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Australia's Joint Approach

BRIG Tim McKenna and Tim McKay

Joint and Operations Analysis Division
Defence Science and Technology Group

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ABSTRACT

The joint design of the future force has been, and continues to be, a significant challenge for Defence. This paper presents a review of the Australian joint approach to the planning and conduct of operations, the management of the current ADF, and the design and building of the future force. And along the way we make a number of suggestions for enhancing joint force design, most notably, that it is necessary to establish an effective, permanent and well-resourced joint force design team to ensure that improvement is achieved throughout the force design process. Furthermore, force design improvement requires a Defence joint force design culture, where the focus is on decision-making through a joint and integrated lens.

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506 Lorimer St
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*Telephone: 1300 333 362
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Australia's Joint Approach

Executive Summary

The purpose of this paper is to review the evolution of the Australian joint approach to inform the ongoing development of joint within the Australian Defence Organisation.

The ADF's joint approach to operations began in the 1960s with a joint national commander in Vietnam and culminated with establishing Headquarters Joint Operations Command (HQJOC) at Bungendore in 2008, commanded by a three-star Chief of Joint Operations (CJOPS). In managing the ADF's preparedness for operations, Australia has also adopted an increasingly joint approach, beginning with the Kangaroo exercises in the 1970s, the establishment of the three-star position of Vice Chief of Defence Force (VCDF) in the 1980s and has continued with VCDF's recent designation as Joint Capability Authority (JCA). Australia's joint approach has also extended to designing and building the future ADF with the establishment of Development Division in 1990 through to appointment of a three-star Chief of Capability Development Group (CCDG) in 2004. The paper addresses Australia's joint development under these three headings, namely: operations, management of the current force, and designing and building the future force.

In April 2015, the Government announced its endorsement of the report of its *First Principles Review (FPR)* which enhances a joint approach by strengthening the roles of CDF and VCDF, and establishing a two star Head Force Design (HFD). But VCDF will face a challenge in taking over key roles of CCDG, abolished as a result of the review.

Australia's current joint approach can be summarised as follows. All operations are planned and conducted by CDF, CJOPS and other joint commanders, supported by joint staff. Service combat capabilities are integrated as a joint force to provide the best coordinated effects into the sea, land and air environments. These combat elements are supported by enablers from all Services and by joint enablers, both of which often include significant numbers of Defence civilians. Current Defence capability is managed by the Services, with some enablers managed by joint or integrated civilian-military groups. VCDF (as JCA) oversees these arrangements to ensure preparedness of the ADF as an integrated, joint force. VCDF also oversees the joint design and development of the future ADF, but again with significant involvement of Defence civilians. Australia's joint approach is linked to an integrated civilian-military Defence Organisation.

Our principal suggestions for improvement are:

1. Current de-facto strategic joint staff arrangements should be formalised, reporting to VCDF, with HFD as J8 and Head Joint Capability Integration (HJCI) as J5.
2. VCDF, supported by JCI Division, should give priority to Defence enterprise preparedness and integration; HJCI's responsibility for capability coordination of specific joint capabilities should be given to other commanders, including CJOPS, who could be designated as a joint Capability Manager.
3. Defence should give priority to implementing a joint professional military education (JPME) program and to the use of joint collective training to evaluate joint doctrine.

4. Joint force design activities should be conducted on a continuous basis, making better use of concepts, experimentation and capability analysis. These activities should be led by VCDF, assisted by HFD and a permanent joint force design team.
5. Force design team members (both civilian and military) will need appropriate competencies developed through the JPME. The team should be supported by a stronger joint force design culture as part of the Pathway to Change reform, where the prime decision-making lens is based on joint and integrated considerations.

Since the First Principles Review has such relevance to this paper we have included a foreword discussing it.

Foreword: The First Principles Review

During the final stages of this paper's preparation Defence released the report of the *First Principles Review (FPR)* on 1 April 2015.¹ Large sections of the report are relevant to this paper, particularly the sections on a strong strategic centre, capability development and the enablers. As a result publishing our paper as soon as possible after the release of the FPR could be a contribution to Defence's efforts to implement the FPR recommendations. We therefore reviewed the FPR and its implications for the next steps in Australia's joint approach, and have incorporated our findings in this forward.

The report recommends transformational change to the way Defence does business so it can operate as one integrated system to deliver its outcome more effectively and efficiently in a "One Defence approach".² The Government agreed or agreed in-principle to 75 of the 76 recommendations,³ with implementation to commence immediately and with changes in place within two years (recommendation 6).

The proposal to introduce legislation to recognise the authority of CDF and VCDF and remove the statutory authority of the Service Chiefs (rec 1.8) represents a most significant next step in the building a joint ADF, which is then better able to integrate with the civilian component of Defence. Clarifying the accountabilities of CDF and the Secretary (rec 1.4) will aid the organisation in delineating the joint functions (such as force structure and preparedness) which support CDF.

The decision to retain CJOPS as a three-star position is a positive outcome for ensuring a continued focus on joint operations, the first key joint Defence function, for all the reasons that we outline in our paper. But the report does recommend that Defence examine headquarters functions to achieve more effective and efficient arrangements (rec 5.5). This is an opportunity for CDF to initiate his proposed evolution of the strategic level ADF headquarters command and control architecture, including consideration of our suggestion of formalising the strategic J staff system for the support of operations.

In relation to the second joint function, managing the current force, the FPR report confirms VCDF's role in managing joint military enabling services (rec 3.13) and VCDF's role as the integrator of the future force and joint capabilities (rec 1.6). It recommends strengthening the latter role by including the right to stop projects until joint force integration is proven (rec 1.17).

The FPR report also makes significant recommendations in relation to the third joint function, designing and building the future force, in particular the establishment of a two-star Head Force Design (HFD) to lead a permanent joint force design team⁴ (as recommended in our paper). But once the decision was made to strengthen contestability for the capability development by moving one of CDG's two divisions under the new DEPSEC Policy and Intelligence (rec 1.10), CDG was no longer sustainable as a group.

Dealing with the disbandment of CDG (rec 2.1) will involve significant challenges for Defence and for VCDF in particular, because VCDF inherits key roles of CCDG, including force design, integration and requirements development of some joint projects. The joint approach to designing

¹ First Principles Review, *Creating One Defence*, released on 1 April 2015.

² Ibid, p 17.

³ The one recommendation not agreed was the Defence Science and Technology Organisation (DSTO) becoming part of the new Capability Acquisition and Sustainment Group. Four recommendations relating to cost issues and to disposal of the Defence estate were agreed in-principle. Message from the Secretary and CDF to All Staff, 1 April 2015.

⁴ First Principles Review, pp 27-28.

and building the future force began by establishing the joint Development Division in 1990, when the Services' requirements staff were centralised in this organisation. CDG was the final stage of a 25 year joint approach to requirements which the FPR notes has "improved elements of the capability development process".⁵ With FPR most of these requirements staff return to the Services. So there is a risk that aspects of the ineffective pre-1990 approach might re-emerge. But the new joint force design and integration arrangements for VCDF should mitigate this risk, if they are properly resourced and implemented using the lessons of CDG's experience.

The transfer of many of CCDG's roles to VCDF, together with the additional role of the review of Defence's other major investments in the key enablers of the estate and information and communications technology,⁶ will allow a more comprehensive approach to designing the future force. As well, VCDF's ability to undertake effective design of the future force will be enhanced by the new permanent force design team. This joint team will make regular and so more effective contributions to force design by developing military strategy,⁷ by contributing to the regular review of the capital program (rec 1.18) (again proposals of our paper) and by contributing to the more formal gate for entry into the investment portfolio (rec 2.9), a recommendation we believe will be very useful.

The report acknowledges VCDF's greater role in force design and as chair of the new Investment Committee represents an increase in workload.⁸ To address this concern the report proposes a VCDF Group structure including a greater role for COMD ADC with responsibility for joint enablers, including logistics policy,⁹ Joint Health Command, Cadets, Reserves, and the Australian Civil Military Centre (rec 1.15 and Diagram 6).

The report describes this suggestion as "a possible option" with CDF and VCDF to decide the specific structure.¹⁰ We believe that resolution of VCDF Group's structure should be part of CDF's review of the strategic level ADF headquarters. Two options worthy of consideration are the transfer of some enabling functions to CJOPS as suggested in our paper and/or a more limited expansion of COMD ADC's role to include only the training related functions of Reserves, Cadets and the Australian Civil Military Centre. Such an arrangement would ensure COMD ADC retains focus on training and doctrine as the strategic J7 and is able to undertake the difficult, but key task of implementing the JPME.

But other than this issue, we believe that the FPR report's proposed structure for VCDF group provides the basis for VCDF to have effective staff support for his responsibilities for the three joint functions with:

- Head Military Strategic Commitments responsible for the strategic direction of operations as the strategic J3;
- Head Force Design responsible for designing the future force and for coordinating capability requirements as the strategic J8; and
- Head Joint Capability Integration (HJCI, previously HJCC) responsible for the joint aspects of managing the current force including integration and preparedness.

⁵ Ibid, p 32.

⁶ First Principles Review, pp 24 and 27.

⁷ Ibid p 23.

⁸ Ibid p 28.

⁹ Ibid p 35. The supply chain and delivery components from Joint Logistics Command, currently part of VCDF Group are transferred to the new Capability Acquisition and Sustainment Group which will replace the disbanded DMO.

¹⁰ Ibid p 28.

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We also suggest that HJCI might be VCDF's link to civilian integration, enterprise planning functions and ICT responsibilities of the Associate Secretary (rec: 1.6, 1.17 and 3.4 respectively), in short HJCI would be the strategic J5.

Finally we note the FPR recommendation that Defence creates a culture where corporate behaviour is valued and rewarded (rec 4.7), which we believe is an essential prerequisite for taking the next steps in Australia's joint approach.

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1. Introduction

In recent years the Australian Defence Force (ADF) has been busy conducting a wide range of operations. All of these operations have been joint, involving the participation of at least two Services, the simplest Australian Defence definition of joint.¹¹ The modern ADF approach to joint operations can be traced back to the establishment of a joint national commander based in Saigon during the Vietnam War in the 1960s. Subsequent development over nearly fifty years has culminated in the re-location of Headquarters Joint Operations Command (HQJOC) into a purpose designed building at Bungendore in 2008, commanded by a three-star Chief of Joint Operations (CJOPS).

Australia's joint approach extends well beyond operations. In preparing the ADF for operations, in sustaining it on those operations and in managing the force in peacetime, Australia has adopted an increasingly joint approach. This approach began with the major joint Kangaroo exercises in the 1970s, the establishment of the three-star position of Vice Chief of Defence Force (VCDF) in the 1980s and has continued through the Defence Reform Program (DRP) in the 1990s and the Strategic Reform Program (SRP) in 2009 to the recently released First Principles Review (FPR).¹² These two key joint functions, operations and preparing the current force-in-being, are now listed as the two joint outputs of Defence in its 2013-14 annual report.¹³ Equally importantly Australia's joint approach has also extended to designing and building the future ADF with the establishment of a joint Development Division in 1990 through to appointment of a three-star Chief of Capability Development Group (CCDG) in 2004. This third joint function is particularly important as it is the means by which the Chief of Defence Force (CDF) ensures the development of an effective future force and it is the function which expends the largest component of Defence's discretionary funds. And it is in the area of force design and development that implementation of the FPR will deliver the significant changes for Defence's joint approach, most notably through the establishment of a permanent joint force design team under VCDF and through the transfer of the force design, integration and joint project requirements roles of CCDG to VCDF, with the disbandment of Capability Development Group (CDG) and the abolition CCDG's position.

Australia's defence situation is changing. By early 2014 Defence had seen some reduction in operational tempo compared with previous years, with the consequent need to understand and apply the lessons of those operations. But recent commitments to Iraq indicate that the ADF needs to remain prepared to undertake a variety of joint operations in the future. In managing the current force, Defence faces significant challenges in funding. The Abbott Government's FPR of the Defence Department has addressed this, at least in part, and the 2016 Defence white paper is likely to provide further guidance.¹⁴ The FPR's emphasis on "One Defence" and a "Strong Strategic Centre"¹⁵ makes it clear that a continuing joint approach within Defence is key to meeting these challenges. Australia has

¹¹ This paper uses the Australian Defence Glossary's definition of joint namely "*activities, operations and organisations in which elements of at least two Services participate*".

¹² First Principles Review, *Creating One Defence*, released on 1 April 2015.

¹³ Defence Annual Report 2013-14, Volume 1, 24 October 2014, p 10.

¹⁴ The Coalition's Policy for Stronger Defence, September 2013, p6.

¹⁵ First Principles Review, pp 17 and 21.

used joint approaches in the past to address these sorts of challenges, so it should be able to do so again. Therefore the purpose of this paper is to review Defence's joint approach up until now so that we might suggest some next steps for the future.

The authors work in the Joint and Operations Analysis Division in the Defence Science and Technology Group (DST Group)¹⁶. Within that division our particular focus is on assisting Defence clients in grappling with the difficult joint problems we now face particularly in designing the future force. But designing the future force is at least in part dependent on a thorough understanding of current issues both operational and administrative, as well as understanding the past. The paper therefore considers the three aspects of joint mentioned above, namely: the planning and conduct of operations; the management of the current force; and the designing and building of the future force. This paper was in the final stages of preparation when the FPR report was released, and while the authors have revised some parts of the paper's text and recommendations in light of the FPR, the document is by no way a comprehensive review of the FPR.

David Horner has already produced an excellent history, *Making of the Australian Defence Force*,¹⁷ which presents the story of the ADF up until 2001. Our work draws on this book and a range of other sources, including interviews with a number of serving and retired officers.

The first section of the paper discusses the planning and conduct of operations, the initial driver of a joint approach. In particular it addresses the organisational changes that Defence has implemented to allow the development of a joint command and control structure for operations, a key component of Australia's joint approach.

2. Planning and Conduct of Operations

Australia's first joint military operation occurred in late 1914 with a minor action to capture German New Guinea with a naval and military force. During World War II the role of the Royal Australian Air Force (RAAF) in supporting the other two Services and the need for regular amphibious operations led to a general acceptance that joint cooperation between the Services was required. After the war this resulted in minor efforts to maintain that cooperation with the establishment of the School of Land Air Warfare in 1947 at Laverton and the Australian Joint Anti-Submarine School (AJASS) at Nowra in 1951.¹⁸ But as Horner notes in a more extensive history of joint command up until 2007, there was no Australian joint command structure until 1966. In that year Commander Australian Force Vietnam (COMAFV) was established as national commander responsible for administration of the Australian forces directly to the Chiefs of Staff Committee (COSC) through its Chairman, General Sir John Wilton.¹⁹ But other than this national joint command arrangement, Australian forces in Vietnam operated largely under US single

¹⁶ In July 2015, the Defence Science and Technology Organisation was re-named the Defence Science and Technology Group.

¹⁷ David Horner, *Making of the Australian Defence Force*, 2001.

¹⁸ *Ibid*, pp 282-3.

¹⁹ The Higher Command Structure for Joint ADF Operations, David Horner, Chapter 10 in *History as Policy: Framing the Debate on the Future of Australia's Defence Policy*, Ron Huiskens, Meredith Thatcher (editors), ANU E Press, 2007, p 146.

Service tactical command arrangements; although the RAAF did provide air transport support to the Army.

In a largely unrecognised early aspect of Australian joint operational arrangements, Australia was involved in ANZUK Force from 1971-1973, established after the withdrawal of the majority of the UK forces 'east of Suez' in the early 1970s. The headquarters of ANZUK was both combined and joint, commanding assigned forces from the three Services of the UK, Australia and New Zealand. Owing to its short life, ANZUK offered some limited opportunities in working in a joint command environment and employing joint doctrine and procedures.²⁰

With the withdrawal of forces from Vietnam and from the rest of South East Asia in 1972-73, Australian Defence commenced a long period of peace which allowed the newly formed single Department of Defence (in 1974) and the newly established ADF (in 1976) to move forward with a joint approach in an evolutionary manner. In the 1970s the early Kangaroo exercises brought together the three Services to conduct large training exercises in a joint setting. These exercises were supported by joint doctrine in the Joint Staff Publications, JSP (AS). For example, JSP (AS) 8, *Procedures for Joint Command and Control*, outlined the organisation and manning for a Joint Force Headquarters.²¹ Nevertheless it was not until the 1980s that the significant change commenced. In the following paragraphs we examine these changes at the three levels of conflict - strategic, operational and tactical.

2.1 Strategic Level

Australian military doctrine defines the strategic level of conflict as involving "the overall direction of national and military effort". It divides this level into national and military strategic components and defines the latter as "the military planning and general direction of the conflict; setting the desired military end state and the broad military approach to achieving that end state".²²

At the centre of Australia's approach to joint command of operations at the strategic level is the CDF, supported and advised by the Chiefs of Navy, Army and Air Force. One of Australia's first joint institutions was the Chiefs of Staff Committee (COSC), which initially included the three Service Chiefs with one of them nominated as its Chairman. During World War II COSC exercised strategic command at the national level, assisted by a war room and intelligence centre located in Melbourne.²³ The COSC Chairman became an independent position in 1958, was renamed Chief of Defence Force Staff (CDFS) with the formation of the ADF in 1976 and was given its current name of CDF in 1984.

Also in 1984 to better support CDF, Headquarters Australian Defence Force (HQADF) was established, based on the joint staff that had initially been established in the late 1960s. And in 1986 the first joint three-star position (VCDF) was established to command

²⁰ Private communication with Jeff Malone, a DST Group analyst, 30 March 2015.

²¹ Joint Command and Control, also known as Procedures for Joint Command and Control, was published jointly by the Flag Officer Commanding HMA Fleet, GOC Field Force Command, and Air Officer Commanding Operational Command. It was approved some time between 1974 and 1976.

²² ADDP-D, Foundations of Australian Military Doctrine, 2012, para 2.12.

²³ Horner 2007, p 145.

