention, in accordance with international law, the Laws of Armed Conflict, Australian National policy and the *Australian Approach to Warfighting*. A mandate reflects an international consensus on the relative validity of the political propositions being supported by the application of violence. The time taken to allow political discourse to establish a mandate will impact on all elements of conflict resolution. The Land Force must be prepared for entry conditions to adversely deteriorate during this time.

  c.   **Force projection and sustainment.** (C2; force application; force generation and sustainment; force deployment). This will include, in a joint context, preparedness requirements for individual and collective training, force preparation and mission rehearsals, operational preparation of the battlespace, advanced force operations, reconnaissance, deployment, force rotation and reconstitution. By necessity, it must include the requirement for at least localised sea and air control, ship-to-shore sustainment, manoeuvre in the littoral, and potentially amphibious manoeuvre. Force sustainment will incorporate a mix of integrated sea-based and air logistics.

  d.   **Defeating armed forces.** (C2; force application; force deployment; force protection; knowledge dominance). The defeat of conventional, unconventional and irregular armed forces is necessary: to safeguard our territory, critical sea lanes, population and infrastructure; to, in the region, counter coercion or aggression against our allies and partners;[67] and in stability and security operations, allow sustained access to local populations.

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[66] *WP 2009*, Chap ter 5 , p 41-45.
[67] *WP 2009*, pp 53-55, para, 7.2, para 7.15.

e. **Counter-insurgency and Rule of Law.** (C2; knowledge dominance; force application; force deployment). Establishing sufficient control of the environment to prevent an insurgency or, if one already exists, defeating it while combating criminal activity[68] in order to establish the conditions for law, order and justice. This may also entail the distribution of aid and/or essential services in order to meet the immediate needs of the affected.

f. **Governance.** (C2; knowledge dominance). Setting conditions for the development of an acceptable government combined with governance that meets the needs of its people.

g. **Support to Transition.** (C2; knowledge dominance). Returning control to acceptable and accepted indigenous or international agencies and/or service providers[69] as soon as possible.

FIVE LINES OF OPERATION

4.3   As depicted in Figure 8, Adaptive Campaigning comprises five mutually reinforcing and interdependent lines of operation (5 LOO), that represent a philosophical conceptual framework for the conduct of Adaptive Campaigning, and are present in all conflicts. The weighting between them is determined by the conditions, and changing conditions, of each conflict. However, they are not prescriptive and are not intended to be a template for direct application in campaign design. A detailed functional analysis of the 5 LOO is contained in annex A. The 5 LOO are:

a. **Joint Land Combat -** actions to defeat organised resistance and secure the environment in order to set and sustain the conditions required for the other lines of operation.

b. **Population Protection -** actions to provide protection and security to threatened populations in order to set the conditions to establish order and the rule of law.

c. **Information Actions -** actions that inform and shape the perceptions, attitudes, behaviour, and understanding of target population groups; assure the quality of our own information; while attempting to disrupt or dislocate[70] enemy command capabilities. When undertaking information activities the Army will always engage with the Australian public in an honest and ethical manner.

d. **Population Support -** actions to relieve immediate human suffering by establishing, restoring, or temporarily replacing necessary essential services in affected communities. By doing so these actions seek to positively influence the population and their perceptions.

e. **Indigenous Capacity Building -** actions to nurture the establishment of capacity within civil communities whilst simultaneously working to establish longer term governance and socio-economic capacity which meets the needs of the people. This may include; micro financial initiatives, local and central government reform – security, police, legal, financial and administrative systems.

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[68] In *Adaptive Campaigning - Future Land Operating Concept* criminal activity may include transnational and organised crime and/or individualised criminal actions.

[69] This may include but is not limited to commercial contractors and/or international aid organisations.

[70] Disrupt applies to a direct attack that seeks to neutralise or destroy an enemy. Dislocation involves actions to render an enemy's strength by not allowing it to be employed at the critical time or place (LWD 1 – 2008).
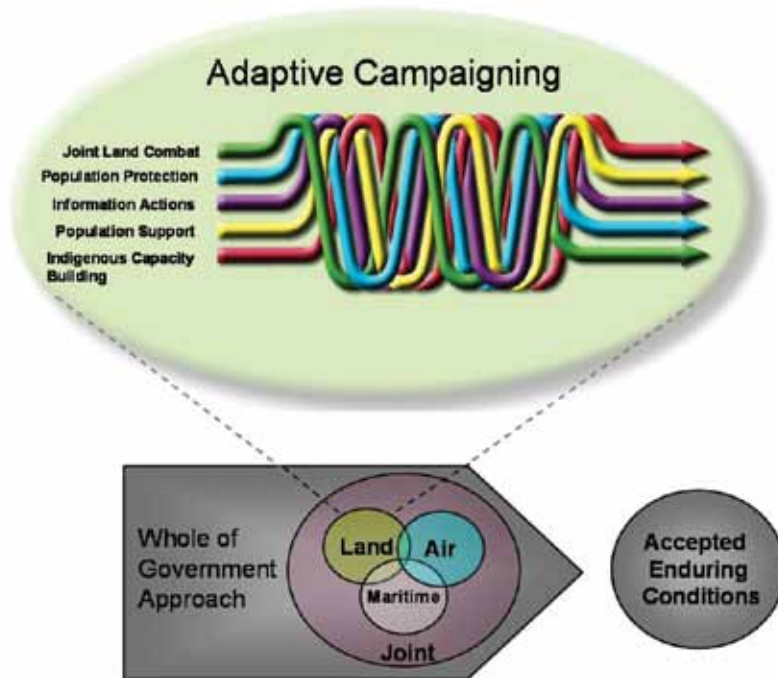
Figure 8. Adaptive Campaigning - Lines of Operations

Figure 8 provides the philosophical framework for the Land Force response. It illustrates the requirement to conduct actions within all lines of operation simultaneously, although not necessarily with equal effort or priority. While initially Joint Land Combat may be the number one priority for the Land Force at the commencement of the operation, it is the success of Indigenous Capacity Building that will often establish the enduring accepted conditions that enable a reduction of military presence. The Information Actions line of operation will remain central to campaign success and will tie all of the other lines of operation together. As a consequence of Operational Uncertainty, the Land Force must be able to shift its Main Effort between and within the lines of operation as the situation demands.

4.4   Success will be dependant on the Land Force's ability to effectively orchestrate effort across all five lines of operation. Historically, these lines of operation have been a component of all wars; however, recognising the demands of complex war, Adaptive Campaigning emphasises a comprehensive approach to campaigning that focuses on the interdependence of each of the lines of operation. Operational experience demonstrates that tactical actions taken within one line of operation can impact on one or more of the other lines of operation. These impacts can be positive or negative and judgement should be used to guard against unintended consequences. While traditionally many of these tasks may not have been seen as the responsibility of the Land Force, the risk of not taking action creates opportunities for enemies and other actors to exploit in order gain influence over the targeted populations.

DEALING WITH COMPLEXITY

'So a military force has no constant formation, water has no constant shape: the ability to gain victory by changing and adapting according to the opponent is called genius.'

Sun Tzu, The Art of War.

4.5   There are four key elements essential to dealing with the complexities of the contemporary and future battlespace:

a.   Operational Tenets of Success,

b.   The Adaptation Cycle,

c.   The Human Dimension, and

d.   Operational Art and Campaigning.

OPERATIONAL TENETS OF SUCCESS

4.6   Noting the complexities of the environment and the likelihood of *Operational Uncertainty*, the key to the Land Force's success will be its ability to effectively orchestrate effort across the five lines of operation. This ability is predicated on timely feedback and sufficient understanding to interpret the feedback properly. Feedback and understanding are enabled through short, medium, and long term learning loops that drive intra-theatre as well as broader organisational adaptation and learning. Appropriate effort must be focused at the right time and place, the ability to do so is based on the following operational tenets:

a.   **Flexibility –** the ability to maintain effectiveness across a range of tasks, situations and conditions within a single line of operation. For example, the structure and capability of the force can be reconfigured in different ways, to do different tasks, under different sets of conditions.

b.   **Agility –** the ability to dynamically manage the balance and weight of effort across all lines of operation in time and space.

c.   **Resilience –** the capacity to sustain loss, damage and setbacks and still maintain essential levels of capability across core functions.

d.   **Responsiveness –** the ability to rapidly identify, and then appropriately respond to, new threats and opportunities within a line of operation.

e.   **Robustness –** the ability to achieve and sustain a critical mass of forces in relation to both population density and adversarial group capabilities; thereby achieving sufficient control of the environment to account for *Operational Uncertainty* and respond across the five lines of operation.

'There have been literally hundreds of unexpected events – incidents that you would not encounter in your wildest dreams. That is when we all fall back on training and adaptability.'

Brigadier Mick Slater DSC, AM, CSC, Timor Leste 2006

THE ADAPTATION CYCLE

4.7   The complexities of the modern battlespace are such that it cannot be understood by remote analysis alone; rather, detailed situational understanding will only flow from physical interaction with the problem and success is achieved by learning from this interaction. In response, Land Force action will be characterised by the Adaptation Cycle; depicted at Figure 9.

Adaptive Action

Figure 9. The Adaptation Cycle

The Adaptation Cycle does not replace COL John Boyd's OODA loop. The OODA loop is a model of decision-making that emphasises the importance of orientation for making sense of the observed situation, which is the basis for decision and action. The dominant understanding and utility of the OODA loop reflects its reactive, tactical origins in air-to-air combat. The OODA loop complements the Adaptation Cycle which presents a prescription for adaptation and has a bias for action. The Adaptation Cycle emphasises understanding a problem through experience, knowledge and planning, enhancing that understanding through interaction and explicitly drawing out the requirements to learn and adapt, individually and organisationally. The process of Adaptive Action is enabled by Mission Command which propagates the Commander's Intent through shared understanding and autonomy of action. The result of Adaptive Action is a greater understanding of complex situations as well as an enhanced capacity to deal with them, the ability to learn at all levels, and an understanding of when adaptation is needed.

4.8   In this construct, the Land Force is required to take considered action in order to stimulate systemic responses from within the operational environment. At the tactical level this might be an action to stimulate a response from an adversary that is attempting to operate below the Land Force's discrimination threshold. The response, carefully scrutinised, provides only a partial view of the actual tactical situation which is, in itself, in a constant state of flux. As a result of this partial view, the Land Force's plans or postures are adjusted, as necessary, before the next action is taken. Frequent iterations of this cycle enable the Land Force to gradually develop a more complete picture of the tactical problem. In order to gain and retain the initiative, the Land Force must be constantly and rapidly learning and, as required, adapting to the emerging situation. The reality of contemporary and future conflict is that threat groups will continually attempt to adapt their Tactics, Techniques, and Procedures (TTPs) faster than their enemy to exploit perceived weaknesses whilst simultaneously attempting to gain allegiances, or at least acquiescence, from societies. *Complex War* is therefore a **competitive learning environment**.

4.9   The same applies at the operational and strategic levels of war. However, while problems at the tactical level of war might be complex, the problems themselves will be easier to frame and will often have been framed by a superior headquarters before a task is given. Therefore, the imperative to solve <u>a problem right</u> will often be greater than the imperative to solve <u>the right problem</u>. Addressing the wrong problem at the operational and strategic levels of war will, by definition, have more serious consequences. Therefore, at these levels of war it is paramount to solve <u>the right problem</u>.

4.10   At the operational and strategic levels of war, which usually apply to the Joint Force, increasing complexity will result in greater difficulty in framing problems. Problems will tend to change over time as new situations emerge from within the complex adaptive system. The adaptation cycle helps to ensure that the Land Force is solving <u>the right problem</u>. At the operational and strategic levels the Joint Force takes considered action in order to understand not only individual actors, but the operational environment as a system. The Joint Force seeks to elicit systemic responses from the operational environment. These responses are used to challenge whether the Joint Force's understanding of the overall problem is accurate. When systemic responses reveal that the Joint Force's understanding of the problem is no longer accurate, it is necessary to develop a new problem frame, which becomes the basis for adaptation.

4.11   In circumstances where an adversary chooses to operate conventionally and above the Land Force's detection threshold, the adaptation cycle and adaptive action remain applicable. Even in the context of a conventional war in which the political and military objectives align closely (eg defeat of another nation's armed forces) the imperative to solve <u>the right problem</u> remains.

4.12   Traditionally, land forces have been organised to generate large scale effects against similarly structured enemies. To achieve these effects, land forces tend to be organised to fight as battalions, brigades, divisions and corps which in turn has demanded a relatively high degree of central control. As a consequence, land forces have lacked the ability to adapt at the same rate as a smaller more agile, less constrained enemy. Therefore, an alternative approach is required to position the Land Force to learn and adapt more quickly than its enemies, both at the individual and collective level. Such an approach is described by the

two key, interconnected components of the Adaptation Cycle, 'Adaptive Action' and 'Mission Command'.

4.13   **Adaptive Action.** Traditionally, deliberate planning has arrived at a solution with limited interaction with the problem. This approach is based on the premise that the more time spent planning prior to an operation the greater the likelihood of success. Deliberate planning remains fundamental, but in the contemporary environment, highly adaptive enemies mean we need to plan to learn. Consequently, plans will increasingly need to be a basis for adaptation rather than prescriptive direction.

4.14   Adaptive Action views deliberate planning as a means to arriving at a start point with a mental model of the problem and how it is likely to evolve, and with appropriate resources and time to allow a solution to be properly developed in contact with the enemy. In order to embrace this philosophy, the Land Force, before becoming decisively engaged, develops and tests its understanding of the interactions that exist between actors and observers involved in the conflict, their respective objectives or goals, and how they are likely to react and adapt over time. Additionally, all levels of the Land Force need to understand what constitutes success and failure at their particular level, how to measure success and failure, and how these measures correlate to success and failure, often simultaneously, at the tactical, operational and strategic levels of the campaign.