HQADF. By the mid-1990s HQADF had expanded into a substantial organisation with seven two-star officers. Together with a two-star military Director Defence Intelligence Organisation (DDIO) and a two-star head of logistics in the Acquisition and Logistics organisation, HQADF provided CDF with support across all the joint (J) staff functions.²⁴ In 1997, as a result of the Defence Efficiency Review (DER) and its implementation through DRP, Defence combined HQADF and the strategic elements of its civilian structure to form an integrated civil-military organisation at the strategic level, Australian Defence Headquarters (ADHQ). In addition to the three Services, the remainder of Defence was re-structured into eight enabling programs. In relation to VCDF, the DER noted that there were several areas of duplication in the staffs of VCDF and the Deputy Secretary Strategy and Intelligence (DEPSEC S&I), and it recommended a split of responsibilities between the two. It then somewhat confused matters by recommending VCDF and DEPSEC S&I also be joint leaders of ADHQ.²⁵ As a result VCDF's responsibilities were blurred as the joint head of ADHQ and were limited, without formal control over any enabling programs.

Further developments in the next decade changed VCDF's role again. In July 1999 VCDF gained full control of capability development but lost any role in the oversight of operations, a situation which remained the case during the deployment to East Timor in late 1999. Prior to the next major operation, the invasion of Iraq, VCDF's operational role was restored in 2003. Then in 2004 VCDF was appointed the first CJOPS but lost responsibility for capability development when the second joint three-star position (CCDG) was established. In 2007, with the establishment of a separate CJOPS as a third joint three-star position to command at the operational level, VCDF retained his strategic role in operations and regained other strategic responsibilities. By 2009 these responsibilities included education and training, logistics, and reserves. And finally VCDF was given a new role in joint capability coordination. The 2015 FPR will result in greater authority being conferred on VCDF,²⁶ together with even more responsibilities, most notably in the area of designing the future force.²⁷

Operational experience since 1999 confirmed the need for a joint three-star officer (VCDF) at the strategic level to assist CDF in the strategic command of operations, and, to do that, he needed the support of staff across the J functions. But the integrated military-civilian nature of Defence at the strategic level also suggests that, for peacetime functions, some of these officers contribute most effectively in integrated civilian-military enabling Groups. While this approach seems workable at present, this current de-facto J system has not been formally promulgated, other than by references in doctrine to individual two-stars, such as the J4 or J6, as having that role. Informal arrangements for strategic command and control are not ideal.

Air Chief Marshal Mark Binskin (in his first CDF Order of the Day) set as one of his priorities to "evolve the strategic level ADF headquarters command and control

²⁴ Defence Annual Report 1995/96 pp47-52. The Joint Staff functions include: J0 – executive, J1 – personnel, J2 – intelligence, J3 operations, J4 – logistics, J5 – plans, J6 – communications, J7 – training and J8 – development.

²⁵ Future Directions for the Management of Australia's Defence, Report of the Defence Efficiency Review, 10 March 1997, (DER 97) pp 12 and 21.

²⁶ First Principles Review, Recommendation 1.8..

²⁷ Ibid, pp 27-28.

architecture ... to support successful joint operations.”²⁸ Our analysis involving consultation with a number of senior officers indicates that a more formal strategic J staff function could be appropriate for Defence. So one step in the evolution sought by the new CDF might be to formally define this de-facto J system for support to operations and promulgate it to provide clarity to Defence. The US military uses a strategic J staff structure to support its Chairman of the Joint Chiefs of Staff. Based on this US model and noting Australia’s definitions for the J staff,²⁹ together with the current duties of Australian two-star military officers at the strategic level, most of these roles are obvious; J1 – the senior military officer in Defence People Group (DPG), J2 – Director DIO, J3 – Head Military Strategic Commitments in VCDF Group, J4 – Commander Joint Logistics also in VCDF Group, J6 – the senior military officer in Chief Information Officer Group and J7 – Commander Australian Defence College (ADC) in VCDF Group. VCDF as chief of the joint staff would be assigned the J01 function. The designation of J5 (Plans) and J8 (Development) is more complex and will be discussed later in this paper.^{30 31}

The many changes in role for VCDF including in 1997, 1999, 2003, 2004, 2007 and 2015 indicate an ongoing concern for the span of responsibility of the position, with each change seeking to adjust it. Later in the paper we discuss VCDF’s role in managing current capability and in designing the future force, in both these functions VCDF’s responsibilities are becoming increasingly substantial. So there may be scope for VCDF to transfer some tasks to other officers at the strategic level but also to CJOPS at the operational level.

2.2 Operational Level

The operational level of conflict is concerned with the planning and conduct of operations to achieve strategic-level objectives.³² David Horner points out that there has been an operational level of war stretching back at least to the campaigns of Alexander and Caesar, even if it has not been so named. He notes that Macarthur commanded at the operational level in his campaign in the South West Pacific during World War II. But Horner describes how the term was only finally accepted in US Army doctrine in 1982 and that in 1983 the then Chief of the General Staff (CGS), Lieutenant General Sir Phillip Bennett, directed its introduction into Australian Army doctrine.³³ When Bennett became CDFS in early 1984 the term caught on in HQADF and the three-level approach to command formed the basis

²⁸ Chief of Defence Force Order of the Day, Chief of Defence Force Change of Command, 1 July 2014.

²⁹ ADDP 00.1 Command and Control, Chapter 5, Annex A para 9, 27 May 2009.

³⁰ The only areas where the US J staff definitions differ are for J7 and J8. The US strategic J7 is designated to as Force Development but includes training, education and doctrine (which are functions of ADC). It also includes exercises, lessons learnt and concepts, functions which are more appropriately allocated elsewhere in the Australian context. The US strategic J8 is designated Force Structure, Resources and Assessment, but still fulfils the joint aspects of force design and capability development for the US military. www.jcs.mil as sighted on 28 July 2014.

³¹ ADDP 00.1 also recognises a J9 function (Civilian Military Coordination - CIMIC), but notes CIMIC can also be part of J3 Operations. At the strategic level CIMIC is a critical operations function although the VCDF’s operations staff could also draw advice from the Australian Civil-Military Centre, which is part of VCDF Group.

³² ADDP-D (2012), para 2.13

³³ Horner (2001), pp 109-11.

for the then Brigadier John Baker's Study into ADF Command Arrangements in 1987, initiated by Bennett's successor, General Peter Gration.³⁴

At the operational level the ADF has made significant progress in its joint approach. By 1986 existing single Service headquarters (Fleet, Field Force Command and Operational Command) had been given joint operational functions as Maritime, Land and Air Headquarters. And in 1987 these became joint commands reporting to CDF for operations, while retaining their raise, train and sustain responsibilities to their Service Chiefs.³⁵ This arrangement was used in the first Gulf War (and in the crisis preceding it) over the period 1990-91, with the Maritime Commander commanding the deployed joint task group. In 1988 Northern Command (NORCOM) was established and the three-star position of Commander Joint Force Australia (CJFA) was instituted. In the main CJFA was only activated for major exercises, although Lieutenant General John Sanderson was appointed to the position for two years in the early 1990s.³⁶

In July 1995 General Baker was appointed CDF and later that year Exercise Kangaroo 95 revealed deficiencies in the coordination between the various operational headquarters. In 1996 joint command at the operational level took an important next step, with the establishment of a permanent two-star Commander Australian Theatre (COMAST) supported by HQAST and a joint intelligence centre. COMAST was effectively a two-star CJFA with responsibility for commanding all operations including those undertaken by the three environmental commanders and the Special Forces commander, who became his component commanders. COMAST also had the option to command operations directly through joint task forces (JTF) based on a Deployable Joint Force Headquarters (DJFHQ) (drawn from HQ 1st Division), the headquarters of Commodore Flotillas (COMFLOT), HQ NORCOM or a specifically constituted headquarters.³⁷ But since there were no significant operations being conducted at that time, COMAST also undertook several joint development and sustainment tasks including developing and testing a joint concept for his operations (entitled *Decisive Manoeuvre*), coordinating joint doctrine and individual training through the ADF Warfare Centre (ADFWC) and managing major joint exercises through the joint exercise planning staff, which had been transferred to ADFWC.³⁸

Since that time there has been consensus within Defence that the operational level is the domain of primacy for a joint approach; at the strategic level an integrated civilian-military approach is needed; while the tactical level is seen by many as the principal domain of the Services. The issues of contention have been the rank of the commander at the operational level and the nature of the headquarters to support that commander.

The concept of a three-star operational commander was first considered in the late 1980s with the establishment of a CJFA for exercises. But through the period from the late 1980s and until the end of the 1990s, the commander of the operations conducted during the period was at the two-star level. For the subset of operations during that period which

³⁴ Report of the Study into ADF Command Arrangements, BRIG J.S. Baker, Mar 1988 (an abridged version of the original report prepared in Nov 1987).

³⁵ Baker (1988), Chapter 2, The Present Situation.

³⁶ Horner (2007), pp 152-53.

³⁷ Horner (2001), pp 142-47.

³⁸ Horner (2001), pp 124-8.

involved principally the projection of land forces overseas, military historian Bob Breen has noted that, while deemed successful, there were still weaknesses in command and control.³⁹ After the most significant of these operations, the deployment to East Timor in 1999, Defence reviewed its approach to command and control of operations.⁴⁰ The initial impact in 2003 was that a three-star officer (VCDF) was inserted into the operational chain at the strategic level, while in 2004 Joint Operations Command was established with VCDF performing the dual roles of 'strategic chief of staff' to CDF and operational commander as CJOPS. But it was only in 2007 that Defence was finally able to fully implement the twenty year old CJFA concept with the establishment of a separate three-star CJOPS.

The first proposal for change in headquarters structure also originated in the late 1980s through Baker's study of ADF command. He recommended that "subject to further cost benefit analysis, the collocation of the existing joint force headquarters should be accepted as a mid-term objective".⁴¹ The CDF at the time, General Gration, accepted this recommendation, noting in 1992 that Defence was contemplating the collocation of the joint headquarters "later in the decade".⁴² After a number of reviews the decision to build a collocated headquarters at Bungendore was announced in 2004. But the structure of this new HQJOC was not resolved until a review by Major General Richard Wilson in 2005. This review resulted in a move from the then current component-based model to an integrated model where CJOPS commanded all operations directly through joint task forces, rather than having an option of using the component method.⁴³ To accommodate this approach, HQJOC was designed as a smaller, integrated headquarters without environmental components. As a result the three environmental commanders once again became single Service commanders retaining their responsibility for raise, train and sustain functions to their Service Chiefs and remaining in their separate headquarters in Sydney. This new structure for HQJOC has assisted CJOPS to command a range of operations in Australia's region and beyond since 2008.

The joint approach to operations is now so well accepted that Australian Defence doctrine states that operations are "inherently joint".⁴⁴ But it is also important to remember that this was not always the case, and has been the result of nearly thirty years of thinking and experience since the Service Chiefs were removed from the operational chain of command with the establishment in the mid-1980s of joint functional commands at the operational level, reporting directly to CDF for the conduct of operations.⁴⁵

This approach has also seen the development of an ADF joint culture in relation to operations. In 2004 *Australian Defence Doctrine Publication (ADDP) – D4 Joint Warfighting* stated that to fight effectively as a joint force the ADF needed to understand its own

³⁹ Australian Military Force Projection in the late 1980s and the 1990s: What Happened and Why, Bob Breen, PhD Thesis ANU, 2006, p v.

⁴⁰ Struggling for Self Reliance, Four case studies of Australian Force projection in the late 1980s and the 1990s, Bob Breen, Strategic and Defence Studies Centre, Canberra papers on Defence No 171, 2008, p 155.

⁴¹ Baker (1988), para 1023.

⁴² General Peter Gration, "the ADF-Today and Tomorrow" CDF Address to USI of Canberra, 2 December, 1992; quoted in Horner (2001), p 121.

⁴³ Strengthening ADF Higher Command and Control through Scrutiny, Forecasting and Audit, Brian Hanlon and Richard Davis, Australian Defence Force Journal, No. 176, 2008, pp 12-33.

⁴⁴ ADDP 3.0 Campaigns and Operations para 1-13, Ed 2, 12 July 2012.

⁴⁵ JSP (AS) 1 (A) Joint Operations Doctrine (27 June 1979) Chapter 4 described the categories of operations at that time as either Single Service (commander reporting to a Service Chief), Joint Force Operations (commander reporting directly to CDFS) or Other Joint Operations conducted under the authority of CDFS by a commander reporting through a Service Chief.

culture and have a joint warfighting ethos.⁴⁶ In 2007 a Defence Science and Technology Organisation (DSTO) study involving interviews with ADF personnel recently returned from operations noted that “interviewees demonstrated an appreciation of jointness concepts and a willingness to promote it in order to get the job done”.⁴⁷ ADF culture is discussed in the 2007 *ADDP 00.6 Leadership*⁴⁸ and in Major General Craig Orme’s 2011 study *Beyond Compliance: Professional, Trust and Capability in the Australian Profession of Arms*.⁴⁹ The DSTO study also noted that “a consistent view was that prior joint experience is the most enabling factor for working effectively in joint operations”⁵⁰. The continuing operations since that time, together with the establishment of the new HQJOC commanded by a fulltime three star officer, have provided just that opportunity in the last few years.

If a reduction in operational tempo does become a more permanent situation, there may be some temptation to revert to earlier peacetime arrangements, disestablishing the separate three-star position of CJOPS and returning that function to VCDF. There are several good reasons not to do this.

Firstly, the current strategic environment is uncertain with a range of possible operations that could emerge, including returning to theatres from which we have only recently withdrawn (as happened several times in the last decade). Maintaining an effective HQJOC with its three-star commander represents a prudent preparedness measure, particularly addressing the need for regular testing of the preparedness of the joint force, including HQ and joint capabilities. As Baker stated in his 1980s review, “The primary determinant of the ADF command structure and arrangements is the suitability for conflict”.⁵¹

Secondly, White Paper 2013 directed Defence to gather and apply the lessons (including joint lessons) from recent conflicts,⁵² including (one would hope) future access to some technologies currently only used by the US in recent operations. Defence has recently announced an initiative to “improve whole-of-Defence capability through lessons learned”.⁵³ HQ JOC under three-star command would be the appropriate organisation to deal with joint lessons within this Defence framework, just as the Services are appropriate to do so for lessons relevant to them.

A third reason relates to White Paper 2013’s direction for an increase in engagement within our region⁵⁴ - the location of many recent operations and likely to be so in the

⁴⁶ ADPP-D.4 Joint Warfighting, June 2003 (draft unsigned), para 3.40. We have been unable to locate a signed copy of ADPP D.4, but it is referenced in Defence documents over the period 2002-07. In June 2006 a meeting of VCDF’s Joint Doctrine Steering Group (JDSG) was told “ADPP-D.4-Joint Warfighting (was) being merged with ADPP 3.0-Operations and (would) be formally withdrawn once ADPP 3.0 (was) published” (JDSG Minutes 4 Jul 2006 para 15). The first edition of ADPP 3.0 was published in 2008.

⁴⁷ The Transition from Network-Centric Warfare to Networker-Centric Warfare: Outcomes of the Human Dimension of Future Warfighting Task, DSTO-CR-2007-0311, Irena Ali, Derek Bopping, Dennis Hart, Celina Pascoe and Leoni Warne, June 2007, para 3.4.5.

⁴⁸ ADPP 00.6, Leadership, 22 March 2007,

⁴⁹ Beyond Compliance: Professional, Trust and Capability in the Australian Profession of Arms, Report of the Australian Defence Force Personal Conduct Review, 2011, Major General C.W. Orme

⁵⁰ Ali et al (2007), para 3.4.5.

⁵¹ Baker (1988), para 301.

⁵² Defence White Paper 2013, para 4.3.

⁵³ Release of Joint Directive 20/2014: Establishment of a Defence Lessons Program, DEFGRAM 89/2015, 3 March 2015.

⁵⁴ Defence White Paper 2013, para 4.4.

future. A joint approach to the ADF's regional engagement, with a focus on understanding and influencing our region, would be the most effective method of ensuring a coordinated, operationally focussed outcome and the most efficient in times of limited resources.

And fourthly, with VCDF gaining additional joint responsibilities at the strategic level, there is an opportunity for the well-developed joint organisation that is HQ JOC to take on some of these tasks related to management of the current force and, possibly, in relation to development of the future force, similar to the way in which COMAST and his headquarters did so in the late 1990s.

So the decision of the FPR to retain CJOPS as a three-star position is a positive outcome. The most obvious additional joint tasks to be given to CJOPS would be those assigned to VCDF associated with the management of the current force, so this issue will be discussed under that section later in the paper.

A final recent development in ADF operations has been greater involvement of civilians, both from Defence's integrated workforce and from other Government and non-Government agencies, as well as from industry.⁵⁵ Management of civilians assigned to operations and coordination with other agencies occurs at the strategic and operational level but also at the tactical level.

2.3 Tactical Level

The tactical level of conflict involves the planning and conduct of battles and engagements.⁵⁶ Many actions at the tactical level, particularly in less intense forms of conflict, can be conducted by units of one Service, operating relatively independently of the others. But equally many also involve close cooperation between the Services. Since World War II the Services have developed and maintained good joint cooperation in a number of tactical level functions. These arrangements began as three sets of bilateral relationships before merging into a more unified framework as joint operational command structures matured.

2.3.1 Naval-Land Cooperation

Navies have transported armies into battle since ancient Egyptian times.⁵⁷ The cooperation between the Royal Australian Navy (RAN) and the Australian Army began with the national operation to secure German New Guinea in late 1914. Australian forces participated in allied naval-military operations at Gallipoli in 1915 and in the South West Pacific in World War II. At the tactical level, this cooperation has centred principally on transport and naval gunfire support (NGS).

In relation to transport, the former aircraft carrier HMAS Sydney led the RAN's efforts to transport heavy equipment and stores to and from Vietnam. Then in the early 1970s the

⁵⁵ ADDP 00.9 Multiagency Coordination, Defence's Contribution to Australian Government Responses, 19 August 2013.

⁵⁶ ADDP-D (2012), para 2.14.

⁵⁷ Ancient Egyptian Sea Power and the Origin of Maritime Forces, Gregory P. Gilbert, Sea Power Study Centre, 2008.

RAN acquired a modest amphibious capability, procuring six heavy landing craft. In 1981 the amphibious heavy lift ship HMAS Tobruk entered service and around the same time the Army's 6th Brigade in Enoggera was given an objective to develop a capability for operating with these amphibious vessels.⁵⁸

HMAS Tobruk deployed to Somalia in 1993 and to Bougainville in 1994. Greater priority for regional and peace-keeping activities led in 1994 to the decision to procure two additional amphibious landing ships, HMAS Manoora and Kanimbla. However the priority for these vessels was still not as high as for capabilities used in defence of Australia, so the ships procured were second hand ex-United States Navy vessels. The ships were in poorer condition than expected and so did not come into service until 2000. As a result only HMAS Tobruk was available for the East Timor operation in 1999, and so in May of that year the RAN leased a large catamaran HMAS Jervis Bay for a two year period.⁵⁹

The 2000 White Paper gave greater priority to regional operations. So it announced a more substantial amphibious capability which has resulted in the procurement of two large and capable amphibious ships, HMAS Canberra and HMAS Adelaide, the former entering service in 2014 and the latter in 2015. In 2011 the landing ship dock (HMAS Choules) was procured at short notice to allow for the decommissioning of HMAS Manoora and HMAS Kanimbla in the same year.⁶⁰ Based on this fleet of three very capable ships the ADF is now developing a more substantial amphibious capability, with the Army assigning 2nd Battalion, Royal Australian Regiment (2 RAR) in Townsville as its specialist amphibious battalion.

The RAN's NGS capability received a significant enhancement in the 1960s with the procurement of three guided missile destroyers, each with two automatic 5 inch guns. All three engaged in NGS operations in Vietnam and since then NGS has been the subject of regular exercises.⁶¹ The RAN continues to maintain a significant NGS capability; both the in-service ANZAC class frigates and the new Air Warfare Destroyers having a similar 5 inch gun.

In the 1990s the Army made a small contribution to air defence of the RAN's amphibious and support ships deploying to the Gulf, with RBS-70 missile systems and detachments operating on these ships.

2.3.2 Land-Air Cooperation

For the Australian Army and the RAAF, World War II demonstrated the importance of air control, airborne fire support and aerial reconnaissance to the success of operations on land. As well, in operations in the jungles of South East Asia and the South West Pacific, air transport played a key role in supporting land manoeuvre. These activities were regularly exercised and implemented in Vietnam, including the greater use of helicopters

⁵⁸ The Army in the 1980s, Lieutenant General Phillip Bennett, Chief of the General Staff, August 1982, p 9.

⁵⁹ Horner (2001), p 174.

⁶⁰ <http://www.navy.gov.au/fleet/ships-boats-craft>, as sighted on 27 November 2013.

⁶¹ One of the authors participated in one such exercise of joint offensive support (including NGS) in Exercise Tasman Link at Shoalwater Bay in 1986. A similar joint and combined exercise was held as part of Talisman Sabre in 2013.

for air transport.⁶² In relation to air control, Army provided and continues to provide assistance to the RAAF in the battle for air control through its ground based air defence capability.

By the end of the 1970s procedures for all these activities were enshrined in joint doctrine.⁶³ As well, an effective joint liaison system had been established with RAAF air liaison officers (ALO) attached to divisional and brigade headquarters, Army ground liaison officers (GLO) at Air Headquarters and RAAF's group headquarters, and Army air defence personnel incorporated into the RAAF's air defence system.

RAAF airborne fire support has been provided to the Army using its jet fighter aircraft from the Sabre through to the F/A 18. In relation to aerial reconnaissance of the land, the RAAF has provided a capability initially through Canberra bombers and subsequently through the RF-111 and F/A 18s. A recent innovation, during conflict in the Middle East over the last decade, has been the use of the AP-3C Orion maritime patrol aircraft, in an over-land Intelligence, Surveillance and Reconnaissance role in support of operations on land.⁶⁴

In the 1980s the Army's 3rd Brigade in Townsville became the combat component of the Operational Deployment Force (ODF) and was required to be air-portable in RAAF's tactical transport aircraft and medium lift helicopters.⁶⁵ At the same time the RAAF and the 1st Brigade in Sydney began developing an airborne (parachute) capability based on 3RAR, deployed and supported by RAAF C-130 aircraft also based in Sydney. This capability remains today although the Army's parachute capability has been transferred to Special Forces.

In relation to helicopters, the Government decided in 1986 that the Army would operate the new Black Hawk 'battlefield' helicopters instead of the RAAF⁶⁶ and in 1989 it was decided to withdraw the RAAF's medium lift Chinook helicopters from service.⁶⁷ In the early 1990s four of these aircraft were re-introduced into service (but with the Army).⁶⁸

The major change since that has been the procurement of the C17 Globemaster capability, which has greatly enhanced the RAAF's ability to deploy Army assets by air, particularly heavier ones. Another change has been in an increased focus to the provision of joint fire support to the Army, which is now encapsulated in the term 'joint fires'.⁶⁹ This latter change has grown out of recent operational experience, but also from developments in

⁶² Australian Land-Air Coordination during World War II, Korea and Vietnam is summarised in the 1995 Proceedings of the Australian History Conference, From Past to Future – The Australian Experience of Land/Air Operations, Jeffery Grey and Peter Dennis (ed), Department of History, University College, Australian Defence Force Academy.

⁶³ The joint procedural manual JSP (AS) 8 on command and control, produced in the mid-seventies, lists four other procedural manuals in the family of JSP publications; three relate to these functions and were entitled offensive support, air defence and air transport. The fourth was entitled joint tactical communications.

⁶⁴ Mission complete on wings of a dream aircraft, Bryan Little, Adelaide Advertiser, 29 November 2012 <http://www.adelaidenow.com.au/news/orion-crews-end-10-year-middle-east-mission-with-last-plane-touching-down-at-edinburgh-raft-base/story-e6frea6u-1226526827264?nk=27d37df59d6e0f7b23ecf986f19aaf38>, sighted 23 Feb 2015.

⁶⁵ Bennett (1982), p10.

⁶⁶ Horner (2001), p 53.

⁶⁷ RAAF Museum: <http://www.airforce.gov.au/raafmuseum/research/aircraft/series3/A15.htm>, sighted 16 Apr 2014.

⁶⁸ Horner (2001), p 92.

⁶⁹ In November 2009 the ADF doctrine publications, ADDP 3.1 and ADFP 3.1.1, were re-issued under new titles, Joint Fire Support and Joint Fire Support Procedures. Both acknowledge in their forewords that 'joint fires' is a more commonly used term in the ADF than 'offensive support', the term used in the 2004 editions of the documents.

information and communications technology (ICT), encapsulated in Network Centric Warfare (NCW) developments within the ADF. But of course, 'joint fires' is a modern development of the older ADF term 'offensive support' both of which apply to not only to fire support to the Army from the RAAF, but also to RAN support to Army through NGS procedures and to Air Force support to Navy.

2.3.3 Naval-Air Cooperation

The first major post-war joint enterprise for the RAN and RAAF was under-sea (anti-submarine) warfare, with the RAAF contributing long-range maritime patrol aircraft to the anti-submarine battle. In 1951 the RAAF took delivery of new P2V Neptune maritime patrol aircraft and in the same year the joint anti-submarine school (AJASS) was established.⁷⁰ By the end of the 1970s, no doubt influenced by the Kangaroo exercises held during that decade, the RAN and RAAF developed a comprehensive approach to 'joint maritime operations'. The 1979 edition of JSP (AS)1(A), *Joint Operations Doctrine*, noted joint maritime operations could include: surveillance and reconnaissance; offensive operations (including maritime strike, anti-submarine warfare and mining); defensive operations (including air defence, protection against surface and sub-surface attack, control of shipping and mining); and amphibious operations.⁷¹ The procedures associated with the doctrine for these operations were developed, practiced and refined jointly by the RAN and RAAF throughout the 1970s and into the 1980s.⁷² A key RAAF contributor to this joint cooperation has been the AP-3C Orion maritime surveillance aircraft, which entered service in the 1960s and was upgraded in the early 2000s. Beginning in 2017, the AP-3C Orion is due to be replaced by a combination of the P-8A Poseidon⁷³ and, subject to successful completion of the United States development program, the MQ-4C Triton unmanned aerial system.⁷⁴

In 1983 the next major change occurred with the decision of the Government not to replace the aircraft carrier HMAS Melbourne. As a result the RAAF was required to provide greater air support for the fleet for both air defence and maritime strike missions. This change introduced the need for a great level of cooperation between the RAN and RAAF in the maritime environment. A significant innovation was to use the F111 to provide a limited, but long range air defence for the fleet.⁷⁵ The F/A 18 multi-role fighter introduced into the RAAF in the late 1980s also provided a shorter range capability for these tasks. But it became more effective with the later procurement of air-to-air refuelling and airborne early warning aircraft.

⁷⁰ RAAF Museum: <http://www.airforce.gov.au/raafmuseum/research/aircraft/series2/A89.htm>, sighted on 22 Nov 13.

⁷¹ JSP (AS)1(A), *Joint Operations Doctrine*, June 1979 and its first amendment in October 1981, Chapter 18, Joint Maritime Operations. The 1981 version notes that the more detailed procedural publication on Joint Maritime Operations had been issued as AJTP 01(B).

⁷² Interview with AVM Kym Osley, 23 January 2014.

⁷³ P-8A Poseidon, <http://www.airforce.gov.au/Boeing-P8-A-Poseidon/?RAAF-Z4PUOpGXH/eLtWmc6qxYl9xYycb+rKng>, sighted on 1 Sep 15

⁷⁴ Triton Acquisition Announced, AFHQ, 17 March 2014, <http://www.airforce.gov.au/News/Triton-acquisition-announced/?RAAF-cni9s6k6kBw0BL5bjzDBZNyZUbTFvoUE>, sighted on 1 Sep 15

⁷⁵ Osley, 2014

In the late 1960s the RAN increased its ability to contribute to the maritime air battle with the introduction of its three guided missile destroyers. These were withdrawn from service between 1999 and 2001, with plans for a new capability only being approved in the 2000 White Paper. These new air warfare destroyers will again allow longer range air defence for ships but also for “land forces and infrastructure in coastal areas.”⁷⁶

The anti-submarine joint battle remains a bilateral activity between the RAN and RAAF. But the use of multi-role RAAF aircraft to contribute to other joint maritime operations is complicated by the possibility that these aircraft could also be required to support Army units or undertake independent air defence, strike or interdiction missions. This issue is principally an operational level problem, which Baker gave considerable thought to in his command study,⁷⁷ and which is essentially solved by the existence of a three-star CJOPS, able to make operational judgements about the relative priorities for use of scarce air assets.

2.3.4 A Unified Joint Approach

Up until 1996 the joint command structure of three environmental joint commands essentially restricted joint coordination to the three bilateral relationships discussed above. But we can see some common themes in these relationships which continue today. The first common theme is that joint cooperation at the tactical level involves the combat capabilities of one Service being applied to the environment of another Service to enable the achievement of the desired effect in that environment; examples include air defence and strike. The second theme is that joint tactical cooperation involves provision of one Service's capability (for example joint fires and transport) to enable another Service to better achieve an effect in its environment. The third theme is that joint tactical cooperation can involve the innovative use of capabilities to undertake joint missions not foreseen when the systems were acquired (for example F111 and RBS 70 for fleet air defence and P3C Orion in land surveillance).

From 1996, with the formation of COMAST, all three bilateral relationships were brought together at the operational level, which then allowed for easier consideration of fully joint cooperation (i.e. from all three Services) at the tactical level. This was further enhanced by the establishment of the three-star CJOPS position with an integrated headquarters.

The continuing advances in ICT have led to an increasingly joint approach to surveillance and other information capabilities. As well, the small numbers of critical specialists in enabling functions across the three Services has led to an increasing number of enabling capabilities being deployed as joint tactical units. In Australia's recent operations this joint approach was reflected in the employment of joint units associated with fire support, unmanned vehicles, counter improvised explosive devices (CIED), intelligence, communications, logistics, movements and other administrative functions.⁷⁸

The littoral nature of our strategic environment, the continuing impact of improved computing power and communications on operations and the continuing need for

⁷⁶ <http://www.navy.gov.au/fleet/ships-boats-craft/awd> as sighted on 5 December 2013.

⁷⁷ Baker (1988), Chapters 4 and 8.

⁷⁸ Afghanistan Fact Sheet, Australian Department of Defence, website as sighted on 19 Nov 2013.

efficiencies, all suggest that joint operation and coordination of more tactical military capabilities, particularly emerging ones, is likely to be a preferred approach in the future. The Australian Army's recent Land Warfare Report 2014 discusses these themes in its consideration of the greater importance of jointery (among other things) for land forces operating in a future operating environment that is 'connected, collective and constrained'.⁷⁹ The peacetime joint management (known as capability coordination) of an increasing range of joint tactical capabilities also reflects this trend, with the amphibious capability the most substantial among them.⁸⁰ The next section discusses the joint developments in managing the current force.

Planning and Conduct of Operations

Observations

- *Establishing joint command for operations has been central to Australia's joint endeavour:*
 - *CDF now has integrated military - civilian advice and support, coordinated by a joint staff.*
 - *CJOPS and JTF commanders are supported by joint headquarters and joint staff.*
- *At the strategic level VCDF's role was changed regularly during the period 1997-2015 reflecting an ongoing concern for the span of responsibility of the position.*
- *At the operational level it took 20 years to fully realise the 1980s concept of a three-star operational commander, with the establishment of a separate CJOPS in 2007.*
- *At the tactical level the Services contribute relevant combat and enabling capabilities to ensure the best achievement of the required joint effects in the operating environments of the other Services. Often that contribution has involved innovative use of these capabilities.*
- *An increasing number of enabling capabilities are being deployed as joint units.*
- *Operations are now 'inherently joint' and the ADF is developing a joint operational culture.*
- *There have been an increasing number of civilians, from Defence, other agencies and industry, involved at all three levels of conflict.*

Future Directions

- *Current de-facto strategic joint staff arrangements should be formalised and report to VCDF.*
- *CJOPS should remain at the three-star level, irrespective of the level of operational tempo.*
- *Joint operation and coordination of more tactical military capabilities, particularly emerging ones, is likely to be a preferred approach in the future.*
- *Should the level of operational tempo allow, CJOPS could take on additional joint responsibilities for management of the current force to ensure VCDF is not overloaded.*

⁷⁹ Future Land Warfare Report 2014, Modernisation and Strategic Planning Division - Australian Army Headquarters, April 2014, pp 11-18.

⁸⁰ Thirteen joint and enabling capabilities are listed in paras 8.12 – 8.43 of Defence White Paper 2013.

3. Managing the Current Force

As with the tactical level of conflict, the Services have always had (and continue to have) a key role in managing of the current force. As joint arrangements for operations have developed in Western militaries, this role of the Services has been summarised as the responsibility to 'raise, train and sustain' forces in preparation for and during operations. In Australia, the 1997 DRP centralised many functions supporting these responsibilities into joint or integrated enabling programs. So the Service Chiefs were designated as 'Capability Managers' to prepare and sustain their forces, not only using the resources directly under their control, but also through influencing the enabling programs, now known as Groups.

But joint approaches to some of these functions began a lot earlier than this. Since the end of World War II significant Australian efforts at a joint approach have developed principally in military enabling functions such as training, doctrine and preparedness. For individual training this began with the establishment of the School of Land Air Warfare in 1947 and culminated in 2012 with the Commander ADC being given responsibility for all joint and Defence civilian education and training.⁸¹ In the early 1970s, the move towards self-reliant Defence of Australia saw a significant step in joint collective training with the first Kangaroo exercises. In the same period Defence commenced the formalisation of joint doctrine to support individual and collective training through the JSP series.

Following the 1987 White Paper, Defence gave greater priority to preparing for shorter term conflict. As a result CDF issued the ADF's first readiness directive in 1989, which had become the CDF's preparedness directive (CPD) by 1992. Over the last twenty years Defence's preparedness management system has continued to develop. And in 2009 a more joint approach was introduced to augment the Service capability management function that supported Defence preparedness. VCDF was given a joint capability coordination role which looked at detailed coordination of some ADF functions that had evolved into joint capabilities. He was also given a role in the integration of all ADF capabilities, both joint and single Service, into an integrated joint force.

In the following paragraphs we address these functions: individual training and education, collective training, doctrine, preparedness, and capability coordination and integration; examining their development and suggesting possible future approaches.⁸²

3.1 Individual Training and Education

The School of Land Air Warfare started its life in 1947 as a RAAF institution and its focus was naturally enough on air transport and offensive support to land forces, two functions identified during World War II as key areas of Land-Air cooperation. In 1975 it formed the

⁸¹ The Evolution of the Australian Defence College, July 2013, p12.

⁸² There a range of other enabling functions including personnel, health services, logistics, base support, ICT and intelligence which are not considered in this paper. They are not considered because their joint integration has been paralleled by integration with the civilian components of these Defence functions. Detailed consideration of this important but separate issue in each of these functions is beyond the scope of this paper.

basis of a new joint school, the Australian Joint Warfare Establishment (AJWE). For Naval-Air cooperation the AJASS (established in 1951) was reorganised in 1986 as the Australian Joint Maritime Warfare Centre (AJMWC) and its role was expanded to cover most aspects of 'joint maritime operations', but not including amphibious support and NGS, which were tasks for AJWE.⁸³ In 1991 AJWE and the AJMWC amalgamated to form the ADF Warfare Centre (ADFWC), centralising their joint training in a single institution.

A joint approach to officer education was first suggested in 1967 with a committee established to develop plans for a single tri-Service initial training institution. But it took a further nineteen years and some controversy before the Australian Defence Force Academy (ADFA) opened in 1986.⁸⁴

At the next level of officer education (Staff College) there was also a slow move to a joint approach. In 1970 the Joint Services Wing of a proposed future Australian Staff College was established but later re-named the Joint Services Staff College (JSSC). Again it was thirty one years before the joint Australian Command and Staff College (ACSC) was opened in 2001. In the meantime another joint officer institution, the Australian College of Defence and Strategic Studies (ACDSS), was established for senior ADF officers and Defence civilians. In 1999 JSSC and ACDSS were amalgamated and briefly designated the Australian Defence College (ADC). Then in July 2000 a two-star military officer was appointed as Commander ADC and given responsibility for the three levels of joint officer education: ADFA, the new ACSC due to open the next year and the previous ADC which was given its present name, the Centre for Defence and Strategic Studies (CDSS).⁸⁵

Joint education and training received a significant boost after the DRP in 1997, with one of the Defence enabling programs being Joint Education and Training (JET). JET was given the role of providing joint education and training policies for Defence and developing a rationalised joint education and training organisation.⁸⁶ The rationalisation of training had already been pursued for several decades, and during that time some Single service trade training schools had been amalgamated to form tri-Service schools under the management of one of the Services.⁸⁷

During its brief existence (1997-2000) JET became "the driving force in encouraging the rationalisation of training" and a list of JET projects being undertaken by the JET Executive in June 2000 included: the ACSC Project, a review of intelligence training, logistics education and training, ADF School of Health, rationalisation of ADF common technical training, rationalisation of communications and information systems training, and rationalisation of Defence service police and security training.⁸⁸ Most of these reviews resulted in the establishment of Defence schools.