4.15   Adaptive Action acknowledges that the dimensions of a problem are not fully known until we stimulate a response. It is an iterative process that combines discovery and learning in order to facilitate adaptation. We learn, and, as required, we change our behaviour. In short, Adaptive Action is about 'context appropriate behaviour'. It is manifested within the Adaptation Cycle (Figure 9) as follows:

   a.   **Act.** The Land Force acts, based on a limited understanding of the situation, to stimulate a response, with a view to learning more about the system prior to decisively committing. Its actions are characterised as:

      (1)   **Discovery Actions –** To test or confirm its understanding of the battlespace the Land Force probes the system to learn. As an example, before committing to an attack on a defensive position small teams may go forward and probe the defences of the position to confirm their understanding of the defensive position and the likely enemy reactions to contact.

      (2)   **Decisive Actions –** Having developed sufficient understanding of the battle space, normally by cycling through at least one iteration of the Adaptation Cycle, the Land Force may elect to conduct decisive action. In committing to decisive action the Land Force acknowledges that further modifications to its course of action are likely based on a better understanding of the problem developed by interacting with it, or as a consequence of enemy actions.

   b.   **Sense.** Reactions to Land Force actions need to be observed and interpreted; consequently the Land Force needs to:

      (1)   **Learn to see what is important –** To ensure the Land Force is able to adapt to change it needs to develop a plan for observing the reactions and adaptations of

threat and population groups alike. This plan must include a strategy for refining the plan over time.

(2) **Learn to measure what is important –** Equally as important as learning to see what is important, is the requirement to develop a plan for measuring the effectiveness of Land Force actions across all five lines of operation. Measures of Effectiveness (MOE)[71] need to be both measurable and meaningful in relation to quantifiable Measures of Success (MOS)[72] and Measures of Failure (MOF).[73] MOS and MOF, in turn, must correlate to the defined accepted enduring conditions.

c. **Decide.** Based on an incomplete understanding of the problem, the keys to deciding when and how to adapt are:

(1) **Understanding what the response means –** Having acted to stimulate a response, and sensed the response, the key is to understand what that response means and what are the potential ramifications.

(2) **Understanding what should be done –** Having understood what the response means, understanding what should be done is vital. Once we have understood, we can decide what is happening and decide what should be done.

d. **Adapt.** It is inevitable that as a consequence of Land Force actions the environment and enemy will adapt. As a result, the Land Force must be able to accommodate this change and, if required, adapt at a quicker rate than its enemies. Therefore, the Land Force must:

(3) **Learn how to learn –** Small teams will often discover successful approaches for dealing with a problem that are unknown to other teams. Therefore it is necessary to promote the spread of successful methods and share knowledge from unsuccessful methods between teams to improve the overall effectiveness of the force. Often the most important lessons will come from early identification of people's mistakes. Consequently, the Land Force needs to reject a 'zero defects mentality' in favour of a culture that embraces learning.[74] At higher levels, the Land Force needs to be capable of critically reflecting on its abilities to learn and how these can be improved if it is to truly become a learning organisation.

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[71] MOE – measurable criteria that indicate the effectiveness of Land Force actions in relation to their intended consequences - effectiveness. To be meaningful, MOE should be lead and not lag indicators of MOS and/or MOF. Measure of Performance (MOP) are often confused with MOE however, MOP relate to how well the Land Force, or elements of, carried out their assigned task - efficiency.

[72] MOS – quantifiable criteria that indicate a positive trend toward achieving the end state conditions.

[73] MOF – quantifiable criteria that indicate a negative trend away from achieving the end state conditions. A key determinant of the degree of success that can be achieved in a complex endeavour is the quality with which comprehensive multi-scale measures of success and failure can be articulated, and how the Measures of Effectiveness correlate to both.

[74] The benefits of a learning culture within an organisation is apparent within certain non-medical industries such as aviation, nuclear power and petrochemical processing, where incident reporting systems have evolved over the past three decades to emphasise near misses, in addition to adverse events, to encourage confidentiality over anonymity, and to move beyond traditional linear thinking about human error, to analyses of multiple causation at the level of systems. Data from aviation incident reporting systems on near misses have been effectively used to redesign aircraft, air traffic control systems, airports, and pilot training, and to reduce human error and have proven to benefit their organisations more than they cost. In contrast, the medical industry has traditionally had a culture of blame and resistance with the threat of punitive action that has inhibited a collaborative mindset that seeks to identify the underlying system failures. Barach, Paul and Small, Stephen D. 'Reporting and Preventing Medical Mishaps: Lessons from Non-Medical Near Miss Reporting Systems', British Medical Journal, 2000 March 18; 320(7237): 759–763.

(4) **Know when to change –** An important aspect of learning is knowing what to learn and understanding its relevance to the future. In particular, what lessons are likely to assist the Land Force in reacting to, or countering, adaptation that will occur within the complex operating environment – to threat and population groups alike. Having identified what lessons are important to prepare for the future, it is important to identify when to change. To be effective this change needs to permeate throughout the force and needs to be both documented and monitored.

(5) **Challenge understanding and perceptions –** Success can breed complacency and the more success individuals or organisations enjoy the less responsive they can become to change. In essence, the very thing that we are striving for by adopting Adaptive Action may, if not guarded against, make us less responsive. As a consequence, individuals and commanders at all levels must be encouraged to constantly challenge their understanding and perceptions or they risk being deceived by their foes.

4.16   **Achieving Adaptive Action (Problem Framing).** The iterative elements of adaptive action such as learning to see what is important, learning to measure what is important, knowing when to change, and challenging understanding and perceptions are not trivial problems. At the operational level the key to addressing these elements of adaptive action is problem framing. A problem frame is the clear written and diagrammatic articulation of the problem, which forms "a perspective from which an amorphous, ill-defined problematic situation can be made sense of and acted upon."[75] The problem frame is, in effect, a theory of the situation at hand. The basis for adaptation is a continuous effort to disprove the theory (the accepted understanding of the problem). The constant effort to challenge the problem frame constitutes the major part of challenging understanding and perceptions.

4.17   Learning to see what is important is also closely tied to problem framing. At the operational level it is largely the process of discerning proxies or indicators that will reveal when the problem frame no longer accurately represents the situation at hand. Consequently, learning to measure what is important is related to the process of testing and monitoring these indicators, often through discovery actions. The use of proxies to reveal when the problem frame no longer accurately represents the situation (the theory is disproved) is a robust method of recognising when to change. The subsequent creation of a new problem frame (a fresh hypothesis) becomes the driver of adaptation. This process of problem framing, challenging the problem frame, and problem reframing, coupled with the ability to incorporate new ideas and understanding generated from the edges of the organisation, is the primary way that the Land Force learns how to learn.

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[75] Martin Rrein and Donald Aa. Schön, "Frame-reflective policy discourse," in *Social sciences, modern states, national experiences and theoretical crossroads*, ed. Peter Wwagner, Carol H. Wweiss, Bjorn Wwittrock, and Hellmut Wwollman (Cambridge: Cambridge University Press, 1991) 263.

MISSION COMMAND

4.18   **Mission Command.** Fundamental to Adaptive Action is the command philosophy of Mission Command. Mission Command is an essential component of *Adaptive Campaigning* because it promotes faster and more effective learning cycles and therefore lends itself to greater levels of adaptation.

4.19   Mission Command recognises the importance of individual judgements and tactical exertion when dealing with *Operational Uncertainty* and the adaptive nature of the battlespace. Higher commanders issue an intent, telling subordinate leaders what to achieve and why, rather than what to do and how. The subordinate then exercises tactical judgement in achieving the commander's intent, regardless of changing situations. Subordinate commanders are also expected to exert themselves in command, seeking opportunities to proactively further the commander's intent without waiting for formal orders.

4.20   Mission Command is predicated on the assumption that combat is frequently so complex and dynamic that every level of command must be empowered to conduct independent Adaptation Cycles unified by pursuit of a higher commander's intent. Importantly, a commander's plan and intent will need to be responsive to change and based on an interactive mutual understanding of the problem as developed by both commanders and their subordinates. Accordingly, the production of untimely, overly prescriptive, and long written operations orders is antithetical to Mission Command. Mission Command sets the framework for Adaptive Action and promotes decision superiority.

4.21   The contemporary commander acknowledges that uncertainty can never be completely eliminated and that commanders at every level must be able to operate effectively in uncertain environments. The best method for doing this is through a clear understanding of the mission and commander's intent and decentralised execution where the impact of *Operational Uncertainty* is mitigated by allowing sufficient freedom of action to local commanders and their forces to adapt their actions in the context of their focussed situational awareness. The key to Mission Command is creating a bond of trust and mutual understanding between commanders and subordinates. This is more than just control: commanders must establish a command climate that encourages subordinates to exercise initiative, Adaptive Action, professional mastery and battlefield cunning.

THE HUMAN DIMENSION

4.22   While the essence of war will remain the savage clash of wills, how our Army prepares soldiers and officers to execute future operations must adapt to the changing environment. In an era of expected persistent conflict, the increasingly complex battlespace and changing domestic and international environments will present new challenges to Defence and, in particular, Army. Existing Army concepts call for tremendous increases in responsiveness, agility, reach, and adaptivity to overcome a thinking and adaptive enemy predicted to fight asymmetrically to overcome our strengths. Despite significant and ongoing modernisation of Army equipment, we must not lose sight of the fact that it is in the human dimension that wars are fought and won. As such, the Army must work to empower its soldiers and officers for

success on the battlefields of the future. Four areas of particular importance include:

a. **Cultural competency and capability.** In wars fought amongst the people, commanders at all levels require the capabilities to understand and address the 'human terrain' of complex social, cultural, historical, political, economic and population geography within an area of operations. While specialist linguists form part of the requirement, they represent only a comparatively small part. More importantly, all personnel within the theatre of operations must be capable of acting as tactical 'ambassadors' and achieving an appropriate degree of empathy and engagement with the population. This means that all personnel in theatre (including interagency elements and service providers) must be empowered with <u>basic</u> cultural, social and language skills, and specific-to-country knowledge.

b. **Ethics and morality.**

(1)   Ethics relates to a system of moral principles by which human actions and proposals may be judged good, bad, right or wrong. Army's nine core behaviours for the Australian soldier form the foundation and boundaries for Army's ethical framework. Ethics, by their nature are a product of an individual's upbringing and the cultural and societal norms within which an individual lives. The practise of ethics focuses on making decisions in conditions of complexity, uncertainty and ambiguity, when there appears to be no clear rules to guide action.

(2)   Morality is defined as conformity to the rules of right conduct. In the context of Australia's involvement in military operations, we abide by the Laws of Armed Conflict and the principles of involvement in a 'Just War'. Importantly, the ethical and moral conduct of the Land Force is essential in convincing targeted populations of the political proposition underwritten by the dominant narrative. This will be reinforced or undermined by the words and deeds of the Land Force.

(3)   The ethical and moral conduct of our soldiers will be a force multiplier. If we cede the moral high ground, or are perceived to do so, then the opposite effect will occur. In this regard the actions of a few can have strategic ramifications - My Lai in Vietnam, and Abu Gharib in Iraq both serve as examples. Individuals within the Land Force must be instilled with the ethical and moral character that ensures unwavering commitment to positive ideals. This must be so even under life-threatening situations, as part of prolonged operations, which are likely to be accentuated by wounding or loss of fellow soldiers. The development of such positive ideals in soldiers and junior officers cannot be left to a haphazard approach. There must be a clearly structured process of instruction, practice and guided reflection.

c. **Complex decision making.** Complex decisions involve outcomes dependent on the interactions, over time, of diverse elements both within a system and between systems. They can have long term, and far reaching, consequences. To account for the complexities of the modern battlespace, increasingly junior commanders are being asked to make complex decisions. Importantly, the success or failure of the Land Force will be determined, to a large extent, by the interrelated outcomes of the countless complex decisions made during the conflict. The challenge for the Army is to ensure that individual

skills and team decision making processes are developed and adapted to maximise our ability to make effective complex decisions.

d. **Networking.** Information technology, including web applications, is enabling tremendous world-wide social change. This change is reflected in workplace processes and in organisational constructs such as the flattening command and control and hierarchical management structures and the empowering, and self-empowering, of individuals. The challenge for the Land Force is to harness and exploit the advantages of gaining, understanding, and sharing information without losing the organisational integrity that a traditional hierarchical structure has provided. The rapid increase in information sharing through social networking applications and digital technology has the potential to alter the way in which information is shared in the battlespace. Experience from recent operations have shown how our allies and enemies, can leverage these technologies to rapidly acquire, understand, and share information faster than the traditional layers of command and control can collect, assimilate, analyse and disseminate information as orders, guidance, or media releases. There are three aspects the Land Force should address:

(1) **Increase Speed of Communications.** Centralised control of information inevitably slows down decision-making and restricts the Land Force's ability to learn and adapt rapidly to a changing situation. There is a strong argument to shift the current Land Force culture from *need to know* to a culture of *need to share* (within sensible security constraints).[76] The Land Force should delegate authority to release information to the lowest practical level in order to sustain the Information Actions line of operation. Security aspects of the Land Force's information requirements need to be carefully balanced against the need for rapid, accurate, and broader situational awareness and understanding in order to enable the Land Force's dominant narrative. Such democratisation of information should shorten learning loops and facilitate faster speed of information leading to higher levels of organisational understanding and adaptability.

A divide has been recognised between the generation that witnessed the rise of Digital Age and the generation raised in the Digital Age. Digital Immigrants are that generation where the rise of digital technology has occurred in their lifetime. They may be comfortable with the technology but will never be part of it. Digital Natives are that generation raised in the Digital Age society where networking, video gaming, instant messaging, mobile phones and other digital technologies are the norm. It needs to be accepted that this generation assimilates knowledge and interprets the world in a different way.