⁸³ Horner (2001), p 283.

⁸⁴ Ibid, p 286.

⁸⁵ Ibid, pp 288-90.

⁸⁶ Defence Annual Report 1997-98, Program 7: Joint Education and Training.

⁸⁷ Horner (2001), p 292.

⁸⁸ Ibid, p 293.

In July 2000 JET was disbanded and its policy functions were absorbed into the Defence personnel organisation. The two-star position of Head JET was used to establish the Commander ADC.⁸⁹

Several years later Commander ADC took up the cause for further development in joint education and training when, in 2004, he proposed to COSC that “ADC further increase its scope of command to include several other institutions delivering joint and common (all-Corps) education and training.”⁹⁰ Although nothing came of this immediately, in 2007 Commander ADC was appointed by COSC to coordinate joint professional military education (JPME).⁹¹

In 2010 ADFWC was demerged, with responsibility for exercise planning and evaluation transferred to HQJOC. ADFWC was renamed Joint Warfare, Doctrine and Training Centre (JWDTC) and retained responsibility for joint individual training, doctrine and the peacekeeping centre under Commander ADC.⁹² The commander of JWDTC was downgraded from a one-star position to an O6. There was a further reorganisation in 2013 with JWDTC being disbanded and split into separate organisations for training and doctrine, the ADF Warfare Training Centre and the ADF Joint Doctrine Centre respectively. The term ADFWC is now used to describe the precinct at Williamstown where these units reside.⁹³

As a result of both the SRP in 2009 and the McKinsey Report into Shared Services in 2011, by mid-2012 ADC had grown to ten Learning Centres and the Defence Learning Branch (DLB).⁹⁴ In July 2012 Commander ADC noted that, while Defence had achieved high levels of proficiency through its programs of training and education, there wasn’t a coherent governance mechanism to manage the continuum of professional military training and education in a properly structured way. To keep the addressing of this issue within manageable bounds he proposed to limit the initial scope of effort to officer education.⁹⁵

In December 2012 COSC endorsed an ADC proposal for the development of a JPME framework, encompassing both Joint and single Service education programs. All officer ranks are grouped into five career phases from pre-commissioning to star rank. This framework aims to synchronise current joint and Service PME programs and ADC institutions have a key role in each phase of the JPME framework from ADFA for pre-commissioning to CDSS for star ranks. ⁹⁶ CDSS involvement in joint star rank education is implemented principally through the Centre for Defence Leadership and Ethics, which has conducted an operations course for one and two-star officers since 2006, to prepare them for joint command and senior staff appointments.

The ADC Strategic Plan 2013-2017 (issued in July 2013) sets two strategic targets in relation to JPME, namely:

⁸⁹ Ibid, pp291-2.

⁹⁰ Evolution of the Australian Defence College (2013), p5.

⁹¹ Australian Defence College Strategic Plan 2013-2017, July 2013, p6.

⁹² History of ADFWC, as sighted on the ADFWC website in November 2012.

⁹³ Recent History of ADFWC, as sighted on the ADFWC website on 17 March 2014.

⁹⁴ Evolution of the Australian Defence College (2013), p12.

⁹⁵ Australian Defence College Planning Guidance, Transforming Defence Education & Training, July 2012, pp10-11.

⁹⁶ Evolution of the Australian Defence College (2013), p14.

- to develop a JPME framework that will underpin the joint education requirements of the ADF; and
- to develop a JPME curriculum management system in order to deliver the joint war fighting and ADO education program, which is responsive to single Service and ADF capability requirements.⁹⁷

While most joint education initiatives have focused on officers, one particularly important course was established in 2003 for Warrant Officers and Non-Commissioned Officers (NCO). In that year, then CDF General Peter Cosgrove initiated the CDF Warrant Officer and NCO leadership forum. This forum provides an opportunity selected Warrant Officers and NCO from the three Services to share their experiences on leadership over a two day period and listen to the views of Defence leaders and external experts. Participants have given these events a positive rating and they continue to be held regularly.⁹⁸

The scope of joint education and training is now substantial. In addition the Services retain under command a number of Defence schools and have a number of their own schools which conduct joint training. These include:

- Navy: ADF School of Catering, ADF Physical Training School and ADF Dental School.
- Army: Defence Force School of Signals, Defence Force School of Music, Defence Intelligence Training Centre, Defence Police Training Centre and Army School of Health.
- Air Force: Defence Explosive Ordnance Training School, ADF Basic Flying Training School, RAAF School of Technical Training and the Central Flying School.

All this begs the question of what comes next. The most significant next step in joint education is the development and implementation of the JPME process, with the ultimate aim being to optimise and synchronise the education of Defence officers throughout the organisation. This is essential to continue to build a joint culture among ADF officers. It may also result in some further rationalisation and savings.

Commander ADC's initial thoughts in July 2012 suggested that ADC would draw on the US approach to JPME⁹⁹ and this is reflected in the framework COSC subsequently adopted. But another key element of the US approach is the establishment of three joint leader competencies, namely: to be strategically minded, to be a critical thinker and to be a skilled joint warfighter¹⁰⁰, with the US National Defence University (NDU) being tasked to implement JPME through this competency-based education model.¹⁰¹

It will be a challenging task for ADC to achieve a coordinated competency-based education within the Australian Defence environment. ADF university education starts with multi-year undergraduate degrees at ADFA provided through its long term partnership with the University College of the University of NSW. As well post graduate

⁹⁷ Australian Defence College Strategic Plan 2013-2017, July 2013, p12.

⁹⁸ DEFGRAM 1/2014, Department of Defence, 2 January 2014.

⁹⁹ Australian Defence College Planning Guidance, 2012, pp10-11.

¹⁰⁰ CJCS vision for Joint Officer Development, November 2005, p2.

¹⁰¹ Vision and Mission of the US National Defence University, <http://www.ndu.edu/About/VisionMission.aspx>, as sighted on 23 July 2014.

degrees have also been made available at ADFA for ADF officers, including through the Capability and Technology Management College (CTMC). Both ACSC and CDSS provide access to one year post graduate degrees through shorter term arrangements with other universities as part of the delivery of their principal courses.

The first step will be to get the curriculum content right and establish the management arrangements for control of its implementation, as ADC is planning to do. The next step will be to assess how the current educational arrangements in the three ADC institutions will be able to implement this coordinated curriculum, or whether new approaches or changed structures are needed, including even the establishment of an Australian equivalent to the US NDU.¹⁰²

Establishment of an Australian Defence University (ADU) could also provide a joint benefit beyond the JPME. The ADU could become a centre for joint research to improve training, doctrine, culture, future concepts and experimentation. It could enhance its own capacity by building a network with the Services' research organisations, DST Group, the Asia Pacific Civil Military Centre of Excellence, and other security research centres in Australia and overseas. A small start has already been made to such a joint research capability at ADC with the establishment of the Centre for Defence Research (CDR) in 2013. This centre has only two fulltime staff, but expanding its capability to conduct a wider range of joint studies might be part of initial steps to build a greater joint research capability at ADC.¹⁰³

In relation to joint training the wider need to find savings in training will continue and the trick will be to ensure that this is done without a reduction in important capabilities in either the Services or in the joint training institutions. The ADFWC, or what is now known as the ADFWC precinct, was at one stage the centre of Australia's joint endeavour to develop doctrine and train ADF members in that doctrine. It has been through a number of reorganisations since 1997, most of which appear to have been driven by other imperatives rather than being particularly aimed at improving its ability to develop doctrine and conduct individual training. Further examination of training and education arrangements was considered by the FPR, which has proposed merging education, individual training, doctrine, health, logistics policy, reserves and cadets, under a single two-star commander reporting directly to VCDF, but noted that this proposal was only a "possible option" with CDF and VCDF to decide the specific structure.¹⁰⁴ The proposed structure effectively uses the COMD ADC position to create this position. While the authors support the initiative to reduce the VCDF's span of command, the proposed arrangement would decrease the ability of the two-star to retain focus on training and doctrine as the strategic J7 and in particular to undertake the difficult, but key task of implementing the JPME, with its important objective of building a joint culture among ADF officers. So we recommend that this 'possible option' from the FPR be re-assessed as part of CDF's review of the strategic level ADF headquarters, which is implicitly endorsed

¹⁰² The authors wish to thank Dr Bob Breen for alerting us to this issue and for a useful discussion on this subject with one of us on 17 July 2014.

¹⁰³ In 2010, before the establishment of the CDR, Dr Aaron Jackson proposed the establishment of a joint studies centre. (It's Time for an ADF Joint Warfare Studies Centre, Aaron P. Jackson, Australian Defence Force Journal, 181, 2010, pp 41-51.)

¹⁰⁴ First Principles Review, p 28. VCDF Group only retains the policy element to logistics. The supply chain and delivery components from Joint Logistics Command are transferred to the new Capability Acquisition and Sustainment Group (p35).

by the FPR in its recommendation to examine headquarters functions in its implementation.¹⁰⁵

3.2 Joint Collective Training: Major Joint Exercises

Individual training (and education) is only the first step in preparing ADF members for operations. Effective and realistic collective training of combat units and supporting forces is the crucial next step. Such collective training at the joint level has been going on for a long time in Australia. The Air Power Development Centre, in one of its regular bulletins, describes a joint RAN / RAAF maritime trade protection exercise held in April 1939. The bulletin quotes E.R. Hall (writing in 1978) noting that the exercise allowed for an easy transition to wartime protection of convoys.¹⁰⁶

Equally, collective training exercises were particularly important for testing skills at the beginning of an era of reduced operational activity. This happened with the first major joint exercises after the Vietnam War, the Kangaroo series, which began with Exercise Kangaroo 1 (K1) in 1974 and included a further two exercises later in the decade. These exercises were also seen as an opportunity to develop and evaluate the emerging joint doctrine in the JSP series. As an example the 1976 version of JSP (AS) 1, *Manual of Joint Operations Doctrine*, was issued on a limited distribution for Exercise K2 held in that year.¹⁰⁷ Exercise Kangaroo 1981 (K81) extended the scope of these exercises to include testing of joint strategic command and intelligence, and joint logistics.¹⁰⁸ Exercise K89, which involved the deployment of most combat elements of the ADF across northern Australia, aimed to test the 1987 White Paper's strategy of defence-in-depth. Smaller Kangaroo exercises were held in 1992 and 1995 and identified command and control issues that the establishment of COMAST in 1996 sought to solve.¹⁰⁹ That said, Bob Breen suggests that the two exercises in 1992 and 1995 involved an unrealistic approach to logistics support needed for an operational deployment, and therefore failed to identify equally important deficiencies in preparation and sustainment that were subsequently exposed in the East Timor deployment in 1999.¹¹⁰

All Kangaroo exercises had significant participation from other nations including the US. Then in 1999, after the strategic policy shift to greater emphasis in off-shore operations in 1997, another change occurred. The exercise series was re-named Crocodile, and Crocodile 99 became an Australian-led bilateral exercise with the US.¹¹¹ After another Crocodile exercise in 2003, the exercise series was again re-named Talisman Sabre (TS) and these exercises have been conducted every two years since 2005. The exercise held in 2013 included an opportunity to practice and progress Australia's amphibious capability, with a landing of 2RAR from HMAS Choules.¹¹²

¹⁰⁵ Ibid, Recommendation 5.5.

¹⁰⁶ Pathfinder, Air Development Centre Bulletin, Issue 56, November 2006.

¹⁰⁷ JSP (AS) 1 (A) Joint Operations Doctrine, 27 June 1979, foreword.

¹⁰⁸ Exercise Kangaroo 81 The Stage is Set, Brigadier R. A. Sunderland, Defence Force Journal No.30, September / October 1981, pp. 5-10.

¹⁰⁹ Horner (2001), p 124.

¹¹⁰ Breen (2006) p v and a subsequent interview with Dr Bob Breen on 17 July 2014.

¹¹¹ <http://www.globalsecurity.org/military/ops/crocodile.htm>, as sighted on 19 June 2013.

¹¹² <http://www.army.gov.au/Our-work/News-and-media/News-and-media-2013/News-and-media-July-2013/Exercise-Talisman-Saber-2013-begins>, as sighted on 1 December 2014.

In a lower level of operational tempo, major joint exercises become more important. So it's not surprising that in 2013 the then CDF General David Hurley noted that joint collective training could be improved and so directed CJOPS and the Service Chiefs to "sort it out in the near future".¹¹³ As operations become more joint, it is logical that collective training needs more effective joint coordination, particularly by CJOPS. This is now happening. A Joint Capability Instruction on collective training has been issued nominating CJOPS as the capability coordinator "responsible for the coordination and management of ADF Joint collective training".¹¹⁴ In late 2013 a major step was taken in implementing this CJOPS responsibility with the establishment of Australian Defence Simulation Training Centre (ADSTC), commanded by the J7 at HQJOC. ADSTC as its name suggests, also took on the responsibility for simulation in Defence, which had previously been the responsibility of Head Joint Capability Coordination (HJCC) in VCDF Group.

One other area of improvement that might be considered in collective training is the greater use of joint exercises to assist the evaluation of joint doctrine as was the case in the last period of low operational tempo from the 1970s to the 1990s.

3.3 Doctrine

Australian Defence Doctrine Publication-D (ADDP-D) – Foundations of Australian Military Doctrine, notes that the purpose of joint doctrine is to provide guidance to ADF operations, specifically defining how "current military operations should be directed, mounted, commanded, conducted, sustained and recovered..... Doctrine also provides a mechanism for the analysis of key operational challenges and assists in the delivery of professional military education and training."¹¹⁵

During the 1960s Australia used UK joint doctrine, in keeping with our commitment to the British Far East Strategic Reserve based in Malaysia and Singapore. With the UK decision in 1967 to withdraw from 'East of Suez', Australia commenced developing its own joint doctrine.¹¹⁶ Beginning with eight manuals of the JSP (AS) series in the early 1970s, Australian joint doctrine has expanded to around ninety manuals at two levels; the ADDP which provide the philosophical basis and high level guidance for the application of force, and the ADFP (Australian Defence Force Publications) which describe more detailed procedures.

The initial JSP (AS) series had a similar split. There were three high-level doctrinal manuals, describing joint operations and the division of responsibilities between the Services for operations and administration. And there were five procedural manuals covering: command and control, communications, offensive support, air defence and air transport.¹¹⁷ The last three described the key tactical tasks on which the Australian

¹¹³ The Australian Defence Force Today and Tomorrow, address given on 16 August 2013, and published in United Service 64 (4) December 2013.

¹¹⁴ Joint Capability Instruction No 8/13, Joint Collective Training and Supporting Simulation Framework, 19 December 2013, para 16. VCDF (HJCC) retains responsibility for policy.

¹¹⁵ Australian Defence Doctrine Publication-D (ADDP-D), *Foundations of Australian Military Doctrine*, edition 3 (May 2012), foreword and paras 3.8-9.

¹¹⁶ Private communication with Mr Jeff Malone, DST Group, 29 July 2014.

¹¹⁷ JSP (AS) 8 Joint Command and Control (1st Edition) (published between 1974 and 1976), Foreword.

Services had cooperated for many years. However for the manual on joint command and control, a 1978 Defence Force Journal article noted that JSP (AS) 8 was “derived almost exclusively from US JTFHQ SOPs”.¹¹⁸ The influence of UK joint doctrine also continued with UK publications authorised for ADF usage until sufficient Australian publications were available.¹¹⁹

To ensure that this doctrine was effectively developed and taught, the Australian Joint Warfare Establishment (AJWE) was formed in 1975. By 1981 an additional five manuals had been published including planning, joint exercises and training, maritime operations, intelligence and electronic warfare. The 1981 version of JSP (AS) 1(A) *Joint Operations Doctrine* provided a summary chapter on each of the subjects covered in other manuals both published and planned. Subjects for these chapters included: amphibious operations, logistics, strategic strike operations and nuclear, biological and chemical defence.¹²⁰

The 1990 amalgamation of AJWE and AJMWC allowed the new ADFWC “to save sufficient positions to form a dedicated doctrine development wing within the new organisation.”¹²¹ In the early 1990s ADFWC commenced rewriting the JSP (AS) series, retitled as ADFP. The keystone publication within the series, ADFP 1, *Doctrine*, which was published in 1993, was designed to guide the ADF at the operational level of conflict¹²² in line with introduction of this concept into the ADF’s lexicon in the late 1980s.

By 1996 the ADF had developed an effective system for the development and validation of doctrine. Once the ADFWC drafted joint doctrine, it was then reviewed by a Joint Operations Doctrine Group which included joint and Service representatives. The doctrine was then validated by ADFWC personnel, including through assessments on joint exercises. Any observed deficiencies could then result in a review of doctrine.¹²³

After the initial establishment of HQAST in 1996, a key task for the second COMAST, Major General Jim Connolly (appointed in February 1997), was to develop joint doctrine for the new command arrangements and validate it through joint exercises. To assist him in this endeavour he was given responsibility for the ADFWC at Williamstown and in December 1997 the Joint Exercise Planning Staff moved from Canberra and was incorporated into the ADFWC.¹²⁴

But before doctrine could be addressed, a warfighting concept was needed to guide operational planning and ultimately to influence doctrine. An interim concept, entitled *Decisive Manoeuvre*, was published by ADFWC in January 1998. While the initial focus was on operational planning and joint exercises, General Connolly’s hope was that the concept would be integrated into joint doctrine by the end of 1999.¹²⁵

¹¹⁸ Australian Joint Force Operations, J.M Chesterfield, Defence Force Journal (9) March April 1978 pp 12-15.

¹¹⁹ Private communication with Mr Jeff Malone, DST Group, 30 March 2015.

¹²⁰ JSP (AS) 1A, Joint Operations Doctrine, published in June 1979 and amended in October 1981, Foreword. The Foreword also notes that the suffix (A) indicates that the manual is a second edition.

¹²¹ Horner (2001), p 283.

¹²² Doctrine, Strategy and Military Culture: Military-Strategic Doctrine Development in Australia, Canada and New Zealand, 1987–2007, Aaron P. Jackson, Canadian Forces Aerospace Warfare Centre, 2013, p 147.

¹²³ ‘Top down’ planning and joint doctrine: the Australian experience, Tomas-Durell Young

Joint Force Quarterly (12) Summer 1996, pp 61-66.

¹²⁴ Horner (2001), p 155.

¹²⁵ Decisive Manoeuvre, Defence Publishing and Visual Communications, 2 January 1998, Foreword.

From 1997 the increased focus of ADFWC on this concept and on exercise planning meant that doctrine development was “limited to developing and ensuring the currency of doctrine needed specifically to support operations (including) the formal validation of the many volumes of current operational doctrine (as) a major objective of Exercise Crocodile 99.”¹²⁶ And from the beginning of 1999, the focus of the new COMAST, Air Vice Marshal Bob Treloar, became the increased preparedness for possible operations in East Timor and the subsequent Australian-led deployment later in that year.

The net effect of this operational focus was that other elements of joint doctrine did not receive adequate attention. For example ADFP 1, published in 1993, was not updated. And by 2002 most of the ADF’s joint doctrine publications were out of date. As a result in 2002, a joint doctrine management restructure was implemented, making two important changes. Firstly the Joint Doctrine Steering Group (JDSG) was established, chaired by the VCDF. The JDSG was tasked with establishing joint doctrine development priorities and overseeing doctrine development and review. The second change was the outsourcing of doctrine production to consultancy firms. As a result of this arrangement, the ADF was able to update 70 per cent of its joint doctrine by 2007.¹²⁷

When VCDF regained operational responsibilities in 2003 and took COMAST under command, he also gained responsibility for doctrine since ADFWC was responsible to COMAST. In 2007, with the separation of the CJOPS and VCDF functions, ADFWC and doctrine initially remained under CJOPS. As a result of a number of reorganisations including the demerger of ADFWC in 2010, joint doctrine is now the responsibility of the Joint Doctrine Centre which resides at the ADFWC precinct in Williamstown within the ADC and is headed by an O5 officer, reducing its profile somewhat. Responsibilities and development procedures for joint doctrine were updated in 2013 through the issue of a new CDF Directive.

The current status of joint doctrine seems satisfactory, with the ADDP and ADFP series in a reasonable state of currency, and with most publications being updated every four years or so.¹²⁸ New and developing subjects are being added to joint doctrine through a system of ADF Joint Doctrine Notes, covering subjects such as stabilisation and force protection.

With recent changes in operational tempo, the role of joint collective training in doctrine should be considered. In the 1970s there was often a close link between the development of the JSP (AS) series and the Kangaroo exercises. And then from 1997, when the joint exercise staff and the joint doctrine team were brought together in ADFWC, to the demerger of ADFWC in 2010, there were very close links between doctrine and joint exercises. So there should be some value in seeking to improve the linkages between joint doctrine and collective training, particularly in testing and understanding new technologies and the procedures to utilise them, as the many parts of the ADF has may have less opportunity to experience these developments first hand in coalition operations. The current efforts to develop joint amphibious doctrine are closely tied to the planning and conduct of collective training – it is an approach that could be repeated elsewhere.

¹²⁶ Defence Annual Report 1998/99, Defence Headquarters Program.

¹²⁷ Jackson (2013), p 148.

¹²⁸ Joint Doctrine Library (ADDP & ADFP Development Status)

<http://intranet.defence.gov.au/vcdf/sites/JointDoctrineLibrary/comweb.asp?page=55113&Title=Welcome>

As well the profile of ADF doctrine would be increased by the formal definition of COMD ADC's role as the strategic J7 (as recommended in the previous section) responsible for doctrine, training and education.

Training, Education and Doctrine
Observations

- *Efforts to improve Defence's joint training, education and doctrine have contributed to Defence's ability to conduct operations, but some changes have taken many years to implement.*
- *Since 1997 there has been significant joint rationalisation of individual training and education.*
- *First steps towards a Joint Professional Military Education (JPME) continuum are promising.*
- *Joint collective training has developed since the joint exercises in 1970s and has recently received an appropriate increased focus, with CJOPS being given coordination responsibility.*
- *Joint doctrine developed effectively from the 1970s to the late 1990s, after which operational tempo distracted effort from it.*
- *Action by VCDF in 2002 ensured that joint doctrine development has been satisfactory since then; although its profile was reduced in 2010 with the demerger of ADFWC.*

Future Directions

- *Defence's implementation of the First Principles Review should ensure that joint individual training and education remains a two-star command reporting directly to VCDF.*
- *Priority should be given to implementing an Australian JPME with consideration being given to establishing an Australian Defence University.*
- *Greater use of joint collective training to evaluate joint doctrine would benefit both functions.*
- *Doctrine's profile would increase if COMD ADC became the strategic J7 (doctrine & training).*

3.4 Preparedness

The *Defence Preparedness Manual (DEFPREPMAN)* defines defence preparedness as "the sustainable capacity of Defence to deliver a prepared joint force-in-being able to accomplish directed tasks and provide contributions to Government, for emerging issues and events that affect Australia's national interests".¹²⁹ Defence's 2013-14 annual report lists Defence's first output as a joint force-in-being which is the "standing, prepared force that provides options to government for future joint force operations".¹³⁰

The term 'defence preparedness' has been in use in Australia for a long time. In 1909 Field Marshal Lord Kitchener visited Australia "to inspect the existing state of defence preparedness of the young Commonwealth".¹³¹ But the development of its modern usage began with the concept of warning in the Strategic Basis papers of the early 1970s, which noted that it would take many years for any regional country to develop the substantial military capabilities required to sustain major operations against Australia.¹³²

¹²⁹ The Defence Preparedness Manual, Part One, Chapter One, para 1.1, approved by the Secretary and CDF on 3 October 2012.

¹³⁰ Defence Annual Report 2013-14, p10.

¹³¹ Universal military training in Australia, 1911-29 – Fact sheet 160, National Archives of Australia, <http://www.naa.gov.au/collection/fact-sheets/fs160.aspx>, as sighted on 5 March 2013.

¹³² Defence of Australia, Defence White Paper 1987, paras 3.36 – 3.37.

In the 1970s the most visible manifestation of Australia's defence preparedness was the forward deployment of forces into the South East Asian region; what we would now call force posture. In the early 1980s a significant preparedness change was the establishment of the Army's Operational Deployment Force (ODF) in Townsville, based on the 3rd Brigade.

The 1987 White Paper changed the direction of Defence policy to give priority to dealing with low level capabilities which already existed in some countries and for which less time would be needed for an adversary to prepare and for Australia to respond.¹³³ Based on this guidance a study was conducted in 1988 entitled the *Review of ADF Operational Readiness*. This study concluded that there was a need to develop agreed terms, concepts, policy and a reporting mechanism for readiness.¹³⁴ This led to the beginning of a formal joint approach to preparedness with the issuing of the CDF Operational Readiness Directive in April 1989.

The directive set operational readiness objectives for the Services including minimum readiness levels for force elements to conduct specific tasks. The Service Chiefs provided six-monthly reports against this directive.¹³⁵ And in what has proved to be a continuing theme of subsequent preparedness arrangements, as part of the introduction of program management and budgeting (PMB) in Defence, Development Division in HQADF began "developing procedures to quantify the resource costs for maintaining force elements at different levels of readiness."¹³⁶

Force Structure Review 1991 (FSR 91) summarised developments in 'readiness and sustainability' up until that time, including using the term 'preparedness'.¹³⁷ At the same time the readiness directive was expanded to include sustainability objectives, which specified "the period of time for which the availability of resources to support force elements in operations must be assured."¹³⁸ By 1992 the readiness directive had become the CDF Preparedness Directive (CPD 92) and since that time preparedness has been used to describe this combination of readiness and sustainability, which is still the Defence description of the components of the preparedness.¹³⁹ CPD 92 also included the terms minimum and operational levels of capability (MLOC and OLOC) which continue to be used in Defence preparedness doctrine.¹⁴⁰

In 1995 the joint doctrine publication *Preparedness and Mobilisation* (ADFP 4) was first published¹⁴¹ and a history of Operations Division (HQADF) noted that its Directorate of

¹³³ Ibid, paras 3.42 – 3.43.

¹³⁴ Management of Australian Defence Force Preparedness, Australian National Audit Office (ANAO) Preliminary Study, Audit Report no.17, 1995-96, p 14.

¹³⁵ Defence Report 1989-90, p23.

¹³⁶ Ibid p23

¹³⁷ Force Structure Review 1991 (FSR 91), paras 1.5-1.7.

¹³⁸ Defence Report 1990-91, p 25.

¹³⁹ The Australian Defence Glossary defines preparedness as the "measurement of how ready and how sustainable forces are to undertake military operations. Note: It describes the combined outcome of readiness and sustainability." as sighted on 9 May 2013.

¹⁴⁰ ADF Preparedness, ACOPS address to JSSC November 1992, from one of the authors' notes from attending the lecture.

¹⁴¹ ADDP 00.2 Preparedness and Mobilisation (provisional), December 2004, p 2.

Joint Planning managed the CDF Preparedness Directive and Preparedness Reports.¹⁴² But not everything was rosy. An Australian National Audit Office (ANAO) report published in 1995-96 acknowledged the 'considerable effort' Defence had made in relation to preparedness, but was disappointed that further development had not received greater priority from Defence senior management. That said it concluded that, after a COSC meeting in August 1995, work was proceeding and it supported "the direction now being taken by Defence".¹⁴³

In the late 1990s the newly established COMAST issued preparedness requirements in an Operational Preparedness Requirement (OPR) based on the CPD. And in 1997-98 additional funding was provided to address priority preparedness requirements.¹⁴⁴ Prior to the East Timor deployment, rapid increases in preparedness were jointly coordinated. But Defence's experience of these last two events suggested that Defence's approach to preparedness planning needed improvement, particularly in integrating that planning into the budget process.¹⁴⁵ As a result two reviews were established in 2000 to determine these improvements.¹⁴⁶

The recommendations of these reviews included proposals to: establish a branch focussed on preparedness, provide stronger linkages between preparedness levels and resource allocation and, improve management reporting. These recommendations were implemented¹⁴⁷ and set the stage for a more comprehensive approach to preparedness with a particular focus on the resource implications. By 2004 a second ANAO audit of defence preparedness found that Defence's Preparedness Management System (PMS) was a sound framework with effective linkages between strategic guidance and the Service outputs.¹⁴⁸

The increase in operational tempo from 2005 resulted in the further increases to Defence preparedness. The separation of VCDF and CJOPS roles in 2007 allowed the new VCDF Group, with a branch responsible for preparedness, to write a companion review on preparedness for White Paper 2009. The White Paper endorsed preparedness reform, and 'preparedness and operating costs' became a stream in the Strategic Reform Program (SRP).

After 2009 the first major change was to replace the two-stage strategic (CPD) and operational (OPR) process, with a single process where the results are all incorporated in the CPD. The OPR was replaced by a preparedness working group involving all relevant Defence organisations. Secondly doctrine is being updated and the procedural manual (DEFPREPMAN) has been drafted. Thirdly a new information system is being established which integrates information from the three Service systems, the Defence financial and

¹⁴² The Operations Division and Its History, pp 2-3. The Operations Division and Its History is chapter two of an Inspector General's review of Operations Division. The document references the Defence Annual Report 1994-95, which would have been released in late 1995.

¹⁴³ ANAO Audit Report no.17, Management of Australian Defence Force Preparedness, Preliminary Study, 1995-96, p 11.

¹⁴⁴ Defence Annual Report 1997-98, p 10.

¹⁴⁵ Defence Annual Report 2000-01, p 14.

¹⁴⁶ The two reviews were a Review of Decision Making for Preparedness, led by Dr Peter Preston from DSTG and the Preparedness Task Force (PTF), Review of ADF Preparedness Management, led by AVM Peter Criss.

¹⁴⁷ Defence Annual Report 2000-01, p 14.

¹⁴⁸ ANAO Audit Report no.43, 2003-04, Defence Force Preparedness Management Systems, 23 April 2004, p 12

personnel information systems, and the Defence deficiencies database. Fourthly there has been improvement in costing information.^{149 150}

Since FY 2011-12, CPD development has been aligned with the Defence budget forward estimates, with a three year horizon. At any one time there are three 'live' CPDs. The first is the approved one for the current FY. The second is the one being developed in detail for the next FY, as part of the budget preparation process. The third (for the following year) is being developed in outline. And although HQJOC no longer produces a requirement focussed OPR, it still produces a report on preparedness, assessing the risks.¹⁵¹

The DEFPREPMAN draft available at the time of writing outlines the processes Defence is now using to define requirements in the CPD and to report on the achievement of these requirements. It also provides guidance on linking Defence activity and resource allocation to these requirements.¹⁵² It lists eight Defence Preparedness Requirements (DPR) which cover the full range of Defence activities from humanitarian assistance to combat operations. For each of these DPRs the necessary elements of the Services and Defence Groups are assigned in the CPD. DEFPREPMAN notes that this assignment allows capability management directives and training requirements to be developed for each of these Defence Elements (DE).^{153 154} DEFPREPMAN also defines 18 Defence operational and enabling functions (DOEF) which describe the generic functions which DE undertake to support various DPR.¹⁵⁵ The operational functions include sea and air control, land combat and a number of specialist combat functions. The enabling functions include command and control, communications, battlespace awareness, lift, logistics and a range of other support functions many of which correspond to the joint capabilities coordinated by VCDF. DEFPREPMAN states that the DOEF describe in functional terms 'what Defence does' and supports better enterprise management of preparedness.¹⁵⁶

Although still a work in progress, this emerging Defence preparedness approach led by the strategic joint staff holds the promise of allowing Defence to determine not only 'what it does', but also 'what it must do' and 'what it doesn't have to continue doing' to achieve Government expectations and at what cost. Given the continuing financial challenges that Defence is likely to face,¹⁵⁷ making hard decisions on the priority of what Defence must be prepared to do within its resource envelope, will require particular priority to the analysis of preparedness reporting.

¹⁴⁹ Interview with CDRE Phillip Spedding (Director General Preparedness) on 23 November 2012.

¹⁵⁰ Preparing Defence, by LTCOL Andrew Stevens in Defence Magazine, Issue 6, 2012.

¹⁵¹ Interview with Mr Mark Thorek, Director Preparedness and Evaluation, 14 December 2013.

¹⁵² Defence Preparedness Manual (DEFPREPMAN) (draft) Part 1 Chapter 1, Annex B, as sighted on 10 December 2014.

¹⁵³ DEFPREPMAN (draft) Part 2, para 1.29.

¹⁵⁴ DEFPREPMAN Part 1, Chapter 1, Annex A and the Defence Glossary define a Defence Element as the basic building block of military capability drawn from Services and Enabling Groups. It can be a component of a unit (including an individual), a unit or an association of units having common prime objectives and activities that result in capability effects. It's definition is almost identical to that of the older, more well known term, Force Element. We assume that Defence Element is used for preparedness because there are increasing numbers of these elements that are from the civilian component of Defence.

¹⁵⁵ Defence Preparedness Manual (DEFPREPMAN) (draft), 2013 Part 2 paras 1.31-3.

¹⁵⁶ Ibid, paras 1.31-3.

¹⁵⁷ The Defence Minister David Johnston (in an interview with Andrew Moore on 10 January 2014), while noting that the Government is "looking to do a White Paper within 18 months of the election" it is also seeking "to stabilise the funding envelope, which is a really difficult task".

As well, the 2012 Defence publication *Pathway to Change: Evolving Defence Culture*, while dealing principally with Defence's need for change in the way its people deal with each other, also provides direction on improved Defence work practices. Specifically the Secretary and CDF require all senior Defence staff "to work with jointery and integration as their prime decision-making lens (rather than Group or Service-specific)."¹⁵⁸ Such an approach will be a necessary component of the conduct and review of preparedness analysis if decisions have to be made about what Defence no longer needs to do.

This direction also indicates that for Defence its joint culture is moving beyond the purely operational domain into management of the current force. One of the purposes of the development of joint doctrine, education and training is to aid the development of a joint culture for operations. But as well, the centralised approach to preparedness management also requires the Services and Groups to have a joint focussed approach.

ADF culture is not just a joint culture. It also involves strong and necessary single Service cultures, particularly in the complex task of managing current capability. ADF joint doctrine acknowledges this point in ADDP 00.6 *Leadership*, which outlines the key differences between the cultures of the three Services.¹⁵⁹ To achieve effective management in Defence, these single Service and civilian cultures need to be recognised, but as well there must be a joint culture to bring them together to achieve common goals.¹⁶⁰ The history of single Service capability management, together with the development of joint capability coordination and integration, demonstrates Defence's attempts to achieve this 'bringing together' at a management level.

3.5 Capability Management, Coordination and Integration

The improvements in joint preparedness, training and doctrine, together with the joint command arrangements discussed in the previous section, have provided Defence with an ability to manage the preparation of the current ADF for operations in an integrated manner. However the implementation of the DRP in 1997, while creating a more integrated Defence organisation, also introduced some challenges for the management of the current force by the single Services. We now discuss how Defence has addressed these capability management challenges. As well we discuss further joint capability coordination and integration initiatives taken after 1997, in particular to address the increasing impact of ICT, which was described in Australia's Strategic Policy 1997 (ASP 97) as the 'knowledge edge'. Since the 1990s Defence's take up of improved ICT has resulted in enhanced networking and interconnectivity, more pervasive situational awareness and the emergence of 'cyber' as a separate environment for conflict – all drivers of an increasingly joint approach across the traditional environments of warfare.

Up until 1996 the Service Chiefs had within their Service organisations most of the enabling functions (including elements such as personnel, training, logistics, garrison support, sustainment and acquisition) to implement their 'raise, train and sustain' responsibility. These functions are important elements of Defence's fundamental inputs to

¹⁵⁸ *Pathway to Change: Evolving Defence Culture* 2012, p 13.