Digital Natives, Digital Immigrants Marc Prensky On the Horizon (MCB University Press, Vol. 9 No. 5, October 2001)

(2) **Leverage Social Media.** Attempts to monitor and regulate social media such as internet based email, blogs, forums, twitters, and Facebook/MySpace will inevitably fail. Instead, the Land Force needs to embrace and harness the

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[76] *WP 2009*, p. 82, para 9.83.

power of social media to best effect. The principle of educate rather than regulate needs to be applied. Social media can enhance both operations and operational support. The US and British Armies both run weblog sites that vastly increase the speed of internalisation of operational lessons learned from Iraq and Afghanistan. Additionally, the Land Force should establish readily accessible, easy to use, and family support networks using appropriate and current web applications that allow almost constant communication between members of the Land Force and family and friends to enhance the morale of all parties.

(3) **Culture Change.** The current practice of headquarters based spokespersons as a single source of information needs addressing. The Land Force should aim to empower personnel at the lowest acceptable levels and delegate authority for those individuals to 'tell their story from the frontline' as an integral component of the *dominant narrative* in the Information Actions line of operation. Such delegation requires high levels of education, trust, and transparency. Inevitably, risks associated with democratising the Land Force's *dominant narrative* must be accepted. Mistakes will be made, just as mistakes are made with the current centralised and formal approach to generating Information Actions. It is better a truth well told now, than a story told out of date and out of context later. Open disclosure of information, within reason, is aimed to improve transparency and accountability of the Land Force, and to achieve a *dominant narrative* over the enemy's message.

OPERATIONAL ART AND CAMPAIGNING

4.23   If the Land Force is to embrace the philosophies of Adaptive Action and Mission Command then there is a need to examine the current doctrine covering decision making and planning within the ADF; in particular campaign design and operational planning. Much existing Joint and Army doctrine tends to be focused on the direct force-on-force encounters with the concept of a singular enemy Centre of Gravity[77] being one example. Adaptive Campaigning describes an environment in which this will not always be the case. As a result, an examination of planning doctrine needs to be conducted to ensure that it can accommodate the more complex and diffuse problems likely to be encountered. This should take into account joint and coalition approaches to the problem.

4.24   Conflict is a search for asymmetry which is simply pitting our strengths against his weakness while guarding our own weaknesses from his strengths. The enemy will consequently seek a strategy of exhaustion if they are weaker or a strategy of annihilation if they are stronger. The Land Force therefore needs to identify, as part of campaign planning, which approach the enemy is likely to use in order to inform our campaign approach. Equally, the Land Force will seek to outmanoeuvre, exhaust or defeat the enemy through joint land combat depending upon the approach adopted within the campaign plan.

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[77] 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. (LWD1, 2008).

4.25   In the contemporary conflict environment combat has diffused across the strategic, operational and tactical levels of command so that seemingly minor and unimportant tactical actions increasingly have strategic consequences. This has always been possible but is increasingly becoming the norm. As a consequence, some military observers have questioned the relevance of the operational level of command in the future. However, while nations or groups of nations seek to achieve strategic ends by means of the tactical application of military forces, there will remain a requirement to identify the ways in which tactical actions can be orchestrated to achieve these ends – the operational level. While traditionally Operational Art was thought to be the remit of a single layer of command, increasingly commanders at both higher and lower levels are finding themselves having to conduct, or being involved in the conduct of, operational planning.[78]

4.26   **Generalship.** The Land Force has a requirement to educate and develop joint and interagency commanders skilled in the operational art at all levels from combat team to joint task force; this must encompass skills and experience developed throughout one's career that enable the military commander to master strategic dialogue across the military and political domains. Army must recognise the critical role of generalship[79] in order to prepare the Land Force for the challenges of future conflict.

4.27   To define and shape the Whole of Government approach envisaged in *Adaptive Campaigning*, the military commander must have continuous dialogue with his political and interagency counterparts. In addition, strategic relationships will need to be established with host nations and/or coalition partners in order to align Australian interests with broader local or regional objectives. Consequently, in the Australian context, a revised approach to campaign planning appears necessary. In all circumstances the strategic objectives of the campaign [reflected in the dominant narrative] will be able to be described in a list of agreed accepted enduring conditions. This list frames the campaign plan by enabling interagency and multi-national agreement on responsibilities, resources and broad approaches to meeting the accepted enduring conditions. The Afghanistan Compact, later to become the Afghanistan National Development Strategy, is a good example. The result is, in effect, a campaign framework that may be largely provided to the operational commander for implementation. In this context, Operational Art is a little more circumscribed than envisaged in existing doctrine and involves the orchestration of tactical actions, through one or more lines of operation, to ultimately achieve the directed strategic accepted enduring conditions.

4.28   Within *AC-FLOC*, tactical tasks representative of the 5 LOO are sequenced in time and space, cognisant of resource availability and threat, through one or more Decisive Points. Importantly, rather than being solely focused on the enemy Centre of Gravity, they are focused

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[78] For example, Operational HELPEM FREN in 2003 saw the Commanding Officer of the 2nd Battalion, The Royal Australian Regiment deployed as both the Battle Group Commander of a combined arms battle group and the Joint Task Force Commander of a Joint, Multi-National force working as part of an Australian Federal Police-led mission.

[79] Generalship is the exercise, by General (star-ranked) officers, of military command and leadership in its widest connotation in the planning, preparation and conduct of military campaigns. Generalship requires competency in the application of the full range of tools through which conflict is handled and is based upon the exercise of direct leadership to inspire others to think, act or endure. It involves the creative development of military strategic theories and concepts in order to anticipate future actions and needs, the exercise of peer leadership in order to gain consensus and marshal resources, and the mediation of the continuous conversation between ends, ways and means.

more broadly on arriving at the accepted enduring conditions. While the Centre of Gravity construct remains valid to achieving an understanding of the key targetable critical vulnerabilities that exist, and the options available to achieving each of the Decisive Points, it is important to realise that each of the multiple actors and influences involved in the conflict may themselves have one or more Centres of Gravity. Additionally, each is likely to be evolving and adapting. To account for this constant change, even the predetermined accepted enduring conditions will need to be occasionally reviewed throughout the campaign to ensure they remain relevant.

4.29   Importantly, in relation to campaign design, the 5 LOO described within *AC-FLOC* are meant to provide a <u>philosophical conceptual framework only</u> from which to consider the diverse array of tactical tasks required to win the fight and influence the people. There is no template for which particular lines of operation should be used. Each conflict will be unique in its characteristics and will, therefore, require a unique comprehensive and holistic approach to campaign design. However, <u>generically</u>, the Land Force should be prepared to consider tactical actions within an operational framework of the five interdependent and mutually reinforcing lines of operation as described within *AC-FLOC*.

CHAPTER 5
ACHIEVING THE ADAPTIVE ARMY
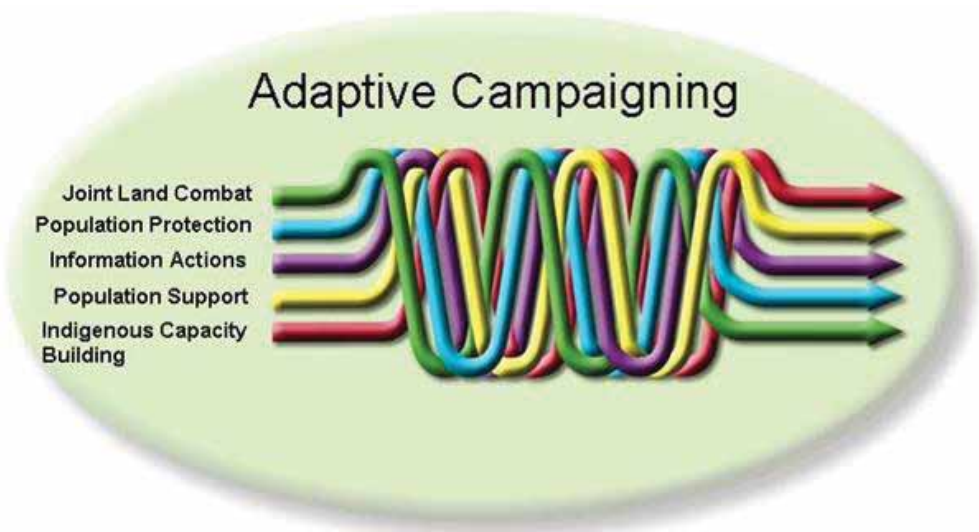
JOINT LAND COMBAT

5.1   Joint Land Combat describes close combat against a lethal enemy under contemporary conditions in complex terrain. The primary purpose of Joint Land Combat is to support the ADF's principal task: to deter and defeat armed attacks on Australia by conducting independent military operations without relying on the combat or combat support forces of other countries. Within this task the Land Force will be used to: control our approaches; to secure offshore territories and facilities; defeat any incursions onto Australian Territory; to protect bases from which our naval and air forces operate and potentially deny the adversaries access to staging bases.[80] Additionally the Land Force must be able to contribute to: stability and security in the South Pacific and East Timor; military contingencies in the Asia Pacific Region and military contingencies in support of global security.[81]

5.2   These tasks encompass both conventional and intra state conflict. Within the land component of these tasks Joint Land Combat sets the conditions for the other lines of operation. Because of *Operational Uncertainty*, Joint Land Combat can be both the precursor to, and contemporaneous with, the other lines of operation and is equally applicable against both conventional and unconventional and irregular enemies. Joint Land Combat is the <u>fundamental role</u> of the Land Force, and is the Land Force's unique and irreplaceable contribution to Government.

5.3   **Maritime and Air Power.** Given the littoral character of the POE and the vast spaces between areas of human habitation, Land Force effects can only be applied in concert with maritime and air forces. The Land Force will need to have an expeditionary orientation[82],seeing

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[80] *WP 2009*, p. 54, para 7.6.
[81] *WP 2009*, p. 54, para 7.10.
[82] *WP 2009*, p.52, para 6.42.

itself increasingly as an air and sea borne force that is almost completely reliant on the other services for its operational reach and its ability to shape, manoeuvre, and sustain itself within the POE and beyond. The Land Force will seek to leverage the characteristics of maritime and air power, in concert with other government agencies, coalition partners, and commercial contractors, to generate effects on land.[83,84] Equally, a Joint Interagency Task Force will seek to leverage the unique capabilities inherent to the Land Force.

5.4   *AC-FLOC* is cognisant of the Future Maritime Operating Concept and the Future Air and Space Operating Concept, and recognises that elements of the Land Force are part of an integrated amphibious and air-land force, and an integral part of an amphibious manoeuvre concept. Therefore, the characteristics of the Land Force, such as comprehensive action, continuous battle, distributed manoeuvre, isolation of the battlespace, dominant response, among others, are inherently joint and interagency.

5.5   Traditionally, military forces have defined success based on the outcome of combat. Today and in the future, how the Land Force conducts combat operations may be just as important as the outcome. In essence, short term tactical successes can be overshadowed by the strategic implications of the consequences of combat and, in particular, the effects military actions have on the perceptions of the population. Therefore, the impact of tactical actions, on what is a 'complex adaptive system', must be considered in relation to their potential second and third order effects when waging war.

5.6   Joint Land Combat is predicated on the effective application of the Adaptation Cycle at the minor tactical level and recognises that, especially at this level, Complex War is a continuous meeting engagement. In the context of an enemy who operates below our detection threshold, the Land Force must seize the initiative and take actions that unmask the enemy. To be effective in complex environments the Land Force will need to be highly mobile, protected and be part of a joint communications architecture that enables access to responsive joint fires. Joint Land Combat describes how these combined arms teams will fight and seeks to dominate our enemies by totally overwhelming their abilities for purposeful response. The Land Force does this by seizing and retaining the initiative through:

a.   **Comprehensive action.** The Land Force seeks to seize and retain the initiative through the simultaneous and coordinated engagement of all detected enemy elements and systems across the physical, information, temporal, cognitive and electro-magnetic domains. The aim of comprehensive action is to suppress an enemy's ability to respond by overwhelming him.

b.   **Continuous Battle.** Continuous Battle seeks to deny the enemy respite or time to understand, recover or adapt. This ensures that, once gained, the tactical initiative is retained and that the enemy's ability to respond appropriately begins to spiral out of reach.

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[83]   The characteristics of maritime power include: mobility in mass, readiness, access, flexibility, adaptability, reach, poise and persistence, and resilience. Department of Defence 2000, *Australian Maritime Doctrine*, Royal Australian Navy, Canberra, p 48-51.

[84]   The relevant characteristics of airpower include: concentration of force, concurrent operations, payload, penetration, perspective, reach, responsiveness, speed, technology. Department of Defence 2006, *AAP 1002: The Operational Air Doctrine Manual*, Royal Australian Air Force, Canberra, p 2-1 – 2-2.

5.7   The amalgam of actions and processes that comprise Joint Land Combat is described through the following interconnected tactical sub-concepts:

    a. Distributed Manoeuvre;

    b. Dynamic Sensor-Shooter Coupling;

    c. Focused Understanding;

    d. Isolation of the Battlespace;

    e. Dominant Response; and

    f. Mission Oriented Force Protection.

5.8   **Distributed Manoeuvre.** Joint Land Combat recognises that to achieve a **persistent**, **pervasive** and **proportionate** presence in complex terrain, it may be necessary to break down into relatively large numbers of small combined arms teams – *Distributed Manoeuvre*. *Distributed Manoeuvre* seeks to close with and destroy the enemy without presenting a targetable mass. Importantly, it seeks to harness the synergies that come from combining precision joint fires and manoeuvre elements into small, agile combined arms teams that 'burrow' into complex terrain to detect, identify and kill or capture the enemy with precision, discrimination and an understanding of the potential second and third order consequences that may arise.