¹⁵⁹ ADDP 00.6 *Leadership*, 22 March 2007, paras 3.17-3.18.

¹⁶⁰ Interview with Lieutenant General Des Mueller (retired) in January 2015.

capability (FIC)¹⁶¹ through which the Services deliver their capabilities.¹⁶² But in 1997 the DRP sought to improve efficiencies in these functions by removing many of them from the Services and centralising them in Defence-wide programs for each function. By 1998 Defence had a particular concern with one aspect of these arrangements in relation to building the future force, where there was “slow progress in injecting whole-of-capability and whole-of-life considerations” into decision-making. And as well, additional logistics funds had to be allocated to address urgent and priority requirements for current Service capabilities. So in July 1998 a review was established “to explore options and make recommendations for improving capability management”.¹⁶³ The aim of this review was, in part, to assign the Service Chiefs (by then appointed as Output Managers) “responsibility for delivering effective defence capability.... (and at the same time) meld together all of the elements that go into building an effective defence force: people, equipment, training, acquisition, doctrine, logistic, disposition (and) facilities.”¹⁶⁴

In 2000 the terminology for the Service Chiefs’ responsibility for delivering current capability was changed to Output Executive ¹⁶⁵ and by 2002 their roles were outlined in the Capability Systems Life Cycle Management Manual (CSLCMM 2002) issued in November of that year.¹⁶⁶ By 2006 the terminology for these Service Chief responsibilities had become Capability Manager, the expression used today.¹⁶⁷ ¹⁶⁸ The Defence Glossary defines a Capability Manager as being responsible for delivering their respective capabilities at the levels of preparedness described in the CPD. ¹⁶⁹

During the same period there was some joint involvement in capability management, with COMAST being appointed an Output Executive at the same time as the Service Chiefs. COMAST had particular responsibility for ensuring that the joint command function and its supporting information systems were properly managed. In 2002 the new Deputy Secretary Intelligence and Security (DEPSEC I&S) was also appointed an Output Executive responsible for managing Defence’s intelligence agencies, which included joint intelligence staff and personnel of all three Services operating in these agencies.¹⁷⁰ And, with the establishment of a full time Chief Information Officer (CIO) in 2001, the CIO was given coordination functions for military as well as civilian communications and information capabilities. So by 2006 CJOPS (replacing COMAST), DEPSEC I&S and CIO were listed as Capability Managers along with the Service Chiefs.¹⁷¹

In addition there have been specific joint capability management arrangements established for the developing amphibious capability. The decision in the 2000 Defence White Paper to

¹⁶¹ The latest Defence definition of FIC is a standard list for consideration of what is required to generate capability, comprising personnel, organisation, collective training, major systems, supplies, facilities and training areas, support, and command and management. Defence Capability Development Manual (DCDM) 2014, Chapter 1, Annex A dated 7 November 2014.

¹⁶² Capability Systems Life Cycle Management Manual (CSLCMM) 2002, 12 November 2002, para 1.1

¹⁶³ Defence Annual Report 1997-98 pp 10-11.

¹⁶⁴ Defence Executive: A Message to all Defence Personnel from the Executive (internal memorandum), Canberra 6 July 1998; quoted in ANAO Audit Report No 13, Management of Major Equipment Acquisition Projects 1999-00, p 58.

¹⁶⁵ Defence Annual Report 1999-00 p 56.

¹⁶⁶ CSLCMM 2002, 12 November 2002 para 5.11.

¹⁶⁷ Defence Capability Development Manual (DCDM) 2006, February 2006, pp 10-11.

¹⁶⁸ Defence Capability Development Handbook (DCDH) 2012, p 17.

¹⁶⁹ Australian Defence Glossary. The definition also notes that this responsibility includes the sustainability of their capabilities while assigned to CJOPS for the conduct of operations and joint exercises.

¹⁷⁰ Defence Annual Report 2001-02 p 39.

¹⁷¹ DCDM 2006, p 10.

procure new larger amphibious ships was a catalyst for a more joint approach to amphibious capability management. In 2003 the Joint Amphibious Steering Group (JASG) was formed as a one-star committee to coordinate amphibious capability and associated management activities. In 2006, as the project to acquire these ships (JP 2048) gained momentum, a Joint Amphibious Capability Implementation Team (JACIT) was formed to coordinate the introduction into service of the project's capability. In the same year, a three-star Joint Amphibious Council (JAC), chaired by Chief of Navy, was established to provide "strategic guidance for the continued improvement and development of current and future ADF amphibious capability".¹⁷² This management structure supervises among other things the development of the Australian Amphibious Concept (up to its fifth version by 2010) and the Joint Amphibious Capability Implementation Plan produced in 2008.

In 2007 the establishment of a separate three-star CJOPS relieved VCDF of the operational-level responsibilities for operations and allowed VCDF to focus on other critical strategic priorities. One of these was the increasingly joint nature of the ADF's current capabilities, as exemplified by the development of the amphibious capability and the continuing impact of ICT on operations, encapsulated by then under the banner of NCW. So in 2009 VCDF established the Joint Capability Coordination (JCC) Division. Head JCC has since taken on a coordination role for a range of joint capabilities, now numbering at least fourteen and including: Battlespace Awareness; Air Surface Integration - Joint Fires; Chemical, Biological Radiological and Nuclear; Cyber; ICT enabled joint command support; Ballistic Missile Defence; Joint Experimentation; Joint Lessons; CIED; and (until recently) Simulation. In addition, Logistics and Health have similar joint coordination functions through the two commands also under VCDF.

VCDF is also now the Joint Capability Authority (JCA) with the role to strengthen the leadership, coordination and coherence of the design, development and operation of the ADF as an integrated, joint force across sea, land and air domains.¹⁷³ As a result the joint approach to capability management has been adjusted, with now only the Service Chiefs and DEPSEC I&S being designated Capability Managers.¹⁷⁴ Instead the joint function has become one of capability coordination, with the role of Capability Coordinators being to "coordinate the generation and sustainment of a designated capability, where the fundamental inputs to that capability, particularly the major systems, are owned or managed within several different Services or Groups."¹⁷⁵ One role of the JCA is to manage capability coordination, including the assignment of Capability Coordinators, who are then identified in the CPD. The second role is integration.

From a capability perspective Defence defines integration as "the bringing together of components and ensuring that they function together."¹⁷⁶ Integration first became a significant term in Australian Defence organisational language when the DER noted that Defence in 1997 was "well placed to pursue further integration of civilian and military

¹⁷² Joint Amphibious Council, Terms of Reference, draft August 2009.

¹⁷³ Defence White Paper 2013, para 5.1.

¹⁷⁴ The Defence Annual Report 2013-14, p 10, in addition to referring to capability managers, also refers to output managers without specifying who these officers are. But from the figure in which they are mentioned it seems reasonable to conclude that the manager for Joint Force Operations is CJOPS and that the manager for the Force-in-Being is VCDF.

¹⁷⁵ Defence Capability Development Handbook (DCDH) 2012, dated December 2012 paras 1.6.14 – 22.

¹⁷⁶ DCDH 2012, Glossary, p 206.

staffs so that the full range of skills and intellects (could) be applied to common objectives.”¹⁷⁷ As a result Defence was re-organised to include an integrated civil-military ADHQ and a number of similarly integrated enabling programs. This organisational construct is reflected in defence instructions¹⁷⁸ and continues today in the phrase that Defence “has an integrated workforce.”¹⁷⁹

In 2002 CDF Admiral Chris Barrie used the term in a broader (but related) way, describing integration of the ADF in joint operations as a key warfare concept for Australia,¹⁸⁰ embracing the notion of a future ‘seamlessly integrated force’ which not only includes the ADF “but also includes Defence civilians, our embedded contractors and defence industry, and where necessary, our allies and coalition partners.”¹⁸¹ His successors, General Peter Cosgrove and Air Chief Marshal Angus Houston, continued with idea of an integrated seamless force in their subsequent concepts published in 2003 and 2007 respectively,^{182 183} with the implementation of NCW seen as a key mechanism to achieve integration.¹⁸⁴

Since such NCW integration was seen as a future end-state for the ADF, the obvious organisation to commence that implementation was the new Capability Development Group (CDG) established in 2004. In July 2004 Defence agreed to the establishment of the NCW Program Office (NCWPO) within CDG “as a solution to cross project integration.”¹⁸⁵ Thus Defence integration also became closely associated with program coordination of projects and ICT interoperability.

The Defence Capability Development Manual 2006 (DCDM 2006) articulated the role of the NCWPO, but also continued to use the more traditional and related term, interoperability, noting that joint interoperability between ADF systems was essential, while combined interoperability with other countries (particularly the United States) was also an important consideration.¹⁸⁶ To support combined interoperability in capability development an Office of Interoperability was established in CDG, which also provided support to CJOPS and Strategy on interoperability issues.^{187 188} By 2012 the concept of integration had become more significant in a capability sense, with VCDF having the role

¹⁷⁷ DER 97, p 10.

¹⁷⁸ [DI\(G\) ADMIN 58-1-Authority in an Integrated Defence Organisation](#). Dated 25 August 2006

¹⁷⁹ Secretary of the Department of Defence, Mr Dennis Richardson – Speech to ASPI Dinner, 12 November 2013 <http://news.defence.gov.au/2013/11/13/secretary-of-the-department-of-defence-mr-dennis-richardson-speech-to-aspi-dinner-12-november-2013/> as sighted on 4 February 2014.

¹⁸⁰ Australia's Approach to Warfare, June 2002, p23.

¹⁸¹ Force 2020, 2002, p17.

¹⁸² ADDP-D.02, Future Warfighting Concept, 2003, p16.

¹⁸³ Joint Operations for the 21st Century, May 2007, p 3.,

¹⁸⁴ Ibid, p 12.

¹⁸⁵ Defence Capability Development Manual, 2006, para 7.71.

¹⁸⁶ This essentiality of joint interoperability follows from the ADF's doctrinal perspective, mentioned earlier in our paper, that all operations are ‘inherently joint’. It also follows from the strategic view that the ADF has “irreducible core tasks we should make sure we can perform without allied assistance in support of our own defence needs in Australia and our nearer region ... (where the) challenge of conducting operations without allied assistance in support of our own defence needs is one that places a premium on the capacity of the Australian Defence Force to be able to operate jointly.” The Strategist ASPI Blog Integration, Strategy and the ADF Peter Jennings, 6 March 2015 . http://www.aspistrategist.org.au/integration-strategy-and-the-adf/?utm_source=rss&utm_medium=rss&utm_campaign=integration-strategy-and-the-adf sighted on 9 March 2015.

¹⁸⁷ Defence Capability Development Manual, 2006, para 1.17d.

¹⁸⁸ Defence Annual Report 2005/06, web section (supplementary information), sighted 11 November 2014.

of JCA and with one of the branches of CDG (Integrated Capability Development Branch) having its main focus on the delivery of integrated capability.¹⁸⁹

Thus within Defence integration now operates at four levels:

- Firstly, there are the ICT and surveillance functions that have evolved as joint capabilities as a result of the needs of joint command and the impact of the information revolution and the networked force. VCDF Group, CDG and CIOG now have organisations which advance integration of these information capabilities within the force.
- Secondly it is used in CDG to describe the program management function that it is developing to better coordinate the development and execution of major projects. The same one-star officer is responsible for this function and for ICT integration within CDG.
- Thirdly, there is integration of capability at the enterprise level, the responsibility of VCDF as JCA. Capability integration is required across all aspects of the capability cycle: needs (force design), requirements, acquisition and in-service and across the whole Defence organisation.
- And finally (related to the third), there is Defence as an integrated military-civilian organisation with an integrated workforce.

To emphasise the relationship between the third and fourth levels, CDFs since 2002 have noted enterprise integration extends beyond coordinating ADF military capabilities to Defence and national civilian capabilities, and to allied capabilities where necessary. On civilian capabilities, the current DEFPREPMAN notes that “Defence’s preparedness posture is established through integration of the fundamental activities of the DBM (Defence Business Model) that provide enabling functions to support capability management and the raising, training and sustainment of DE (Defence Elements).”¹⁹⁰ On allied capabilities, the latest Defence Capability Development Handbook (DCDH 2014) continues to emphasise the importance of combined interoperability, particularly with the United States (as mentioned in DCDM 2006) as well as continuing to note the essentiality of joint ADF interoperability.¹⁹¹ The Office of Interoperability no longer exists but the function for CDG is now performed by its Directorate of Industry and International Engagement.¹⁹²

A draft chapter of the new Defence Capability Development Manual (DCDM 2014), which is already superseding DCDH 2014, repeats these interoperability definitions but expands combined interoperability to ‘combined and coalition’. The chapter also defines a third form of interoperability (whole of nation) which it describes as taking into account the necessity of interoperability with Australia’s civilian agencies, the Australian intelligence community and key national transport and logistics agencies. It notes that this “will become more important in the future as the Australian Defence Force participates in Joint

¹⁸⁹ DCDH 2012, para 1.6.7 (d)

¹⁹⁰ DEFPREPMAN Part 2, para 1.15.

¹⁹¹ Defence Capability Development Handbook (DCDH) 2014), para 1.6.7 (d), Additional Guidance on Integration.

¹⁹² Ibid, para 1.6.12c.

Interagency Task Forces”,¹⁹³ reflecting the greater involvement of civilians and civilian agencies in recent operations.

Of the four levels of integration described above, the most important strategic function for VCDF is enterprise capability integration as the Joint Capability Authority. VCDF is the only senior joint position that, as deputy to CDF, has the authority to oversight all aspects of Defence involved with capability, and that’s most of Defence. This is a particular challenge when, as is the case now, resources are limited and tasks for both the present and the future are challenging. There is not only a need to examine the balance of current and future capabilities and the personnel and financial resources devoted to each. There is also the issue of the balance between various functions (both military and enabling) and the issue of determining the appropriate level of combined interoperability.

The separation of enabling functions from the Services since the DRP in 1997 has been an enduring integration challenge for Defence’s management of the current force. And the challenge increased in the late 2000s, as Defence sought to design, build and prepare an integrated joint force based on these three Services, ready to operate in a networked battlespace. It was also made more challenging by further centralisation of enabling functions under SRP from 2009. These dependencies have recently articulated in the Defence’s Simplified Business Model (DSBM).¹⁹⁴ From our analysis of developments in Defence management of the current force we present a model in Figure 1, which is based on the DSBM and ideas derived from our analysis of preparedness presented above. Although an apparently simple model, it highlights the complexities of Defence relationships and dependencies that have existed in various organisational forms since 1997, when Defence first became an integrated military civilian-organisation.

The model starts with Defence resources (personnel and operating budgets) and ends with Defence tasks (combat operations, peace and stability operations, and domestic security)¹⁹⁵, each constrained by mission, geography and the threat. There are two steps in the middle: the first is the capabilities that need to be staffed, managed and supported in the three Services and in the Defence Groups; the second is the joint functions where the operational functions represent the ability of Defence entities to achieve an effect in each environment and the joint enabling functions support the operational functions. It is through consideration of joint effects-based functions that Defence can present joint, integrated functional teams from the capabilities of the Services and Groups, which can undertake Defence tasks.

¹⁹³ Defence Capability Development Manual 2014 (DCDM 2014), Chapter 2, para 2.31.

¹⁹⁴ Defence Corporate Plan 2012-17, p 8.

¹⁹⁵ There are a range of other Defence peacetime tasks but these are not determinants of force structure.

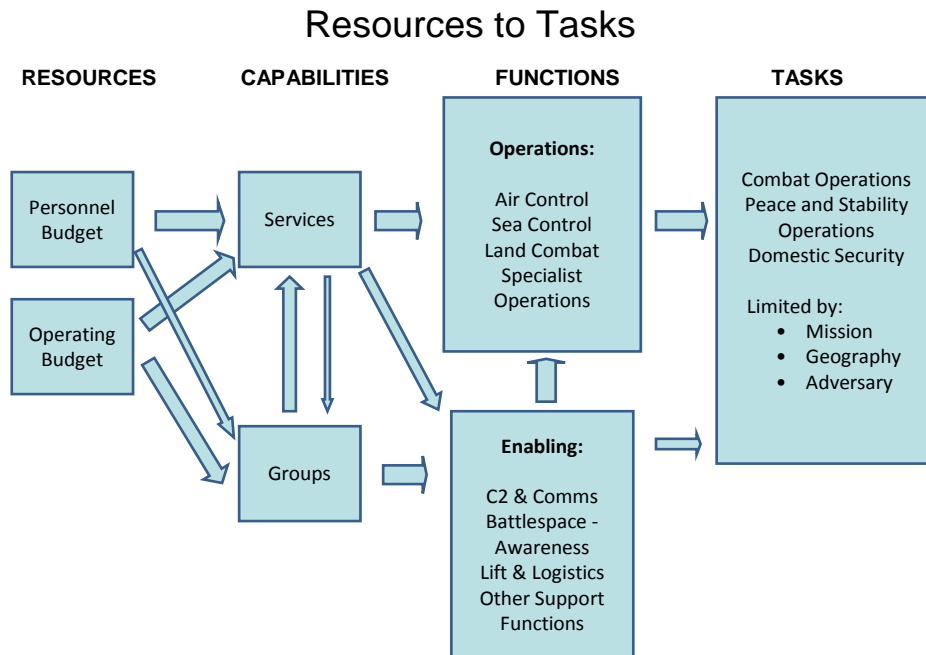


Figure 1 Defence Model for Resources to Tasks for the Current Force

But the other critical point emphasised in the model is the interdependencies in these two middle steps. For capabilities, the Services absorb the majority of Defence's personnel budget, with the largest number of personnel. Services and Groups split the operating budget more evenly, but much of the Groups' budgets are then converted into support provided to the Services. The Services in turn provide support to the Groups through a significant number of ADF personnel posted to these Groups. Examples of this arrangement are two Groups under Defence's Associated Secretary, the Chief Operating Officer (COO)¹⁹⁶ – ICT and support. Both have large operating budgets most of which support the day-to-day running of the Services' ICT, garrison functions and facilities. But both groups depend on significant numbers of properly trained Service personnel to undertake this support.

And this interdependency continues with the joint functions. The Services together provide joint teams to all the operational functions as well as a significant portion of the enabling functions; with the latter often provided by joint units. The Groups directly provide significant elements of some enabling functions, such as communications and battlespace awareness (through intelligence). But in the end, the enabling functions are just that, they support the operations functions in the conduct of operations that involve the use of force or the threat of its use.

Hopefully this model might assist VCDF staff and the wider Defence community in thinking about the links between Defence resources and tasks, and the interdependencies between its functions, its fighting capabilities and the enablers. At the very least it might

¹⁹⁶ The Chief Operating Office has the rank of Associate Secretary. As a result of the FPR the position is referred to by its rank only, reflecting the wider responsibilities the position is being given.

also indicate that cuts to the civilian workforce, on the basis that they are in the 'back-end', might have very direct impact on the Services themselves and the enabling functions, which together provide and support combat operations. As well it might also indicate that such civilian reductions might also result in the ADF having to shoulder additional burdens in enabling functions that could be performed by civilians. Equally it might also suggest what elements of Groups are more critical than others should further adjustments be necessary.

As a result of the FPR Defence will implement a diarchic approach to enterprise integration. The VCDF will remain responsible for ensuring joint force integration¹⁹⁷ and military enabling services¹⁹⁸ while the Associate Secretary will be responsible for integration of corporate enabling services.¹⁹⁹ VCDF's responsibility for enhancing strategic enterprise capability integration will be difficult to implement within the JCC organisation (which as a result of the FPR will be retitled Joint Capability Integration (JCI) Division)²⁰⁰ while JCI also has the specific responsibility (if you like, tactical responsibility) for at least fourteen diverse joint capabilities. Furthermore it is inevitable that with the need for greater efficiency and connectivity that number will go up. And finally all of these enabling capabilities have gained increased importance as a result of recent operations, and often have been, at least in part, sustained by operations funding which has now reduced for many of them.

So while taking these important enabling capabilities forward is important, HJCI should not be diverted by these from the larger strategic responsibilities he has to VCDF. To mitigate this risk VCDF could re-assign some capability coordination responsibilities from HJCI to CJOPS or other joint two-stars within Defence, as has already been done in the case of collective training and simulation. Or a more significant shift could occur by giving CJOPS a more extensive role as a joint Capability Manager (JCM)²⁰¹ including responsibility for some or of all VCDF's enabling functions including the joint logistics and health commands, and ADC.²⁰² Such a position would have similar responsibilities to the United Kingdom's recently established Joint Force Commander (JFC).²⁰³ And as discussed earlier in this section, until 2006 VCDF (as CJOPS) and before that COMAST, did have joint capability management responsibilities. Greater involvement of CJOPS in joint capability management of specific joint enablers would free up VCDF to concentrate on the enterprise functions and would also offer the opportunity for the ADF to 'fully understand and use our enablers' as Air Chief Marshal Binskin is seeking during his

¹⁹⁷ First Principles Review, Recommendation 1.7

¹⁹⁸ Ibid, p 23.

¹⁹⁹ Ibid, p 22.

²⁰⁰ Ibid, p 28.

²⁰¹ Joining up the ADF: why we need a new capability manager, Andrew Davies, The Strategist, the Australian Strategic Policy Institute Blog 30 Apr 14, <http://www.aspistrategist.org.au/joining-up-the-adf/> as sighted on 15 July 20 14

²⁰² Some of the joint capabilities for which HJCC is currently responsible (for example Lessons) are an enterprise function best handled by VCDF. The recent initiative to improve Defence Lessons from Operations involved a Joint Secretary /CDF Directive authorising VCDF to direct all Groups and Services in order to establish and lead a Lessons program. (DEFGRAM 89/2015 3 March 2015). The staff supporting this program are in the Preparedness Branch of JCC. And we would propose that preparedness, as an enterprise planning function, should remain with VCDF under HJCC.

²⁰³ The UK Chief of Defence Staff in a speech in December 2014 noted that, in establishing Joint Forces Command, "we have done far more than simply find a proponent for Intelligence, Cyber and CIS. We have established the proponent for the new way of warfare. We have started to give intellectual energy to how we must conduct warfare in the information age." (<https://www.rusi.org/events/ref:E545211393622E> sighted on 5 February 2015.

tenure as CDF.²⁰⁴ Such an arrangement might also ensure a more detailed, coordinated, joint and operational focus on these capabilities, similar to that provided by the Services for their capabilities. Removal of capability coordination of these enabling functions from VCDF Group would allow VCDF to be a more effective 'umpire' in guiding both single Service and joint enabling capability management and preparedness at the enterprise level. This will become especially important as the VCDF picks up additional responsibility for designing and integrating the joint force. Such a re-assignment could occur as part of FPR implementation through the examination of headquarters functions recommended by the review.

A further aid to VCDF exercising strategic enterprise capability integration would be the formalisation of the strategic J staff recommended in the previous section. These J staff functions provide not only a means of coordinating strategic input to the support of operations, but they also provide a means of strategic oversight of the enabling joint capabilities in Defence Groups and potentially in a JCM. And brought together, these functions also provide a means of integrating military strategic effort in managing the current force.

Of particular importance to such management is the joint strategic planning function (J5). As stated in the previous section the identification of an individual two-star officer for this role is not simple. This is principally because we can identify at least six joint strategic planning functions including:

1. Longer term military strategic planning, which results in a military strategy and which drives all other Defence planning.
2. Shorter term planning for the conduct of operations, including contingency plans.
3. Preparedness planning, resulting in the CPD and influencing the Defence corporate planning over the three years of the Budget forward estimates.
4. Capability planning, resulting in the Defence Capability Plan (DCP) and giving guidance to the force modernisation plans of the Services (such as Army's Plan Beersheba and RAAF's Plan Jericho) and the equivalent plans of some Groups.
5. Integration planning, resulting in harmonisation of the DCP (soon to become the Defence Capability Investment Plan under FPR) and Service and Group modernisation plans, capability management plans and activities.
6. Specific joint capability management planning such as for ICT and surveillance where there is a joint capability coordinator.

Since 1997 longer term military strategic planning has been integrated with Defence strategic policy, while limited planning for operations is conducted at the strategic level, with majority of the operational planning effort conducted by CJOPS and HQ JOC. Since 2004 capability planning, at least for the DCP, has been the responsibility of the Capability Development Group. But the remaining three (preparedness, integration and joint capability management) now reside with JCC division under VCDF. So on balance this suggests that HJCC is the joint two-star officer best placed to be designated as the strategic

²⁰⁴ Chief of Defence Force Order of the Day, Chief of Defence Force Change of Command, 1 July 2014.

J5, even if JCC loses the responsibility for the sixth function, joint capability management. Designating HJCI (the new name for HJCC) as the strategic J5 as part of FPR implementation would formalise the approach mirrored in the strategic command of operations, where a joint staff leads an integrated military-civilian team across Defence to manage Defence's approach to preparedness and enterprise capability integration.

The FPR has highlighted the priority for VCDF and HJCI to focus on enterprise integration. A key issue will be how any proposed changes in enabling functions within Defence's business structures will be integrated into an effective mechanism for delivering Defence tasks (as outlined in Figure 1). The obvious senior officer to coordinate the joint implementation of the FPR is VCDF supported by a strategic J5 and other joint staff and with a particular focus on the VCDF's integrating role as JCA.

Our review of joint management of the current force has identified to us two types of joint capability management tasks, both of which are important, but which have significantly different characteristics and which should therefore probably be undertaken by different people. The first is enterprise preparedness and integration (points 3 and 5 on the previous page). This is a high-level strategic function which is reasonably static in its nature, although the challenges of enterprise integration and coalition interoperability are increasing. It is also concerned with balancing resources for various capabilities in the Services (both combat and enabling) and in the Groups. This responsibility should remain with VCDF and the JCI staff, working closely with the civilian side of Defence as well as the Services.

The second task is the management or coordination of specific joint capabilities, principally enabling functions (point 6 on the previous page); a task analogous to the capability management functions of the Services and Intelligence. This is a fast developing area, particularly as technology provides new joint opportunities. It requires deep knowledge of the individual capabilities and of the likely directions for their future development. It should be undertaken by specialist commanders and staff outside JCI division which currently has this role. This issue should be addressed in the implementation of FPR through determination of the final structure of VCDF Group and through the examination of headquarters functions.

Joint management of Defence's current force has been of particular importance while the ADF has been conducting sustained operations in the last few years. But as the ADF is now also looking to the future through the force structure review associated with the 2016 White Paper, an equally important function comes to the fore, namely designing and building the future Defence Force, the subject of the next section.

Preparedness, Capability Management and Integration Observations

- *Preparedness has been an ADF focus since 1988. Progress through the 1990s proved difficult, but since then it has been integrated into the resource allocation process, improved processes have been documented and information systems are being developed. It is still work in progress.*
- *The separation of enabling functions from the Services since 1997 has been a challenge for management of the current force. Designation of the Service Chiefs as Capability Managers, responsible to deliver their respective capabilities, has been Defence's principal response.*
- *As well, since 1997, some joint and civilian authorities have had capability management roles, although by 2014 DEPSEC I&S was the only non-Service Capability Manager.*
- *Defence became an integrated military-civilian organisation in 1997. Integration now has wider meanings including: integration of information in a networked ADF, integration of projects into an effective program, and enterprise integration of the joint force and enabling functions.*
- *VCDF is now the Joint Capability Authority (JCA), responsible for joint force integration, as well as being responsible for integration of military enablers. The remaining component of enterprise integration, for the corporate enablers, is the responsibility of the Associate Secretary.*
- *Defence also continues to use of the related term, interoperability, noting that joint interoperability between ADF systems is **essential**, while combined interoperability with other countries (particularly the United States) was also an **important consideration**.*
- *VCDF's responsibilities for enterprise integration are difficult to implement within a JCI organisation that also has responsibilities for some 14 diverse joint capabilities.*

Future Directions

- *In making the hard decisions on preparedness, priority should be given to analysis of reporting, including making joint and integration the prime decision-making lens.*
- *This study has identified two types of joint capability management tasks: enterprise preparedness & integration; and capability coordination of specific capabilities. The first is a key responsibility of VCDF (supported by JCI division) for military capabilities. The second should be undertaken by CJOPS and other specialist commanders and staff outside the JCI division.*
- *CJOPS could be given a role as a joint Capability Manager, including responsibility for some of VCDF Group's enabling functions, much like Joint Forces Command in the UK.*
- *HJCI should be designated strategic J5 (Plans) to lead enterprise preparedness & integration.*
- *The changes suggested in the two previous dot points should be considered in FPR implementation as part of the examination of headquarters functions.*
- *Figure 1 (on page 34) presents a model for Defence preparedness and integration, showing the 'value chain' from resources to the conduct of Defence tasks. It may assist Defence in making decisions in relation to current force integration and capability priorities.*

4. Designing and Building the Future Force

The Australian Government's national security and defence policies, its associated strategic guidance and the resources it is prepared to assign to the capital procurement program are the key drivers from which Defence designs the future force. Based on this design Defence then develops and executes major projects and other activities (such as restructuring in the Services) to build that force. In relation to building the force, successive governments and Defence have already devoted significant effort to the reform of building the force through capability development and procurement. So this section of the paper focuses on force design, noting that force design not only influences building the force, but may also provide input into Government's guidance to Defence.

Force design does not have a formal definition in Defence. It is a term that has gained some currency in recent years to describe the processes by which Defence conceives and produces a plan for its future capabilities.²⁰⁵ This description includes the processes of the Needs Phase of the Capability Systems Life Cycle for capability development which results in projects entering the DCP.²⁰⁶ But as DCDH 2014 notes "the planned force is developed, (only) in part, through a mix of individual projects that are entered into the DCP."²⁰⁷ Force design also includes capability planning of the individual Services and Groups. Force design is the major activity of a Force Structure Review (FSR) and since 2009 FSRs have been the primary mechanism of force design in Defence.²⁰⁸ That said DCDH 2014 also lists a range of other force design activities including concepts, experimentation and assessment,²⁰⁹ activities that have played a force design role in the past.

The history of force design is more complex and interrelated than the subjects already considered in this paper. So this section takes a slightly different approach. It starts with a more extended history of force design and then concludes with a discussion of current issues and suggestions for the future.

4.1 History of Force Design

The history of coordinated Defence force design in Australia began in the mid 1970s with the preparation of the *Defence Force Capabilities Paper*. The paper was coordinated by the one of the divisions of Defence's Central Office, Force Development and Analysis (FDA) Division, in consultation with the Services.²¹⁰ This and other similar mechanisms continued into the 1980s, with only limited involvement from the joint military staff which became HQADF in 1984. In 1989 then Major General John Sanderson noted that the joint staff available during this time was "inadequate for the task of providing a capacity for CDFS to fulfil his responsibility for the preparation of policy advice on force development

²⁰⁵ Guiding Principles for Force Posture Design, DSTO-TN-1221, Anthony Ween, Thitima Pitinanondha, Ivan Garanovich, Tim McKenna and Tim McKay, August 2013, p1.

²⁰⁶ DCDH 2012 and 2014, para. 1.2.2 a. and Figure 2.1.

²⁰⁷ DCDH 2014, para 1.5.2.

²⁰⁸ Ibid para 2.2.1.

²⁰⁹ Ibid Figure 2.1.

²¹⁰ Potted History of Capability Development Group since 1969, Defence internal website, sighted 11 February 2014.

... (and that as a consequence) ... a fractured and often acrimonious climate existed between the Defence policy staffs and between the Service Offices and the Centre.”²¹¹

The Australian joint approach to force design then effectively began with the formation of the joint Development Division in HQADF under General Sanderson in the following year, together with implementation of the 1987 White Paper and the more specific guidance given in Australia’s Strategic Planning in the 1990s (ASP 90). The establishment of Development Division also heralded a cultural change. General Sanderson and the then DEPSEC Strategy and Intelligence (Paul Dibb), under whom FDA worked, made a significant effort to convince the two organisations to work more collaboratively together, rather than use the previous adversarial approach. One of the authors, who worked in Development Division at the time, noticed the change, although FDA still performed a contestability function which grated with the military ‘can do’ culture.

ASP 90 defined eight Defence roles for the defence of Australia and an additional role related to activities in the South Pacific.²¹² From 1990 until 1996 the eight roles for defence of Australia were used as the basis for the force structure changes (including major projects) which were associated with FSR 91 and the 1994 White Paper, *Defending Australia* (DA 94). FSR 91 directed a reduction in the size of the regular ADF associated with the introduction of the Ready Reserve and with the civilianisation or commercialisation of many military positions as part of the Commercial Support Program (CSP). DA 94 proposed a review of Army’s force structure which became known as ‘The Army in the 21st Century’ (Army 21). This review was conducted in 1995.²¹³

During the period 1988-96 Defence used two principal tools to make the link between strategic guidance and the proposals for improvement to capabilities: concepts (based on each Defence role) which identified the ADF tasks needed to undertake that role ; and capability analysis to determine options to improve task performance. Beginning in 1988 four operational concepts (OPCONCEPTS) were developed, one overarching concept and one for each of the three environments.²¹⁴ But these environmental concepts “did not meet the requirements of the force development process for examining ADF capabilities.”²¹⁵ So instead from 1990, the ASP 90 roles were used as the subjects for each concept to ensure a more joint approach.

²¹¹ Report on the Structural Review of Higher ADF Staff Arrangements, June 1989, paras 2.10 -11. The full statement of para 2.11 is quite enlightening and is therefore reproduced in full below:

“As a consequence of these limitations, a fractured and often acrimonious climate existed between the Defence policy staffs and between the Service Offices and the Centre. Services Offices continued to pursue the development of their own policy and force structure requirements in what was seen as a virtual vacuum - despite the existence of broad strategic guidance. Much of the work was considered to be nugatory. The suspicion on the part of the Services was that the Central staff oversighted the process on the basis of an agenda which was not well informed and was partly hidden. The Central staffs saw the Services’ proposals as ill-conceived in terms of priorities and contrived from positions of self interest with a continued adherence to elements of the previous strategy of forward defence.”

²¹² The eight defence of Australia roles included: intelligence, maritime surveillance, maritime patrol and response, air defence, protection of shipping, offshore territories and resources, protection of assets and infrastructure, response to incursions onto Australian territory and strategic strike. The ninth was contributing to the national response to requests from South Pacific nations for security assistance, including incidents affecting the safety of Australian nationals. (Australia’s Strategic Planning in the 1990s (ASP 90), para 5.9)

²¹³ Horner (2001), p 92.

²¹⁴ A Potted History of Capability Development Group since 1969, an internal Defence document, p1.

²¹⁵ Defence Report 1989/90, p 24.

During the same period Defence used the output of these concepts to conduct joint capability studies to develop and assess capability options where deficiencies were identified. A significant example was the set of studies associated with surveillance to support air defence of Australia's northern approaches. These studies contributed to the decision in 1997 to go ahead with the Airborne Early Warning and Control (AEW&C) project, after years of debate about the capability in Defence.²¹⁶

In 1997 the Howard Government issued new strategic guidance through ASP 97, which confirmed 'defeating attacks on Australia' as the 'core force structure priority', but added two new tasks 'defending our regional interests', and 'supporting our global interests'.²¹⁷ The period 1997-2000 saw a move away from using concepts, to a focus on a military strategy (based on the three ASP 97 tasks) as the start point for force design. Even so there was still some concept work, which influenced the design of Defence's information capabilities, including COMAST's Decisive Manoeuvre and concepts developed by the information branch of Strategic Command Division. To test Army 21 concepts (modified by the Howard Government as the Restructuring the Army (RTA) program), the Army started an experimentation program in 1997 supported by DSTO, which informed Army's decision-making. In 2000 DSTO formed a joint experimentation branch to contribute to concept development and experimentation (CD&E) across Defence. During this period capability studies continued within ADHQ and (on behalf of ADHQ) in DSTO. The process used for these capability studies was outlined in an internal Defence guide, *The Capability Development Process: From Strategic Guidance to Specific Capability Proposals – A Summary*.²¹⁸

From 1988 until 1999 most Defence force design activity was devoted to implementing strategic guidance derived from previous white papers and strategic reviews. In 1999 the focus changed to using a new technique, Force Options Testing (FOT), which involved assessment of several future force options through assessments against a set of contingencies using a formal analytical method in a seminar war game.^{219 220} FOT and existing capability studies informed the capability sections of the 2000 White Paper, *Defence 2000 Our Future Defence Force* and supported the development of the first public DCP issued shortly afterwards in 2001. A significant increase in Defence funding as part of White Paper 2000 allowed a range of new capability initiatives including: three new air warfare destroyers, a better equipped and higher readiness Army, up to 100 new combat aircraft to replace the RAAF's F/A 18 and the F111, replacements for the RAN's amphibious ships and significant enhancement to Defence's joint information and intelligence capabilities.