5.9   **Dynamic Sensor-Shooter Coupling.** Joint Land Combat seeks to integrate joint Non Line Of Sight (NLOS) fires, including reachback to operational and strategic assets, into the close fight. NLOS fires will be employed to support small scale, distributed force elements coordinated by junior commanders who have received enhanced levels of training in the application of NLOS fires. Joint fires experts will continue to have a crucial role in the process, as supervisors and/or Subject Matter Experts. This integration is a principal enabler of distributed manoeuvre. To be useful in this context the NLOS fires system will:

    a.   be sufficiently responsive to meet the needs of a small team in lethal contact at short range – which suggests response times in seconds rather than minutes;

    b.   be able to deliver munitions that are sufficiently precise and discriminate to remove the need for forces in contact to break contact and establish safe separation between themselves and the NLOS fire;[85]

    c.   be focused on discrimination and destruction rather than neutralisation or suppression but not to the exclusion of the latter; and

    d.   by employing mission command, be able to distribute fires in tailored packets, in complex terrain, in the face of very uneven demand, with great reliability and without imposing unnecessary queuing on manoeuvre forces.

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[85] DSTO examination of a large number of bunker contacts by the Australian Army in South Vietnam indicates that in complex terrain most casualties are received when contact is initially made (highlighting the action of unobtrusive killing areas). Typically, having made contact, ground forces withdrew and called in air or artillery strikes. Once these strikes were complete there was a second spike in the casualty rates as physical contact was re-made and the effectiveness of the indirect fire was assessed empirically. If contact, once made, is maintained this second spike of casualties may be avoided.

5.10   The current arrangement of the Land Force offensive support system reflects a supply chain approach to the management of offensive fires. This approach fails to provide for the response times demanded of *Distributed Manoeuvre*. The future Land Force offensive support system will need to be optimised to provide a wide array of specialist types of munitions from diverse joint platforms responding to very uneven demand. To meet this requirement, at the tactical level, NLOS fires will be organised not around prior apportionment but potentially as a 'reservoir' of fire assets from which small teams may draw from on the basis of need.

5.11   **Focused Understanding.** There is overwhelming evidence that technological surveillance and reconnaissance alone cannot be expected to reliably produce useful tactical intelligence on enemy capabilities, intentions or locations and that to generate useful information requires physical interaction with the enemy and the battlespace.[86] This realisation is the foundation of the Adaptation Cycle. The Adaptation Cycle requires that action be taken in order to stimulate the enemy into some response. It is anticipated that this response will generate signatures that, if detected, will enable both the identification of the next tactical step and the gradual aggregation of information into *Focused Understanding*. As well as the need to take the initial action to stimulate a response, it is necessary that preparations be made to detect that response and act on the information gained within a timely fashion. The ability to detect, understand, and act is enhanced through reachback to operational and strategic capabilities. *Focused Understanding* will allow the Land Force to discriminate enemy forces from amongst the background clutter of the complex battlespace and to distribute the resulting combat intelligence to stakeholders in real time.

5.12   **Isolation of the Battlespace.** Each component of the enemy force draws strength from its connections – physical and informational, with the larger whole, with other adversarial groups and with the population. Severing these ties weakens the enemy's individual elements, reduces his or her capacity for purposeful manoeuvre, limits the ability of the enemy to adapt, and creates the conditions for their destruction. *Isolating of the Battlespace* seeks to prevent the enemy from informing, supporting, controlling or reinforcing their forces and from being in a position to unduly influence the civilian population in a selected portion of the battlespace. It relies on the interdiction of physical and information links between the sources of support and on the identification and destruction or neutralisation of these sources of support. *Isolation of the Battlespace* is supported by *Focused Understanding* and *Dominant Response* and may involve physical manoeuvre, air, maritime, artillery or Special Forces strikes, demolitions, and the construction of physical barriers or information actions including network attack. The Land Force also needs the capabilities to isolate portions of its own force from the effects of enemy action and civilian interference. These capabilities will enable the Land Force to concentrate its manoeuvre or supporting forces to achieve desired effects without risk of destruction from long range standoff attack, manoeuvre forces or a combination of the two.

5.13   **Dominant Response.** The response itself comprises two critical elements, a counter fire capability that seeks to detect, identify, locate and defeat enemy NLOS weapons before they can achieve tactical or strategic impacts, and an ability to rapidly mass forces and/or fires to achieve larger scale effects.

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[86] Operation ANACONDA in Afghanistan in May 2002 and the 2006 Israel /Hezbollah War in southern Lebanon highlight the limitations of technological ISR employed against a thoughtful enemy at the tactical level.

a. **Counter-fire.** The enemy NLOS system is comprised of: sensors, decision makers, communications, platforms, munitions, targets and logistics. Counter-fire seeks to grapple with this entire system. It will employ ISTAREW to locate nodes and interdict communications between them, physical manoeuvre to deny terrain, harass movement and replenishment, and will force the enemy to unmask and destroy assets encountered. Sensors and shooters will be closely coupled to provide immediate responses to enemy fire. Layered defences including defensive counter-air, Ground Based Air and Missile Defence (GBAMD) and Counter Rocket, Artillery and Mortar (C-RAM) capabilities will interdict platforms and/or munitions as far from likely target areas as possible. To the extent feasible, physical hardening of lucrative targets, the provision of appropriate shelters, timely warning, and Active Defence Systems on vehicles will form a last line of defence. A counter fire capability is supported by *Focused Understanding* and *Mission Oriented Force Protection*, may use *Dynamic Sensor Shooter Coupling* and *Information Actions*, and will contribute to *Isolation of the Battlespace*.

b. **Rapid Aggregation of Effects.** The rapid aggregation of effects refers to the deliberately structured and rapidly coordinated concentration of forces and/or fires to enable strike from multiple directions. The diffusion of lethality and the nature of complex terrain requires the Land Force to split into small combined arms teams to achieve a **persistent**, **pervasive** and **proportionate** presence, the Land Force will, and must, retain the ability to rapidly aggregate these teams and/or fires to achieve larger scale effects. For this to occur there are two fundamental requirements. First, to be able to strike at an enemy from multiple directions there must be large numbers of manoeuvre units that are tightly networked. The second requirement is that the manoeuvre force must not only engage in combat operations, but it also must form part of a 'sensory organisation' providing the *Focused Understanding*. The rapid aggregation of effects relies on teams cooperating through a few simple decision rules, shared situational awareness and a common understanding of the commander's intent. Importantly, small teams must ensure that the commander is given a clear understanding of the situation thereby enabling commander situational awareness. This establishes a command element that 'knows' a great deal but intervenes only sparingly and when necessary.

5.14   **Mission Oriented Force Protection.** The contemporary and future battlespace is characterised by a lack of identifiable fronts, flanks or rear areas, by the proliferation of highly lethal weapons, by the presence of a variety of combatant groups- each with their own TTPs and capabilities - and by the need for the Land Force to establish a persistent, pervasive and proportionate presence in population centres. At the same time, many of the enemies in that battlespace will be seeking nothing more at the tactical level than to impose a steady trickle of casualties on the Joint Force. The net result is to create a large and complex force protection problem. Mission Oriented Force Protection seeks to both conserve the force and contribute to the achievement of the mission. It is supported by *Dominant Response* and *Focused Understanding*.

5.15   The variety of circumstances likely to be encountered in any modern conflict mitigate against the imposition of blanket, force-wide, force protection regulations in favour of a mission command approach in which the local commander puts in place those measures that are

deemed appropriate. This approach creates a need to support the commander with sound doctrine, good intelligence and a full array of technological measures. Base areas present particular vulnerabilities because they are likely to be subjected to deliberate and thoughtful attempts to breach their security or inflict casualties. They are therefore in a competition of Adaptation Cycles with their putative attackers. This demands a constant process of innovation and improvement in the protection of all base areas, a refusal to set patterns and a constant search for ways to deny viable options to an enemy. The history of warfare attests that the best form of defence is often the offense. Force Protection measures that prevent the force from being able to effectively take the fight to the enemy are antithetical with reducing the risk to personnel, material and mission.

> *'The threat environment … demands more than greater protection and firepower to ensure that our forces prevail. We will need pervasive situational awareness, seamless access to joint effects and the ability to match the agility of our irregular foes through the creation of small, tailored combined arms teams. This will permit us to be more discriminate in the application of effects.'*
>
> **LTGEN Peter Leahy AC**

POPULATION PROTECTION

5.16   Population Protection operations include actions to provide immediate security to threatened populations in order to control residence, identity, movement, assembly and the distribution of commodities, thereby setting the conditions for the establishment of order and the rule of law. Population Protection operations have both an immediate and a longer term purpose. In the first instance, Population Protection operations are designed to defuse widespread civil unrest and restore a degree of order to daily life. In the longer term, Population Protection operations are conducted in concert with Indigenous Capacity Building to return affected societies to an appropriate and acceptable level of stability.

5.17   In most cases, military operations will be conducted under a specific agreement with either a host nation or multinational organisation. At least initially, it is possible that the military will be required to fulfil some roles normally associated with law enforcement agencies. Failure to do this may create a security vacuum that could be exploited by a variety of interest groups that may or may not be parties to the conflict. Therefore, the need for Population Protection operations and the authority to conduct necessary actions needs to be anticipated in training and planning, and provided for in the implementing agreements.

5.18   In essence, Population Protection is achieved through the conduct of synchronised actions in five categories, or sub-concepts as represented in Figure 10. The five sub-concepts that comprise Population Protection are:

a. **Security Actions.** These actions seek to minimise fear and harm through the execution of immediate protective actions contributing to public safety and protection of property.

b. **Population Control Actions.** These actions seek to establish and maintain control over a population's residence, movement and identity, while remaining cognisant of a population's own perceptions of safety and protection needs.

c. **Weapon and Hazardous Material Control Actions.** These actions seek to identify, locate, secure and/or dispose of weapons and environmental hazards deemed to pose a threat to the population or the Land Force.

d. **Policing Actions.** These actions provide: policing capabilities appropriate to the environment, collection of criminal intelligence, evidence preservation, investigations, judicial support and detention management.

e. **Disarmament, Disbandment and Reintegration.** These actions seek to disarm and disband adversarial groups and unwanted elements of the pre-existing security apparatus identified as being suitable for reintegration into society. These actions, by their nature, need to be closely coordinated with Policing and Security Actions within the Population Protection line of operation and are key to the long term stability of the system.
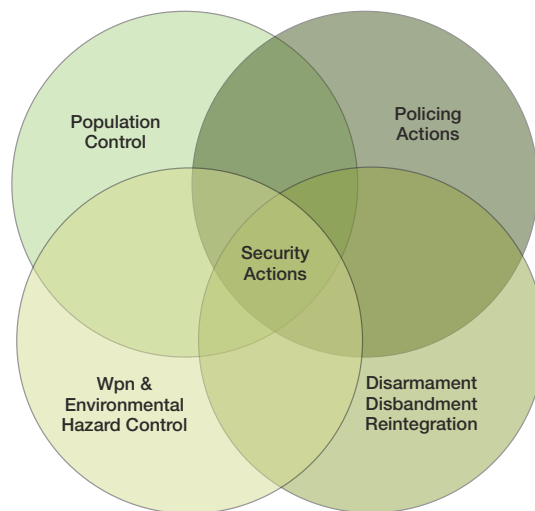
Figure 10. Population Protection

5.19   The size and nature of any operational deployment, and the relative balance between law enforcement agencies and military contributions, will be driven by a consideration of the above factors and will be shaped by the *Operational Uncertainty* that exists within the theatre of operations. Traditionally police forces are optimised for law enforcement operations in a permissive to low threat environment. In contrast, military forces, whilst being able to operate throughout a range of threats, are optimised for combat operations in medium to high threat environments. Consequently, operations that occur at the junction between law enforcement and military operations and/or those operations that involve a high level of *Operational Uncertainty* pose a particular challenge in that neither the police nor the military are optimised for these types of operations.

5.20   Recent operational experiences and future warfighting trends indicate an increased likelihood of operations occurring at the boundary between traditional military and policing operations. These operations are also likely to encompass high levels of *Operational Uncertainty*. Given police limitations in terms of capacity, force protection, deployability, secure communications, logistics and work practices, it is unlikely that the police could be expected

to expand to fill this requirement on their own. While it is acknowledged that the police are capable of conducting large scale security operations on mainland Australia, they remain limited in their ability to project and sustain a similar capability offshore. These limitations are further exacerbated in uncertain or high threat environments. In contrast, the Land Force would be capable of expanding its capabilities to fill the requirement; however, in isolation this would represent a costly and sub optimal solution to the current problem with the potential to detract from the Land Force's primary roles.[87]

INFORMATION ACTIONS

'The success or failure of a military mission can often rest with the willingness of the public to support the government in the conduct of military operations. Therefore, the ability to accurately inform the government and the public in a timely and relevant manner during military operations remains critical to the success of the operation.'

General Peter Cosgrove, AC, MC

5.21   The pervasiveness of the media, combined with the effects of globalisation and technology has resulted in events, almost anywhere in the world, being able to be reported on instantly. The rise of web-based and digital technologies for example have opened a new 'virtual' theatre of war. The readily available means of social networks, weblogs and internet sites are open to any combatant, or even non-combatant, to influence this form of Information Actions. In the media today many on the spot eyewitness reports and images have come from the public utilising simple means such as cameras in mobile phones being uploaded directly onto *Youtube* or emailing it directly onto a media site. As a result, the contest to tell one's story before an enemy is becoming more influential in the final outcome of conflict. In conflict today, all actors aim to rally support for their cause, create an impression of effectiveness and inevitable victory, discredit their opposition and its forces, and destroy public morale.

5.22   Consequently, the primary purpose of Information Actions is to inform and shape the perceptions, attitudes, behaviour and understanding of targeted population groups in order to reinforce actions within the other lines of operation. Information Actions refer to a collection of capabilities brought together and focused to contribute to three broad purposes essential to the success of Adaptive Campaigning. *'One of these is to win the psychological contest with real and potential enemies. Another is the need to keep the trust and confidence of home and allied publics while gaining the confidence and support of local publics. The third is winning the strategic, operational, cognitive and technical "Info Age Applications" contest. Each of these necessary, realistic and tangible aims relies on distinct and understandable logic and fields of competence'*.[88]

5.23   Information Actions underpin every element of *Adaptive Campaigning* and are an essential prerequisite for success. Just as there is a Whole of Government approach to campaigning, there needs to be a Whole of Government approach to the development of

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[87] See Figure 7 for a diagrammatic explanation of this challenge.
[88] BG Huba Wass de Czege, US Army, (Retired), (2 June 08 Draft), Rethinking "IO:" Complex Operations in the Information Age.

Information Action objectives and themes. Information Actions are described through the following tactical sub-concepts:

> a. **Influence.** Influence actions fight the enemy with words, symbols and ideas. They have the primary purpose of influencing the perceptions, and hence the will, attitudes, and, ultimately, the behaviour of target audiences. An antagonist's messages will be principally directed at the uncommitted, disadvantaged minorities, political factions which may be persuaded, vulnerable elements of the opposing force and the media. Consequently, the Land Force must have the capabilities and capacity to strengthen the support of the loyal, gain support of the uncommitted and undermine an enemy's will to fight - the ability to accurately tell its story while being able to discredit the lies and propaganda of its enemies.

> b. **Counter Command.** Counter Command actions attack and erode the enemy's will to fight, diminish their understanding of the situation and their ability to make timely and effective decisions. Counter Command actions are aimed at:

> > (1)   deceiving, disabling or destroying enemy commanders;

> > (2)   disrupting, degrading, denying or destroying the ISTAREW systems and the information enemy commanders rely upon; and

> > (3)   destroying enemy commanders' faith and confidence in those systems and the information they contain.

5.24   In selecting a counter command action judgement should be used as to whether the benefits of removal or neutralisation of a enemy commander as outlined above will bring any unintended consequences such as a more 'hardline' or 'radical'commander taking over.

5.25   **Command and Information Protection.** To be successful, Influence and Counter Command actions must be coupled with actions to protect Land Force commanders and the information and systems on which they depend. These protective actions have the following two aspects: command protection, and information protection. Command protection is focused on the intellectual and moral components of the information domain – the minds of commanders and other decision makers. In contrast, information protection is focused on the physical component of the information domain and on the information itself.

5.26   Technology can enhance but not replace the human element in this line of operation. Influencing people and their perceptions is fundamentally a human activity that requires personal contact, proximity and an enduring presence. This means that the ability to put high-quality individuals and teams into an area of operations, in close proximity to the enemy and the population, is critical. At the lowest level, therefore every member of the force must be capable of acting as a tactical 'ambassador' and relating with the population. The Land Force's capacity to achieve this is guided by the nine core behaviours of the Australian soldier.

5.27   All members of the Land Force (including interagency elements) must possess cultural competency and therefore must be trained in basic media, communication, cultural, and linguistic skills and specific in country knowledge. They must be regularly briefed on information objectives for media coverage and interaction with the local population. Most importantly, personnel must be imbued with a sense of the fundamental importance of perception

management in the operation, so that – in thousands of daily interactions – their actions support the mission by avoiding dissonant actions and seizing fleeting chances to advance informational objectives.

POPULATION SUPPORT

'If you presume on the orderliness of government and fail to provide for the comfort of the governed, thus creating much resentment, disorder is certain to arise.'

Li Quan to Sun Tzu, The Art of War

5.28   Population Support includes actions to relieve immediate suffering and positively influence the population and their perceptions. As such, these actions seek to provide essential services to affected communities. By necessity, actions taken along this line of operation are closely aligned to Information Actions and Indigenous Capacity Building. The aim of Population Support is to conduct integrated civil operations that:

   a.   reduce the likelihood of humanitarian crises;

   b.   provide expedient mitigation to the effects of damage to key infrastructure as a result of combat;

   c.   manage the internal displacement of populations;

   d.   encourage a return to normalcy within communities; and

   e.   build confidence in the viability and effectiveness of the governance arrangements that are in place.

5.29   Population Support operations are integrated actions involving military forces, OGA and NGOs and commercial contractors. At least initially, military forces may have the greatest capacity, and often unique capabilities, to respond to a crisis and therefore may be required to provide the majority of the effort for this line of operation. As such, task organised combined arms, multiagency teams will focus on the delivery of Population Support through the application of two sub concepts:

   a.   **Emergency Relief (ER).** ER aims to mitigate the negative consequences of human conflict, natural disaster or civil catastrophe by <u>delivering commodities</u> to alleviate the potential for immediate human suffering. Typical tasks may include:

      (1)   the provision of a logistics framework to deliver relief items, such as packaged food, water, medicine and temporary shelter, by air, land, or sea, into austere locations from bases on land and at sea;

      (2)   the requirement to rapidly erect temporary facilities, including emergency water, shelter, and sanitation, for displaced persons;

      (3)   the provision of timely emergency medical treatment and prophylaxis to affected populations; and

      (4)   consequence management.

b. **Emergency Rehabilitation & Reconstruction (ERR).** ERR aims to expediently restore or reconstruct indigenous essential services and associated infrastructure necessary for the sustainment of society which has either been damaged, destroyed or denied to the dependent population. In doing so ERR creates the foundation for long term development and needs to be very closely aligned to more long term rehabilitation efforts. The key difference between ERR and ER is that ERR establishes the capacity to source, within country, the key requirements to sustain the population. Typical tasks include:

(1) support for coordinated assessment processes, and involvement in prioritisation and planning;

(2) expedient, temporary repairs to key civil infrastructure (sewage, power and water);

(3) refuse control; and

(4) the provision of flexible and agile medical personnel and facilities capable of conducting sustained operations in multiple locations.

5.30 As the campaign progresses, the military role in Population Support operations is likely to reduce as OGA, NGO and contractor capacity builds. From a Whole of Government perspective, DFAT, through AusAID, is likely to assume responsibility for this role. Regardless, the Land Force must continue to monitor Population Support actions throughout the campaign to ensure synergy with the other lines of operation.

5.31 Often the urgency of the situation will demand an immediate response where basic provisions like food, potable water, clothing and blankets, shelter, power and sanitation will be central to establishing effective governance and interaction with the population. However, the Land Force must have relevant measures of effectiveness to ensure false dependencies and unrealistic expectations are not created.

5.32 While traditionally this may not be seen as a military responsibility, the risk of not completing such tasks creates opportunities for enemies to gain influence over the population or to seek to profit from a destabilised situation. Actions by OGA and NGOs to support this line of operation are often impossible without the provision of adequate security by the Land Force. In the longer term, failure to establish a permissive environment undermines the ability to develop indigenous capacity.

5.33 Population Support operations will only be effective if approached within the context of a holistic campaign that appropriately addresses the other lines of operation. To achieve synergy across the other lines of operation, areas of responsibility should, where possible, be aligned with indigenous territorial committees at district, sub-district and regional levels. These committees, once mature, are likely to have multi-agency representation from the Land Force, police, intelligence, government, aid, development and public affairs agencies. Their role is to plan and execute integrated essential services development through these committee structures across their respective areas of responsibility. This approach supports the line of operation - Indigenous Capability Building.

INDIGENOUS CAPACITY BUILDING

*'There can be no government without an army, no army without money,
no money without prosperity, and no prosperity without justice and good
administration'*

Ninth century Islamic scholar Ibn Qutayba

5.34   Indigenous Capacity Building is defined as those actions taken by the Land Force to assist in the development of effective indigenous government, security, police, legal, financial and administrative systems.[89] It assists to set the host nation conditions for transition to indigenous governance and as such is fundamental to shaping Australia's strategic accepted enduring conditions. Although the Land Force contribution to this line of operation will predominantly be limited to Security Sector Reform, there is a likelihood that early in a campaign, the Land Force may be required to take the lead in other non-traditional areas of responsibility. Consequently, early joint interagency planning along this line of operation is necessary to ensure key OGA input into the development of <u>attainable objectives</u> and a realistic plan for transition of responsibility. Early and comprehensive planning, in concert with purposefully designed measures of effectiveness that are continuously analysed for relevance throughout the campaign, will assist in preventing the creation of false expectations or unsustainable dependencies.

5.35   Where war is waged amongst the people, actions that support the establishment of functional legitimate governance send powerful messages that impact on the perceptions of the people and help sell the political proposition of the intervening authority. Central to effective Indigenous Capacity Building will be identifying and empowering indigenous leaders who are not only competent but also acceptable to the majority of the local population. Putting an accepted local face on indigenous governance, as early as possible, will contribute significantly to winning the competition for governance.

*Noting the importance of cultural sensitivities, any effort to develop indigenous
capacity must resist the temptation to impose a 'Westernised' template to a
problem at the expense of empowering traditional structures.*

5.36   Task organised combined arms teams will focus on the delivery of Indigenous Capacity Building through the application of five operating concepts as represented in Figure 11:

a. **Effective Indigenous Government.** These actions aim to deliver effective indigenous government processes including: financial administration, restoration and/or reform of the public service, the development of an accountability mechanism, due electoral processes, policy development, and civil education and communications capabilities. While these might not be seen as military responsibilities, Afghanistan serves as a good example of what might be required, with local area commanders, through to Commander International Security Forces Afghanistan, having mentoring and/or advisory responsibilities to their respective levels of government.

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[89] For the Land Force, a logical main effort within this line of operation will be Security Sector Reform. The Security Sector includes all those organisations that have the authority to use, or order the use of, force or threat of force, to protect the state and its citizens, as well as those civilian structures that are responsible for their management and oversight.

b.   **Civil Infrastructure Development.** Functional infrastructure systems are essential to enabling effective governance and the development of a self sustaining economy. The government needs a visible presence located within the community and the ability to communicate with the people, police and the military need barracks and depots to train in and operate from, farmers need access to markets and the ability to export their produce, and business needs road and power infrastructure. Due to Operational Uncertainty OGAs, NGOs and the indigenous government's ability to plan and commence implementing long term infrastructure development projects, on the ground, are likely to be severely restricted early in the campaign. Consequently, the Land Force must be prepared to work with key stakeholders in the planning and initial implementation of long term infrastructure development plans.

c.   **Security Sector Reform (SSR).** SSR is the transformation or establishment of security institutions (Judiciary, Police and Armed Forces) that are effective, legitimate and accountable. The SS accepted enduring conditions should be the provision of internal and external security by, or for, the host nation.

d.   **Stable Economic Environment.** The provision of a stable self sustaining economy will be essential in achieving long term national stability for the host nation. Importantly, both macro and micro economic reform take time, are a Whole of Government responsibility, and are dependant on the provision of a stable security environment, a functioning government, and effective civil infrastructure. Focal areas for economic development may include but are not limited to:

　　(1)   micro financing,

　　(2)   market and cottage industries,

　　(3)   mining and natural resources,

　　(4)   agriculture and rural development,

　　(5)   major manufacturing,

　　(6)   access to national and international markets,

　　(7)   banking, financial services and markets, and

　　(8)   legislative and policy framework as an enabler.

e.   **Civil Society Development.** Civil Society Development encompasses areas of activity that take place both within and outside of the States' direct control. It comprises those actions required to reinstate societal values normal for the host nation that are conducive with its long term stability. Additionally, this sub concept includes the protection and preservation of significant cultural and heritage sites and the development of the required human capital necessary to sustain development.
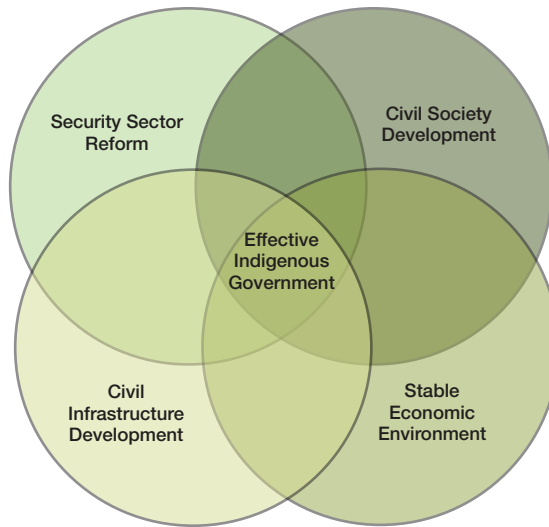
Figure 11. The interrelation of the five Indigenous Capacity Building sub-concepts

5.37   When planning Indigenous Capacity Building operations, the Land Force should, where possible, localise sustainable actions in partnership with local and district leaders. This approach energises key relationships and enhances the military response by:

    a.   creating synergies and alignment with the other lines of operation;

    b.   enabling local leaders to communicate and own the solutions to meet the true needs of the people;

    c.   creating economies of scale that allow the Land Force to accommodate other priorities;

    d.   promoting a long term approach to the restoration of law, order and stability;

    e.   enhancing the likelihood of qualitative human intelligence; and

    f.   setting conditions for the transition.

5.38   By its nature, Indigenous Capacity Building requires an incremental approach that is long term in perspective despite the fact that immediate and visible improvements to governance will be expected by both local and international audiences. Constant holistic assessment will be required to ensure that actions taken within this line of operation are orchestrated with actions taken in the other lines of operation and that expectations of success are managed across the Joint Inter-Agency Task Force.

CHAPTER 6
FORCE MODERNISATION

'My vision is that the Australian Defence Force will be balanced, networked and deployable, staffed by dedicated and professional people who operate within a culture of adaptability and excel at joint, interagency and coalition operations'.

Air Chief Marshal A.G. HOUSTON, AC, AFC

LAND FORCE MODERNISATION AND ENHANCEMENT

6.1   This chapter identifies the Government's key capability priorities for modernising and enhancing the Army, and in particular, the major capabilities that we will need to deliver to build Force 2030, and remediate the current and projected force. Land Force modernisation and enhancement guidance is drawn from the Force Attributes and Capability Development Principles provided by *WP 09* and the principles of the Chief of Army's Development Intent (CADI). *WP 09* will provide significant funding to increase the combat power and survivability of Army as well as key capability priorities for modernising and enhancing the ADF, and in particular the major capabilities that will be needed to deliver to build Force 2030.[90]

6.2   The Adaptive Army. Army will continue to develop and enhance capability under the *Adaptive Army* initiative.[91] Modernisation reforms will focus on improving the Army's long-term capacity to sustain prolonged operational deployments. The Army is also to structure so as to be capable of flexibly surging as required.[92] The CADI gives guidance that the foundation of force modernisation is built on the premise of being concept-led and capability-based while being resource conscious and threat aware. In order to meet higher direction, the Army requires the Land Force to be capable of a wide range of responses mainly, but not exclusively, within the POE and in concert with other services, government and non-government organisations.

FORCE ATTRIBUTES AND CAPABILITY DEVELOPMENT PRINCIPLES

6.3   *WP 09* directs that the ADF, and therefore the Army, design a balanced force for the conduct of operations primarily to defeat armed attacks on Australia.[93] To guide the development of Force 2030, the Government has identified eight force attributes and capability development principles, three of which are universal in application, five of which are specific. These are described below:

> a. **Universal Capabilities.** Certain capabilities are not related to any specific operational function but are universal in application and therefore inherent and perversive throughout. These are described as follows:
>
> > (1) **Interoperable Capability.** Interoperability is principally concerned with the ability of personnel and systems of different nations, services, and agencies to work effectively together, safely and securely. Where it makes sense to do so, and it is cost-effective and in keeping with the policy settings in this White Paper, capabilities and systems should be designed to be interoperable from conception.[94]
> >
> > (2) **Fully Developed Capability.** While mission-specific capability enhancements will be applied where necessary, as a capability development principle the ADF will

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[90]   *WP 2009*, p. 70-86.
[91]   *WP 2009*, p.74, para 9.32.
[92]   *WP 2009*, p. 74, para 9.32.
[93]   *WP 2009*, p 9, Foreword.
[94]   *WP 2009*, p.68, para 8.65

acquire fully developed capabilities, which are fully deployable and effective within readiness warning times.[95]

(3) **Cost Effective Capability.** Defence will continue to drive down the costs of ownership of military capability. This will include greater use of simulation, a more active role for ADF Reserves, smarter maintenance and leaner logistics systems, improved information management, and, where appropriate, a bias towards military- and commercial-off-the shelf capabilities.[96]

b. **Precise Force Application.** The goal for future ADF operations is to achieve precise effects, especially in the discriminate application of kinetic and non-kinetic force, which should seek to minimise unintended consequences to the greatest extent possible.[97] *WP 09* provides direction for the Future Joint Force to develop the following capabilities:

(1) **Personal Attributes.** To ensure success in combat operations the ADF, and therefore the Army, must provide superior leadership and professional mastery.[98] In turn, the soldier is to be disciplined with their use of force, empathetic, positive and friendly in their engagement with local communities, display high ethical standards and uphold the proud tradition of the Australian serviceman.[99]

(2) **Amphibious Capability.** The deployment and sustainment of the Land Force will be substantially enhanced through the introduction of new amphibious ships, supporting sealift and landing craft, as well as other air and maritime capabilities. This will provide a significant capacity for maritime manoeuvre of land forces in our littoral environment.[100] Amphibious operations provide strategic lift and power projection. The amphibious capability also provides a strategic option to respond to other essential tasks throughout the POE and, on occasions, beyond.[101] Our expansive strategic geography requires an expeditionary orientation on the part of the ADF at the operational level.[102]

(3) **Protected Tactical Land Mobility.** The Government places a high priority on the survivability and mobility of our land forces. To meet this priority, Defence intends to acquire a new fleet of around 1,100 deployable protected vehicles. These new vehicles will replace existing armoured personnel carriers, mobility vehicles and other combat vehicles which, in the past, have had limited or no protection. These new vehicles will offer greatly improved firepower, protection and mobility, in response to the increasing complexity and lethality of land operations.[103] The system will be equipped with the Army's integrated battle management systems from inception.

(4) **Special Forces.** Army is to generate the development of joint Special Operations capabilities.[104] *WP 09* directs that Special Forces be highly trained and

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[95] *WP 2009*, p.67, para 8.62
[96] *WP 2009*, p.68, para 8.66
[97] *WP 2009*, p. 67, para 8.59.
[98] *WP 2009*, p. 68, para 8.69.
[99] *WP 2009*, p. 69, para 8.70.
[100] *WP 2009*, p. 73, para 9.23.
[101] *WP 2009*, pp 61 , para 8.25
[102] *WP 2009*, p. 52, para 6.42
[103] *WP 2009*, p. 75, para 9.38.
[104] *WP 2009*, p. 61, para 8.21.

equipped for a wide range of roles with fixed and rotary wing assets as enablers.[105] Special Forces are one of the Government's crucial priority areas for the ADF.[106] Special Forces also provide the Army with the capability of strategic land strike operations.[107]

(5) **Intelligence, Surveillance, Target Acquisition, Electronic Warfare [ISTAREW] Capabilities.** The Government will make a substantial investment in ISR capabilities to provide the very high levels of situational awareness required in the specific area of ADF operations.[108] Importantly the Land Force will be required to contribute to, and benefit from, the broader common operating picture, provided by the merging of information from many sources, both deployed, and through reachback, strategic capabilities. As one of these sources, the strengthening of the Joint EW capability is afforded high priority. Effective use of EW techniques can enhance the protection of our deployed forces, increase their effectiveness, and deny our adversaries information about our locations, intentions and capabilities.[109]

(6) **Joint Offensive Fires.** To further enhance the direct and indirect combat power available to the Army's combined-arms teams, Government will proceed with the acquisition of new 155mm artillery systems, both self-propelled and towed type, able to fire precision munitions at very long ranges, and high rates of fire.[110] Army's fire support will be augmented by Armed Reconnaissance Helicopters and new improved mortars.[111] This increase in offensive fire will be further enhanced by the Joint fires capabilities inherent in the Future Joint Force.

(7) **Non-Lethal Weapons.** Government has also decided that our deployed troops will have access to an enhanced suite of non-lethal weapons. This will provide our troops with options short of lethal force.[112]

c. **Networked Capability.** The future ADF will use modern information technology to link sensors, weapons systems and commanders and their personnel in a networked environment.[113] This will include:

(1) **Communications.** The Army is to operate and maintain resilient and integrated communications and information systems to enable command and control,[114] defend the integrity of our own network and threaten enemy network capabilities.[115] Army is to be cognisant of the potential power of other informal communication mediums such as social networks and web-based technology and put measures in place to exploit them to our advantage or deny the enemy advantage accordingly.

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[105] *WP 2009*, p. 61, para 8.21.
[106] *WP 2009*, p. 63, para 8.35.
[107] *WP 2009*, p. 61, para 8.23
[108] *WP 2009*, p. 81, para 9.79
[109] *WP 2009*, p. 83, para 9.90
[110] *WP 2009*, p.77, para 9.45.
[111] *WP 2009*, p.77, para 9.47.
[112] *WP 2009*, p.77, para 9.52.
[113] *WP 2009*, p. 67, para 8.60.
[114] *WP 2009*, p.67, para 8.60.
[115] *WP 2009*, p.79, para 9.64.

(2) **Intelligence.** Central to Australia's security is a robust intelligence capability.[116] In the broader national security arrangements, Defence and in turn Army has a vital role. Army's main focus and future path will be support to operations with an emphasis on developing human intelligence gathering capability which is fundamental for mission success in conducting operations in complex terrain.[117]

(3) **Tactical Unmanned Aerial Vehicles [UAVs].** Tactical UAVs will enhance the effectiveness and survivability of ground forces by providing real-time situational awareness directly to forces on the ground.[118]

(4) **Space-based Capabilities.** Space-based assets and capabilities such as communications and situational awareness systems give an information superiority that provides our forces with a winning edge.[119] *WP 09* views space-based capability as a strategic hedge against counter space technologies.[120] We also need to take action to protect our systems from an adversary's space-based capabilities.[121] Space based capabilities are an essential component of how Army conducts operations.[122]

d. **Operational Flexibility.** Australia cannot afford to maintain a large number of narrowly applicable capabilities. The future development of the ADF is to emphasise, wherever possible, operational flexibility and multirole employment in its systems, platforms and organisations.[123] Examples are:

(1) **Deployable Logistic Support Vehicle Fleet.** Defence will continue a further major vehicle-related project to replace the current deployable support vehicle fleet of wheeled transport and logistic vehicles with a mix of around 7,000 support vehicles. The new vehicles will provide transport, command and control, liaison and logistic support.[124]

(2) **Force Projection.** The acquisition of amphibious and sea-lift ships, strategic (inter-theatre) and operational (intra-theatre) air lift, mounting bases and forward operating bases allow for the projection of Land Forces throughout the POE.[125]

(3) **Battlefield Lift Capability.** Operations in our region will generate considerable demands for intra-theatre lift to support dispersed deployments and to access remote areas.[126] *WP 09* states that the acquisition of seven new medium-lift CH-47F helicopters will increase the Land Force operational effectiveness and employability across the battlefield.[127] Coupled with this requirement, is the acquisition of 30 MRH-90

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[116] *WP 2009*, p. 102, para 12.1.
[117] *WP 2009*, p. 77, para 9.49.
[118] *WP 2009*, p.77, para 9.51.
[119] *WP 2009*, p. 82, para 9.80.
[120] *WP 2009*, p. 62, para 8.28.
[121] *WP 2009*, p. 85, para 9.100.
[122] *WP 2009*, p. 85, para 9.100.
[123] *WP 2009*, p. 67, para 8.61.
[124] *WP 2009*, p. 76, para 9.39.
[125] *WP 2009*, p. 61, para 8.25.
[126] *WP 2009*, p. 76, para 9.42.
[127] *WP 2009*, p. 76, para 9.43.

helicopters for the Army to increase its tactical troop lift capability and up to ten light tactical fixed-wing aircraft for the RAAF to replace the DHC-4.[128]

(4) **Reserve Forces.** Government is committed to a better integration between part-time and full-time service in the ADF, and removing the factors which can impede the contribution that part-time forces can make to ADF capability.[129] The Reserve is an integral part of the force. It provides a valuable source of latent capability to enable the force to surge and provides links into the local community. *WP 09* guidance provides a specific focus on how to better utilise the capabilities of Army's Reserve force including through the use of focussed contribution and Sponsored Reserves.[130] The Army will internally re-balance the fulltime /part time mix and seek to increase greater levels of integration. The balance of the Army's full-time and part-time components should be considered a force multiplier.[131]

(5) **Commercial Contracting.** Commercial contractors have been used, in some form, on all recent operational deployments.[132] Deployable contractors allow ADF elements to redeploy, reconstitute and prepare for subsequent operations.[133] Army will continue to develop the skills and experience necessary to manage and support commercial contractors in operational environments.[134]

e. **Survivable and Robust Capability.** The ADF must be able to protect itself against the range of existing and evolving threats, particularly as the proliferation of threats is unlikely to abate.[135] Such threats can be mitigated by:

(1) **Personal Protection.** Every soldier is to have access to appropriate personal protection, protected mobility[136], protected combat mobility[137], firepower, situational awareness and stealth to enable them to perform their missions with the least risk.

(2) **Protecting the Force.** The Land Force is to be provided with Counter-Improvised Explosive Device (C-IED), Counter-Rocket Artillery Mortar (C-RAM) and Ground Based Air and Missile Defence (GBAMD) capabilities to protect critical nodes and routes.[138]

(3) **Sustaining the Force.** Army needs to improve its long-term capacity to sustain prolonged operational deployments and to flexibly surge in response to changing strategic circumstances. Through the Adaptive Army and other initiatives, Army will develop plans, within the strategic guidance and funding parameters[139], to support and

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[128] *WP 2009*, p. 76, para 9.44 and 9.72.
[129] *WP 2009*, p. 90, para 10.15.
[130] *WP 2009*, p. 91, para 10.19.
[131] *WP 2009*, p. 90, para 10.12.
[132] *WP 2009*, p. 91, para 10.20.
[133] *WP 2009*, p. 91, para 10.20.
[134] *WP 2009*, p. 92, para 10.20.
[135] *WP 2009*, p. 67, para 8.52
[136] To and from the fight.
[137] In the fight.
[138] *WP 2009*, p.77, para 9.48.
[139] *WP 2009*, p. 74, para 9.32.

invest in our people[140] and smart ways to maintain equipment.[141] The POE demands that the Army's processes are aligned to allow for integrated logistics over the shore.

f. **Capability Advantage.** In order to maintain a strategic capability advantage, the ADF will acquire the most capable platforms and systems within policy settings, in order to offset the relatively small size of our forces and give them a war-winning edge. Exploiting and applying new advanced technologies will be crucial to achieve this.[142] It will include:

(1) **Counter Weapons of Mass Destruction (C-WMD).** WP 09 guidance is that Army enhances the counter-WMD capabilities of the ADF by establishing a deployable defensive counter-WMD capability in the Incident Response Regiment (IRR) in support of land force or special operations activities. This will include some decontamination capabilities, as well as area and close survey, technical advice, and sophisticated measurement capabilities.[143] Additionally the existing chemical, biological, radiological and nuclear protective (CBRN) capabilities within the IRR will be enhanced.[144]

(2) **Cyber Warfare.** In the past decade the growing importance of operations in cyberspace has become more apparent. The potential impacts of such attacks have grown with Defence's increasing reliance on networked operations. Army must be able to play its part in operations in cyberspace.[145]

CHIEF OF ARMY'S DEVELOPMENT INTENT

6.4 Chief of Army's Development Intent is to develop an Army that is able to operate simultaneously across all five LOO, in particular through the conduct of sustained close combat, in order to win the joint land battle, every soldier, regardless of specialisation, must have a warfighting focus and a high level of combat skill.

6.5 The CADI, at the Army program level, details design rules that will allow concept development and force modernisation staffs to generate an Army that is capable of performing effectively across all lines of operation. These rules represent logical deductions driven by the analysis of the future warfighting environment. The CADI is a key input into experimentation and gap analysis.

CHIEF OF ARMY'S DESIGN RULES

6.6 **Design Rules.** The Army is to conform to the 10 Design Rules in order to maximise the utility of the force. These Rules in turn are informed by, and should be read in conjunction with, the *WP 09* Capability Principles.

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[140] *WP 2009*, p. 113, para 14.3
[141] *WP 2009*, p. 126, para 16.10.
[142] *WP 2009*, p. 67, para 8.63.
[143] *WP 2009*, p.86, para 9.106.
[144] *WP 2009*, p 78, para 9.54.
[145] *WP 2009*, p. 83, para 9.85.

a. **Rule 1.** Every soldier within Army is to be: an expert in close combat, a leader, physically tough, mentally prepared, courageous, prepared to take the initiative, a valued team member, compassionate and committed to continuous learning and self development.

b. **Rule 2.** The Army is to be designed for operations based on deploying the Land Force in complex environments and optimised for sustained close combat against a lethal enemy.

c. **Rule 3.** The Army is to promote a learning culture and become a Learning Organisation. To support this, Army will apply a mission command philosophy, organisational structures, and training and education systems that empower soldiers and their commanders for complex, unpredictable tasks based on short, medium and long term learning loops and the ability to adapt.

d. **Rule 4.** The Land Force is to be capable of planning, integrating, balancing, executing and sustaining actions across all five lines of operations for an extended period.

e. **Rule 5.** The Army is to maintain appropriate levels of interoperability, and integrated learning, with the other Services, OGA, key allies and where applicable commercial contractors.

f. **Rule 6.** Army must develop a joint robust logistics, administrative and personnel system to support the Land Force with the capacity to support non-Army elements such as OGA, allies and coalition partners as appropriate.

g. **Rule 7.** All elements of the Land Force are to be provided with devolved situational awareness, including a relevant common operating picture, access to key intelligence products, logistics situational awareness, personnel tracking, and appropriate capabilities and capacities to conduct ISTAREW in order to inform the Land Force ISTAREW network – *every soldier a sensor*.

h. **Rule 8.** Elements in the Land Force are to have a modular, flexible structure which allows rapid regrouping and application of precision combined arms effects at the small team level.

i. **Rule 9.** Force Modernisation is to be predicated on the philosophy of Fighting – Learning – Adapting – Winning.

j. **Rule 10.** The Army is to regard cultural, societal and language capabilities as combat multipliers and as such, these skills need to be developed across all corps' and managed as a resource across Army. Every soldier acts as a '*tactical ambassador*' whose cultural competence is a force multiplier.

ANNEX A
FUNCTIONAL ANALYSIS

ADAPTIVE CAMPAIGNING'S FIVE LINES OF OPERATIONS

Purpose

A.1   The purpose of this annex is to provide greater guidance on the force modernisation requirements necessary to realise *Adaptive Campaigning*. This annex expands on the description of each of the lines of operation contained within the covering document by providing a more detailed functional analysis.

FUNCTIONAL ANALYSIS OF JOINT LAND COMBAT

A.2   Joint Land Combat and the sub concepts of Distributed Manoeuvre; Dynamic Sensor-Shooter Coupling; Focused Understanding; Isolation of the Battlespace; Dominant Response; and Mission Oriented Force Protection are predicated on the following seven demands:

a. **ISTAREW.** The ability to command, control and coordinate Land Force actions that generate actionable intelligence and update the shared common operating picture across the Land Force is essential. The foundation of the common operating picture is based on the ability to dynamically map the complex operating environment and disseminate this information in a time critical manner to the lowest practical level. This ability is intrinsically linked to the Land Force's ISR capabilities and is predicated on the fusion of technical and human intelligence. Underpinning this approach is the concept 'every soldier is a sensor'.

b. **Force Protection.** Individualised lethality of modern weapons and the disaggregated battlespace means that in *Complex War*, land forces will encounter more lethal enemies, with less warning, in close combat, in complex terrain. Therefore, all deployed land force elements will need to be given sufficient levels of protection, mobility and firepower to conduct sustained close combat within the complex battlespace. Importantly, the Land Force will need to survive first contact with the enemy and react accordingly. Additionally, the Land Force will need the capacity to conduct rapid route clearance and gap crossing, maintain essential lines of communication, and operate within a contaminated environment.

c. **Adaptation.** The Land Force must be capable of planning and conducting operations in uncertain, volatile, complex and ambiguous settings. This is critically enabled by the ability to identify key requirements, modify and respond to threats and/or react rapidly to exploit fleeting opportunities. This capability will only be achieved by creating a culture of adaptation with an emphasis on leadership, education, and training within complex and ambiguous environments and the ability to rapidly incorporate lessons learned into TTPs.

d. **Joint Fires.** The complex operating environment demands greater numbers of small combined arms teams operating within the battlespace, each able to orchestrate precision joint fires within critical time.[146] Consequently, there is an increased demand for joint

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[146] Critical Time (TCrit) - is that time after which the continuation of an action will fail to meet its primary purpose.

fires. To address these requirements, the Land Force needs enhanced access to scalable precision joint fires within critical time.

e.   **GBAMD.** The future joint offensive fires threat will be characterised by the proliferation of: UAVs; cruise/ballistic missiles; long range rockets, artillery and mortars amongst others. As a result of increases in stand-off weapon and sensor ranges and lethality, the requirement for GBAMD and CRAM assets to defeat munitions in flight, as well as the delivery/acquisition platforms themselves, is increasing. True GBAMD and CRAM capabilities must consist of a layered system of response capabilities interconnected through the provision of Airspace Battle Management and Situational Awareness.

f.   **Protected Logistics.** The requirement to operate in large numbers of small combined arms teams is likely to increase the pressure upon Land Force logistic capacity. Despite being essential to success, land force logistic elements have tended not to be as well protected as the remainder of the force. Consequently, they are often targeted by enemies. Logistic nodes and modes will therefore, require access to greater levels of: protection, NLOS fires, tailorable fighting capabilities and automation than has previously been the case. Experience in Iraq and Afghanistan has shown that logistics soldiers required specialist counter vehicle ambush drills. Additionally, the enemy counter-mobility actions, especially the use of roadside bombs in those theatres, have rendered road supply routes untenable without convoy protection. A lot of personnel transportation that would be more efficiently transported by road is moved by rotary wing. This absorbs enormous resources and has demanded protected mobility for all vehicles in the fleet not just combat vehicles.

g.   **Rapid Regrouping.** Land Forces must be versatile, agile, and able to orchestrate effects in a precise and discriminating fashion. Elements in the Land Force therefore need to have modular flexible structures that allow for rapid regrouping and the development of combined arms outcomes at the small team level. Modularity requires highly educated and skilled forces with a capacity for network-enabled operations, optimised for close combat.

h.   **Sustainment.** The Land Force is to be optimised to conduct close combat in complex terrain. It follows, therefore, that the Land Force logistic component must be optimised to support these operations. The US experience at Fallujah and the Israeli experience against Hezbollah in South Lebanon showed a three-fold increase in estimates of ammunition usage of all types. This was especially true of artillery rounds which are the heaviest items of sustainment in any modern Western army. In roughly two weeks of operation US forces fired 14 000 rounds and the IDF in a month fired approximately 100 000 rounds. Added to this was the expensive and extensive use of Precision Guided Munitions (PGMs) from attack helicopters and fixed wing aircraft not at armour for which they were designed but at individual weapon emplacements and soft-skinned vehicles. Over 540 offensive air missions were conducted into Fallujah while the IDF flew 200 missions daily for the duration.[147]

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[147]   Evans, Michael (2007), 'City Without Joy-Urban Operations into the 21st Century', Australian Defence College Occasional Series, No. 2, p. 19.

FUNCTIONAL ANALYSIS OF POPULATION PROTECTION

A.3   Defence has consolidated the existing excellent working relationship enjoyed between the ADF and the Australian Federal Police (AFP) through the 26 Sep 08 signing of a Memorandum of Understanding on ADF / AFP Interoperability. More Whole of Government work needs to be done. In the future, the Land Force will move beyond *interoperability* with Whole of Government agencies, to *interconnectedness* with not only Whole of Government, but Whole of Nation, including: commercial contractors, NGOs, and various populations, including Australian citizens. This approach is dependant on building on the relationship that exists between the AFP and ADF and extending this to other relevant stakeholders. This transition will be dependent on the following demands being met:

> a.   **Coordination.** Moving from *interoperability* to a concept of *interconnectedness* will be underpinned by coordination and, by necessity, will need to be based on the tenets of mutual trust, a commonly understood vision, recognised organisational boundaries and capabilities, shared responsibilities, and, measurable objectives. The first step to achieving the rest with available doctrine and shared aspects of training.

> b.   **Doctrine and Training.** Frequent joint and combined exercises that involve the AFP, DFAT and OGA, coalition partners, and the Land Force, within realistic training scenarios, will stimulate the development of robust TTPs, and combined interagency doctrine.

> c.   **Non-Lethal Capabilities.** The Land Force's non-lethal capability is embryonic in nature and is currently limited in terms of depth and weapon array. The Land Force's non-lethal capability needs to be improved to enable it to project non-lethal effects, at distance, to shape and influence crowds. An important aspect of enhancing the current non-lethal capability is instilling in the Land Force a culture and Rules of Engagement which reflects a graduated response between non-lethal and lethal force.

> d.   **Military Police Capabilities.** The ADF's Military Policing capacity, specifically focusing on their deployable investigation, processing and detention capabilities, needs to be enhanced.

> e.   **Enhanced Police Capabilities.** It is likely that the capacity and readiness levels of the police will need to be further increased. However, the formation of the International Deployment Group (IDG) within the AFP represents a significant step toward fulfilling this demand. Key to further enhancing the capabilities resident within the IDG will be to ensure that police have appropriate access[148] to commensurate levels of protection, mobility and protected communications. Failure to do so risks exposing police to an adaptive enemy that will seek to exploit vulnerabilities within the Force.

> f.   **Linguistic and Cultural Sensitivity.** An important aspect of Population Protection operations is developing the trust of the population through a combination of engagement and affinity. This enables the force to understand local behaviours and population normalcy. This necessitates a base level of linguistic and cultural skills throughout the

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[148] Access – in this context their may be a number of different ways by which this can be achieved from ensuring these capabilities are resident, on a permanent basis, within the police, to partnering relationships with Defence, industry or commercial contractors.

deployed force. According to the Australian Bureau of Statistics over 160 000 Australians speak Arabic as native speakers in the home and were raised in a traditional setting. This rich resource is yet to be utilised as there is still a need to send Army officers to learn Arabic at language school.[149]

g. **Positive Perceptions.** Many populations in developing nations are intimidated by the presence of a military force. This stigma has the potential to limit the ADF's ability to get close to and develop intimacy with the population. Therefore, the ADF needs the capability to produce and disseminate public information, in printed and electronic media, in order to explain their actions and intentions, to advise the public on what they should, and should not, do and to counter enemy propaganda. The production of this type of material is fundamental to shaping the perceptions of the population and critically important to the success of the other lines of operation.

h. **Specialist Engineering Capabilities.** Security, Population Control and Weapon and Hazard Material Control actions all require access to specialist engineering capabilities.

i. **Logistics and Administration.** The ADF needs to have the logistics and administrative capacity to support large scale contingents of other government agencies on operations. The Land Force should have a logistics and administrative component that fulfils its requirements (including any embedded or attached personnel from OGA) and no more. It should be designed and focussed entirely on the needs of combat service support to the Land Force. This is in keeping with the requirement for the Land Force to be agile and optimised for close combat. This does not preclude any residual capacity being utilised for the ADF effort, if available; however, this should not be a planning factor. As the lead element of the Land Force, Army must be prepared to provide logistic and administrative support to OGA at least initially.

FUNCTIONAL ANALYSIS OF INFORMATION ACTIONS

A.4 Information Actions underpin every element of *Adaptive Campaigning* and are an essential prerequisite for success. Information Actions and the key sub-concepts; Influence, Counter Command, and Command and Information Protection are predicated on the following requirements:

a. **Assess.** Every society has a structure of ideas, attitudes and customs instilled by its culture, spiritual beliefs and social systems. Some of the sociological norms and patterns of thought are so firmly entrenched that they cannot be altered. Other attitudes can be modified but only slowly and carefully. It is essential to distinguish between those attitudes which are malleable and those which are not. To harness this approach, the Land Force requires greater access to detailed cultural, societal and anthropological information on target population groups.

b. **Information Management.** Modern ISTAREW systems potentially provide vast amounts of information. Commanders must control information, or risk being dominated

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[149] Australian Bureau of Statistics, *Australian Language Survey*, www.abs.gov.au

by it and rendered ineffective. Additionally, the rapid saturation of commercial and non-commercial communication capabilities will place yet further demands on the ability to manage information. This is especially true of the web-based information domain where it must be accepted that information probably cannot be controlled and therefore needs to be managed to best effect. The requirement to maintain an analytical situational awareness of this 'white' information will become increasingly important as planners seek to tap into this information to support lethal and non-lethal effects planning. Consequently, Information Management entails the provision, through systems, education and procedures, of relevant information to the right person at the right time in a usable form.

c. **Plan and Integrate.** Information Action operations must be planned and coordinated across the force, and within a Whole of Government campaign plan, from the outset. The Land Force needs to adopt a planning culture that places greater emphasis on the planning and conduct of Information Actions. These operations must be seen as central to a campaign rather than as an afterthought. Planning must embrace a joint-interagency approach that enlists support from key OGA and NGOs. Just as there is a Whole of Government approach to campaigning, there needs to be a Whole of Government approach to the development of Information Action objectives and themes.

d. **Disseminate.** Combined arms teams need the ability to create and disseminate information, in accordance with campaign themes, which explain their actions or intentions and informs the public on how to avoid or counter enemy propaganda. This form of influence is one of communicating and marketing rather than one of propaganda. Capabilities required include responsive access to media products, leaflets, mass printing facilities, broadcasting facilities, video capture, Internet and bandwidth. This is especially true of the web-based information domain where it must be accepted that information probably cannot be controlled and therefore needs to be managed to best effect. Additionally, the Land Force must have the ability to test, disseminate and evaluate messages and themes prior to mass dissemination. Finally, responsibility for disseminating agreed messages must be devolved wherever possible to the lowest practical level.

e. **Monitor.** Managing the perceptions of people is a continuous cycle that requires constant feedback, assessment and adaptation. This process needs to occur across all levels of an operation, consequently formal coordination mechanisms at the tactical, operational and strategic level need to exist.

f. **Electronic Warfare.** Electronic Warfare describes those actions involving the use of electromagnetic and directed energy to control the electromagnetic spectrum, or to attack the enemy while protecting friendly freedom of action in the spectrum. Given the increasing importance of being able to guarantee use of the electromagnetic spectrum, for both the Joint Force and Indigenous Government, the Land Force will need expanded and devolved Electronic Warfare capabilities in the future.

g. **Counter Leadership Operations.** The ability to responsively target High Value Targets with kinetic or non kinetic means to physical disrupt or destroy adversarial command and control. These operations demand high fidelity ISTAREW, decision support

including legal support, <u>authority</u>, and responsive, discriminating manoeuvre forces and/or fires, all in real time.

FUNCTIONAL ANALYSIS OF POPULATION SUPPORT

A.5   The provision of Population Support is primarily the responsibility of specialised civilian, national, international, governmental or nongovernmental organisations and agencies. However, Population Support provided by military forces may precede or accompany humanitarian activities provided by specialised civilian organisations. The military's capability to undertake Population Support actions is predicated on three key demands:

a.   **Capacity.** Traditionally, Land Force logistic capacity has been designed to sustain the force and assigned elements. This capacity, although it can be stretched to meet surge requirements, needs to be increased to adequately cope with the additional demands of Population Support operations. An important component of this capability is the ability to distribute aid within a theatre of operations. This requires the Land Force to be able to operate from and deliver aid to austere and remote locations within the context of a joint force.

b.   **Interagency Integration Mechanisms.** The Land Force requires the creation of both formal and informal mechanisms at all levels of command including working levels of government to ensure effective and efficient delivery of aid. While these mechanisms exist at the strategic level in the form of Inter-Departmental Working Committees, similar mechanisms need to be replicated at the operational and tactical levels, thereby ensuring a coordinated Whole of Government response to crises.

c.   **Transition.** Successful transition to other legitimate agencies is facilitated through the provision of security by Joint Land Combat and Population Protection operations. Successful transition is dependent on the capacities and resilience of the host government, the level of integration in Whole of Government planning and outcomes, being able to measure the effectiveness of the assistance being delivered by other agencies, and, the generation of comprehensive solutions with non-government and international partners. The Land Force needs to continue to monitor the effectiveness of the aid being delivered in order to allow it to rapidly respond to changes if required.

FUNCTIONAL ANALYSIS OF INDIGENOUS CAPACITY BUILDING

A.6   By its nature, Indigenous Capacity Building requires an incremental approach that is long term in perspective despite the fact that immediate and visible improvements to governance will be expected by both local and international audiences. Importantly, while initially Joint Land Combat may be the number one priority for the Land Force at the commencement of the operation, it is the success of Indigenous Capacity Building that will often establish the accepted enduring conditions. The Land Force capability to undertake Indigenous Capacity Building actions is predicated on four basic requirements:

a. **Understand.** Understanding the machinery of governance, the economic system, political dimension, and the legal apparatus that either exists, or is absent within, the assigned environment is critical to this line of operation. To truly analyse the nature of the problem, the Land Force requires an accurate appreciation of normalcy patterns; an approach broader than the traditional military Intelligence Preparation of the Battlefield. Key Land Force personnel will need to be broadly educated in the basics of civil governance, town planning, economic and political systems and anthropology. To ensure the Land Force is adequately prepared to conduct Indigenous Capacity Building, the Force needs to have the skills to effectively engage and cooperate with indigenous and coalition partners, as well as understand how to manage a population and restore and rebuild a city.

b. **Capacity.** While traditionally this may not be seen as a military responsibility, the risk of not completing such tasks creates opportunity for enemy elements to gain influence over the population. Consequently, the Land Force will need to have the capacity to, at least initially, supply specialist staff to provide these functions until relieved by other legitimate agencies. The Land Force's capacity can be reinforced by developing reach back capabilities to allow operational and tactical commanders and their staff to remotely access expert technical advice and/or assistance including commercial contractors and the Reserve.

c. **Enable.** When conducting this line of operation, the guiding principle should be to empower appropriate indigenous agencies as soon as possible. While ideal, this approach will not always be possible and the Land Force may need to assume lead roles in establishing required levels of governance and civil service function. As a result, key personnel within the force require suitable training and credentials to fulfil, as an interim measure, the functions of town mayors, legal appointments, through to civil service responsibilities.

d. **Engage and Monitor.** The Land Force must remain engaged in all aspects of Indigenous Capacity Building to ensure alignment across all lines of operation within the campaign. The Land Force requires the ability to monitor the effectiveness of services provided and their impact on the population. This will be enhanced by fostering the continued development of coordination mechanisms between the force, indigenous groups, OGAs and NGOs.

REFERENCES

Military

Arquilla, J., and Ronfeldt, D. 2000, Swarming and the Future of Conflict. RAND study.

ABCA 2008, Strategic Assessment of the Security Environment 2008-2030. http://www.abca-armies.org

Bender, A. System Dynamics and Attractors: Background for Prediction and Exploitation of Complex Systems, Defence Science and Technology Organisation, Canberra.

De Czege, H.W. 2007, On Inserting Systemic Operational Design (SOD) Derived Ideas Into US Army Doctrine, Unified Quest 07 Postscript 2 (June 29, 2007).

Department of the Army 2007, The United States Army: Functional Concept for Strike 2015-2024, TRADOC Pamphlet 525-3-4.

Department of the Army 2008, The United States Army: Commander's Appreciation and Campaign Design, TRADOC Pamphlet 525-5-500.

Department of Defence, The Australian Army – A Learning Organisation, Training Command, Canberra.

Department of Defence undated, Complex Decision Making, Defence Science and Technology Organisation, Canberra.

Department of Defence 2002, The Australian Approach to Warfighting, Canberra.

Department of Defence 2006, Adaptive Campaigning, Australian Army, Canberra

Department of Defence 2006, Complex Warfighting, Australian Army, Canberra.

Department of Defence 2006, Future Maritime Operating Concept – 2025: Maritime Force Projection and Control, Australian Defence Force, Canberra.

Department of Defence 2007, Future Air and Space Operating Concept, Australian Air Publication AAP 1000–F, Canberra.

Department of Defence 2007, Joint Operations for the 21st Century: The Future Joint Operating Concept, Australian Defence Force, Canberra.

Department of Defence 2008, Army Continuous Modernisation Process Handbook 2008, Australian Army, Canberra.

Department of Defence, Lines of Operation Papers, Force Development Group, Draft as at July 2008.

Department of Defence 2008, LWD 1 the Fundamentals of Land Warfare 2008, Australian Army, Canberra.

Department of Defence, 2009, Defence White Paper, Defending Australia in the Asia Pacific Century: FORCE 2030, Canberra.

Department of Defence 2000, *Australian Maritime Doctrine*, Royal Australian Navy, Canberra.

Department of Defence 2006, AAP 1002: The Operational Air Doctrine Manual, Royal Australian Air Force, Canberra

Glenn, R. W. 2007, Continuing Counterinsurgency Challenges: Third in a Series of Joint Urban Operations Observations and Insights from Iraq and Afghanistan, National Defense Research Institute, California.

Glenn, R. W. and Helmus, T.C. 2007, A Tale of Three Cities: Analyzing Joint Operations with a Focus on Falujah, Al Amara, and Mosul, National Defense Research Institute, California.

Glenn, R. W. 2008, Counterinsurgency and Capacity Building: Lessons from the Soloman Islands and the Southern Philippines, National Defense Research Institute, California.

Grisogono, A. undated, Transitioning a Brigade to an Adaptive Organisational Stance, Defence Science and Technology Organisation, Canberra.

Grisogono, A., and Ryan, A.J. undated, Insights for Counter Insurgency Operations from Complex Adaptive Systems Thinking, Defence Science and Technology Organisation, Canberra.

Grisogono, A., and Spaans, M. undated, Adaptive Use of Networks to Generate an Adaptive Task Force, presented at the 13th ICCRTS: C2 for Complex Endeavours.

Kelly, J. 2008, Future War – Future Wars, Australian Army, Australian Defence Force, Canberra.

Krauthammer, C. quoted in Allison, W. T. Autumn 2008, Primacy and the Unipolar Movement: The Debate Over American Power in an Asymmetric World, Australian Army Journal, Land Warfare Development Centre, Canberra.

Matthews, M.M. 2008, We Were Caught Unprepared: The 2006 Hezbollah-Israeli War, The Long War Series Occasional Paper 26, U.S. Army Combined Arms Centre Combat Studies Institute Press, Kansas.

Schmitt, J.F. undated, A Systemic Concept for Operational Design. http://www.au.af.mil/au/awc/awcgate/usmc/mcwl_schmitt_op_design.pdf

Scott, M. Autumn 2007, Rebuilding Afghanistan One Mud-Brick at a Time, Australian Army Journal, Land Warfare Studies Centre, Canberra.

Special Operations Command. Future Special Operations Concept. Draft. 2008.

The Afghanistan Compact, presented at the London Conference on Afghanistan 31 Jan- 1 Feb 2006.

USJFCOM, Joint Operating Environment 'Trends & Challenges for the Future Joint Force Through 2030, Nov 2008.

Non-Military

AusAID, 2009, Australian Aid: Promoting Growth and Stability, www.ausaid.gov.au/publications/whitepaper

Australian Communications and Media Authority 2009, Trends in Communications and Media Technology, Applications and Use, Canberra. http://www.acma.gov.au

Biddle, S. 2004, Military Power: Explaining Victory & Defeat in Modern Battle, Princeton University Press, Princeton and Oxford.

Commonwealth of Australia, 2009, Australia's Future Security and Prosperity in a Rapidly Changing Region and World – Responding to the Australia 2020 Summit, http://www.australia2020.gov.au/response/index.cfm

Clausewitz, C.V. 1976 On War, Princeton University Press; translated by Howard, M. and Paret, P.

De Czege, H.W. 2008, Rethinking "IO:" Complex Operations in the Information Age, Draft.

DeRosa, J.K., Grisogono, A., Ryan, A.J., and Norman, D.O. undated, A Research Agenda for the Engineering of Complex Systems, unpublished.

Department of Health and Ageing 2005, Preparing for an Influenza Pandemic - Practical Information for Health Care Workers - Introductory letter from the Chief Medical Officer to health care workers.

http://www.health.gov.au/internet/main/Publishing.nsf/Content/pubhlth-pandemic-healthcare-cmoletter.htm.

English, J.A. and Gudmundsson, B.I. 1994, On Infantry: The Military Profession, Praeger Publishers, Connecticut.

Hoffman, F. 2007, Conflict in the 21st Century: The Rise of Hybrid Wars, Potomac Institute for Policy Studies, Virginia.

International Labour Office 2006, Global Employment Trends for Youth, International Labour Organisation, Switzerland. www.ilo.org/asia/info/public

Islamic Republic of Afghanistan 2008, Afghanistan National Development Strategy (ANDS) 1387-1391(2008-2013): A Strategy for Security, Governance, Economic Growth and Poverty Reduction. http://www.ands.gov.af/ands/ands_docs/index.asp

Krasetv, I. 2008, What Russia Wants, Foreign Policy, May/June 2008.

Krulak, C. 1997, The Three Block War: Fighting in Urban Areas, Address to the National Press Club, Washington, D.C., October 10, 1997.

Pacific 2020 Project 2006, Pacific 2020 Challenges and Opportunities for Growth, http://www.ausaid.gov.au

Quinlivan J.T. (2003) 'The Painful Arithmetic of Stability Operations RAND Corporation. www.rand.org/publications/randreview/issues/summer2003

Rrein, M. and Schön, D. 1991, "Frame-reflective policy discourse," in *Social sciences, modern states, national experiences and theoretical crossroads*, ed. Wwagner, P., Wweiss C.H., Wwittrock, B., and Wwollman, H. (Cambridge: Cambridge University Press, 1991)

Smith, R. 2005, The Utility of Force: The Art of Warfare in the Modern World, Allen Lane, London.

The United Nations 2005, World Urbanisation Prospects: The 2005 Revision. http://www.un.org/esa/population/unpop.htm

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