²¹⁶ Interview with Dr Ian Brunskill who worked in Force Development and Analysis (FDA) Division, 31 January 2013.

²¹⁷ Australia's Strategic Policy, December 1997, p 29.

²¹⁸ *The Capability Development Process: From Strategic Guidance to Specific Capability Proposals – A Summary*, dated July 1998. The document was written and updated by Tom Ciesniewski, a member of the Capability Analysis Branch in FDA, from at least as early as 1992 (when one of authors left Development Division) and at least until July 1998, the date of the copy of the version available to the author. It had no official status, but was accepted by many in the capability development world as a wise guide to what should be done. Although the only available version of the paper is from 1998, the paper reflects the processes used in the early nineties as well.

²¹⁹ Systems Thinking and Systems Engineering for Defence Strategic Planning, Richard Hodge, Kym Hendrickson and Geoff Walpole, Presentation to a Panel Session at the International Council on Systems Engineering International Symposium 2001 (INCOSE 2001), 4 July 2001.

²²⁰ Guiding Principles, pp 7-8.

Force design processes used up until 2002 were described for the first time in a public document, the Capability Systems Life Cycle Management Manual (CSLCMM) published in that year. The document defined the capability systems life cycle in terms of five phases: Needs, Requirements, Acquisition, In-Service and Disposal, the definition still in use today. The Needs Phase, in which the initial processes of force design occur, was described as being the process of determining capability gaps using inputs from strategic policy, military strategy, analytical studies and joint military experiments. The principal output of the Needs Phase (jointly coordinated by Strategy and VCDF Groups) was the Defence Capability Planning Guidance (DCPG). The development of the DCP, the output of force design, was listed as part of the next stage, the Requirements Phase.²²¹ The CSLCMM described the various processes of capability development, and also included a host of hints on working these processes.²²²

The CSLCMM described Defence Capability Planning Guidance (DCPG) as the common frame of reference for consideration of capability related matters. It noted that the DCPG "identifies the principal operational effects delivered by each Defence capability and group's capabilities with related effects into domains...This approach departed from a single Service or environmental classification in preference to a joint approach that concentrates on outcomes delivered by a combination of functionally related capabilities."²²³ The DCPG dealt with domains such as maritime, land and littoral, aerospace, strategic strike, information and support to operations.²²⁴ DCPG assessments were produced from 2001 to 2003.²²⁵ The manual also described a four stage process of capability analysis by which capability gaps are identified and ways in which they can be reduced are determined.²²⁶ This process is very similar to process described in the internal Defence guide mentioned above.

After the September 11 terrorist attacks in 2001 Defence's capability focus shifted somewhat towards developing and implementing more short-term changes to Defence capability in response to current operational needs. FOT activities continued in the period 2001-06 and focussed on updates for the DCP in 2004 and 2006, and on supporting the related Defence Updates which were published in 2003, 2005 and 2007. Input to these FOT assessments was primarily from the Services (including their experimentation results).²²⁷

In the foreword to DCP 2004, then Defence Minister Robert Hill noted this plan of capital investment had resulted from re-balancing of capability and expenditure determined through an 'exhaustive' capability review in 2003, which took into account the changes in the strategic environment identified in Defence Update 2003.²²⁸ The 2006 DCP introduced less change. Its principal changes were to: add a small number of projects to take into account changes outlined in Defence Update 2005; update information on the expected life of existing equipment; and roll-on the plan to include two more years to 2016.²²⁹ Two

²²¹ Capability Systems Life Cycle Management Manual 2002 (CSLCMM), Nov 2002, Annex A to Chapter 1.

²²² Ibid, paras 2.4 and 2.12.

²²³ Ibid paras 2.36 - 2.37

²²⁴ Ibid, para 2.38.

²²⁵ Guiding Principles, p 10.

²²⁶ CSLCMM, paras 2.29 - 2.34.

²²⁷ Guiding Principles, p 12.

²²⁸ Defence Capability Plan 2004-14, Minister's Foreword.

²²⁹ Defence Capability Plan 2006-16, Minister's Foreword.

major force structure changes during the period 2001-2006 were the raising of a further two Regular infantry battalions and the purchase of C-17 heavy-lift aircraft to improve the deployability of the ADF.

Shortly after the first CCDG, then Lieutenant General David Hurley, was appointed in 2004, he produced the first Defence Capability Development Manual (DCDM) in February 2005. This manual replaced the CSLCMM and was updated by DCDM 2006 in February of the next year. DCDM 2006 described the updated processes associated with the new CDG. It gave a comprehensive description of the processes introduced by the Defence Procurement Review 2003, the 'Kinnaird Review'. In particular it described the Needs Phase in similar terms to the CSLCMM of 2002 but listed the process as including five steps including strategic priorities, concepts, capability goals, performance assessment and program development.²³⁰

The first two steps (strategic priorities and concepts) were listed as the responsibility of the Strategy Group. The third step, undertaken by CDG, was the development of the Defence Capability Strategy (DCS) which included capability goals, which sought "to describe, in specific and measurable terms, the operational effects the ADF would need to generate to meet its highest priority threats."²³¹ The next step was to conduct a Defence Capability Update which assessed the performance of current plans against these goals and identified adjustments to the DCP to best reflect strategic and financial guidance. This process (including FOT) was used to update DCP 2006 and provided a similar bridge between strategic guidance and the DCP that the capability analysis technique provided prior to 2002. DCDM 2006 defined capability analysis as the process of identifying gaps but only mentioned it once in the text, in terms of DSTO's role in participation in 'capability analysis workshops' to provide input to the DCS.²³² The 'effects-based' capability goals (although not specified in the document) are based on domains similar to those of the 2002 CSLCMM.²³³

Concepts re-emerged in 2002 when CDF Admiral Chris Barrie produced Force 2020 and the Australian Approach to Warfare (AAW). Force 2020 described three key future concepts – the seamless force, effects-based operations and network enabled operations (later termed NCW), all of which have continuing relevance to Defence today. AAW identified a series of key warfare attributes for Australia which continue to be listed in the latest Future Joint Operating Concept (FJOC) published in 2011. In 2003 CDF General Peter Cosgrove produced his Future Warfighting Concept (FWC 2003) which expanded on the ideas in Force 2020 and stated its purpose as being "to guide joint and single-service concept development and provide a basis for experimentation, in order to shape capability development decisions".²³⁴

²³⁰ Defence Capability Development Manual, 2006, Figure 1.

²³¹ Ibid, para 2.13.

²³² Ibid, para 7.18.

²³³ The 'effects-based' capability goals are defined, but not specified, in para 2.13 of DCDM 2006, but they are described in terms of the effects produced in the domains of intelligence, information, aerospace, land, maritime, strike and support in *Defence 2015* (pp 21-22), a draft unclassified Defence document prepared in early 2006, in the same year that DCDM 2006 was published. These domain descriptions are similar to those used in CSLCMM paras 2.36 - 2.38.

²³⁴ ADPP-D.02, Future Warfighting Concept dated 2003, p2.

In 2006 Defence issued the Strategy Planning Framework Handbook. The framework was to provide “a set of strategic-level documents and processes that are congruent, coherent and comprehensive ... by unifying the functions of strategy development, deliberate planning for operations and capability development.”²³⁵ The framework was planned to enable Defence to have, among other things, “a concept-led capability development process”.²³⁶ In 2007 CDF Air Chief Marshal Angus Houston issued the first iteration of the Future Joint Operating Concept (FJOC) which expanded on the efforts of the two previous CDFs and stated it was supported by additional concepts but described these as examining “**operation** in the three major combat environments”,²³⁷ a single Service focus, as distinct from the joint focus considering **effects into** these environments, described for capability goals in DCDM 2006.

In 2008 a review of ADF concept development in the previous decade by the US/UK/Canada/Australia/NZ Technical Cooperation Program (TTCP) noted: “Work was conducted predominately by the Single Services (in a Joint context), with Joint groups focusing on the over-arching and integrating aspects. An issue that soon developed related to the differences between and within the Services of how concepts were developed and how the results of the concept development work were reported. Thus, the purpose and inter-relationships of these concepts can prove confusing and even contradictory. The result is that while substantial work was completed, they have been separately focussed and are not necessarily able to be brought together in a congruent and coherent manner.”²³⁸

A 2013 DSTO paper (to which the authors of the current paper contributed) made similar comments about experimentation: “The value of the Service experimentation for joint force design is questionable because there was varying levels of joint oversight or consideration of alignment, cost constraints, potential efficiencies, affordability, or enablers. Joint experimentation was also undertaken from 2000 to 2005, but was never sufficiently aligned, focused or matured to have an impact on force design decision making problems.”²³⁹ For example joint experimentation was undertaken to test FWC 2003. But this concept was too high level to have a direct influence on force design.²⁴⁰

One other force design technique that emerged in the early 2000s was the roadmap. In 2003 Defence released the inaugural NCW Roadmap as a joint plan for implementation of NCW in the ADF. In 2005, the newly formed CDG expanded the process of developing capability roadmaps with the purpose of: providing an integrating view of capability; providing a stronger analytical basis; providing visibility of considerations and information to stakeholders; and providing a mechanism to examine the impact of changing strategic priority, funding and threats.²⁴¹ The guidance for these roadmaps, outlined in DCDM 2006, includes elements of the capability analysis processes outlined in CSLCMM and the guidance paper used in the 1990s.²⁴² But the 2013 DSTO paper notes

²³⁵ Strategy Planning Framework Handbook 2006, dated May 2006 p 2.

²³⁶ Ibid, p4.

²³⁷ ADDP D.3 Joint Operations for the 21st Century, dated May 2007, pp 2-3

²³⁸ Concept Development Best Practices, TTCP Document JSA-TP7-1 2008, dated Sep 08, p11.

²³⁹ Guiding Principles, pp 9-10.

²⁴⁰ Private Communication with Dr David Wood, DST Group, 15 July 2015.

²⁴¹ DCDM 2006, para 7.86.

²⁴² Ibid, para 7.93.

that there were “many challenges to implement these roadmaps. These included the skills and effort required from desk officers; and the maturity and awareness of strategic guidance and joint concepts.”²⁴³ The most effective was probably the NCW Roadmap, which was updated in 2005, 2007 and 2009 by the NCW Program Office within CDG.

In 2008 Defence commenced preparations for a white paper for the new Rudd Government. In a similar way to preparations for the 2000 White Paper, force design activity was conducted to support the paper’s development. The difference was the scale of the endeavour. It was based around only the second force structure review (FSR 08) in Defence history and was hailed as “the most comprehensive force structure analysis ever undertaken in support of a White Paper.”²⁴⁴ The most significant force structure initiative of this 2009 White Paper was the plan to double the size of the submarine fleet by procuring twelve new submarines. In FSR 08 similar assessment methods to the original FOT in 1999 were used together with results of studies and single Service experimentation focussed on key project areas.²⁴⁵

Following the 2009 White Paper, the 2006 Strategy Planning Framework Handbook was updated as the Strategy Framework 2010, the Black Review of the Defence Accountability Framework was conducted, and a Force Structure Development Directorate (FSDD) was established in the Strategy Executive to provide strategic guidance on matters arising from FSR 08. The strategy framework noted that Government directed that a white paper would be produced at intervals of no greater than five years. It noted that “between the releases of each new White Paper, the Defence Planning Guidance (DPG) is the Government’s classified defence planning document”.²⁴⁶ The DPG was to be produced annually and be considered annually by the National Security Committee of Cabinet. The DPG was to give guidance on a range of Defence activities including force structure planning and capability development. But it was also to give guidance on a range of activities beyond planning for the future force including preparedness, international engagement, resource planning and enterprise planning for Defence’s enabling functions.

In line with this guidance, the first DPG was produced in 2010. It provided direction for improving capabilities “in response to emerging challenges in space, missile defence and cyber security”.²⁴⁷ A DPG was also produced in 2012 with its key recommendations to be implemented in the Defence Corporate Plan 2012-17, which outlined Defence’s approach to both developing and sustaining the Defence organisation over a five year period; a wider scope but a shorter timeframe, and more focussed on management issues than the other DCP, the Defence Capability Plan.²⁴⁸

Strategy Framework 2010 also changed the way in which the Needs Phase of the capability life cycle was to be considered. Instead of the continuous step by step joint process used up until 2006 and detailed in both the strategy and capability development documents produced in that year, Strategy Framework 2010 introduced a new process to address the issue identified by both the 2008 Audit of the Defence Budget (the Pappas Review) and the

²⁴³ Guiding Principles p 10.

²⁴⁴ Defending Australia in the Asia Pacific Century: Force 2030, Defence White Paper 2009, p 58

²⁴⁵ Guiding Principles, p 12.

²⁴⁶ The Strategy Framework 2010, para 3-20.

²⁴⁷ Defence Report 2009-10, p 58.

²⁴⁸ Defence Report 2011-12, p 37.

Defence Procurement and Sustainment Review 2008 (the Mortimer Review) “that Defence’s strategy and its capability decisions needed to link more effectively in a transparent and auditable manner”.²⁴⁹

Strategy Framework 2010 proposed “an institutionalised FSR process”, operating within a “five year planning cycle for major Defence decisions”.²⁵⁰ In this process, in the intervening five years between white papers (and their associated FSR), FSDD was to conduct workshops and studies to “align the Capability Managers’ force modernisation and capability development activities with the strategic guidance provided by the White Paper and subsequent DPG.”²⁵¹ But it was to be only in the fourth year of this cycle, when the full FSR was conducted, that Defence-wide capability gaps and priorities for capabilities goals across the ADF and Defence were to be identified.²⁵²

Unfortunately, while defining the Needs process mechanisms, Strategy Framework 2010 was not as clear as previous strategy or capability development documents as to what constituted the components of the Needs Phase. The Needs Phase itself was only discussed briefly in three pages of Strategy Framework 2010 and it made the note that the Capability Managers (the Service Chiefs and DEPSEC I&S) would conduct their own gap analysis as an input to the FSR process.²⁵³ At the joint level, FSDD maintained a Force Structure Matrix (FSM) and conducted FSM workshops as initial preparation for the next FSR. However no joint force design studies, assessment or review activities (such as FOT) were conducted prior to the next FSR before White Paper 2013.²⁵⁴

The 2010 framework also noted that the FJOC, environmental (single Service) and enabling concepts would inform the next force structure review and that these concepts would be validated by experimentation, with joint and Single Service experimentation linked to develop “a shared vision for ADF’s future capabilities”.²⁵⁵ In March 2011, Defence released an unclassified version of FJOC 2030 with the task of describing the ways in which the joint force can achieve control and influence in various operating domains even as these change in response to a variety of political, technological and demographic factors.²⁵⁶ The concept notes that it retains elements of both the Australian Approach to Warfare (2002) and Joint Operations in the 21st Century (2007).²⁵⁷

By 2012 the decision had been taken to combine the environmental concepts and the enabling concepts into a single framework based on the DOEF terminology already being applied to preparedness. This joint concepts framework changes the maritime and aerospace concepts from describing how they **operate** in these environments to how the ADF **controls** these environments. This change is less clear with the land concept, which is described as covering the DOEF components of land combat, combat support and population centric operations. But still this DOEF framework is very similar to the

²⁴⁹ The Strategy Framework 2010, para 7.4.

²⁵⁰ Ibid, para 7.5.

²⁵¹ Ibid, para 7.8.

²⁵² Ibid, para 7.8.

²⁵³ Ibid, para 7.3 and Figure 15.

²⁵⁴ Guiding Principles, pp 12-13.

²⁵⁵ The Strategy Framework 2010, paras 3.35-40.

²⁵⁶ Future Joint Operating Concept 2030, dated 25 Mar 2011, covering page. The paper was released by HJCC, Major General Steve Day.

²⁵⁷ Ibid pp 3-4 and Australia’s Approach to Warfare pp 23 -24.

CSLCMM 2002 domains and the DCDM 2006 goals, all seeking to set Defence's thinking in terms of joint effects rather than considering operating environments independently.

No significant work on joint concepts using this framework has yet been undertaken. Instead the only joint concept produced recently has been a concept for the employment of the amphibious force. This internal Defence document makes an assessment of the capability against its role and tasks and suggests some minor changes to capability.²⁵⁸ However this joint concept work has been done after the major capability decision on the LHDs has already been made rather than doing it beforehand. The latter is the arena of force design, where the joint concept work in the early 1990s was done.

During the period 2010-2013 joint experimentation was also limited to one program on joint fires issues conducted with DSTO.²⁵⁹ At the same time significant single Service experimentation programs continued. In 2013 Defence (through JCC Division) established a Joint Experimentation Framework to guide a joint experimentation program. The framework is described as 'federated', with the policy and direction setting determined jointly, but with "the allocation of resources against priorities and the execution of experiments (remaining) with individual Services and Groups and with the individual Divisions within VCDF Group".²⁶⁰ Again, as yet no joint experiments have commenced under this framework.

In 2012 once again the focus of force design in the ADF shifted to preparation for the next force structure review (FSR 12), which had been brought forward with the announcement of a new white paper produced in 2013, a year earlier than originally planned. And in 2014 force design activity was also focussed on the FSR being conducted in preparation for the white paper being produced in 2016.

DCPs continued to be developed during the period 2009 to 2013. DCP 2009 reflected the strategic requirements outlined in the white paper published in the same year. DCP 2009 also promised to provide an electronic update every six months, with a particular focus on providing up to date information for industry.²⁶¹ The first online updates were published in February and December 2010 with no indication of any significant changes.²⁶² The 2011 update mentioned two process initiatives, one to reduce over-programming and one to ensure that future updates were more closely linked to the DPG process.²⁶³ The latest DCP was produced in 2012 and was reduced to covering a period of only four years. The aim was to give greater certainty to industry and resulted from consultation with industry. It also noted that a new document, the Defence Capability Guide, would be developed to provide more general industry guidance on projects being planned for the following six years.²⁶⁴

²⁵⁸ Concept for Employment of the Australian Amphibious Force, v 5.1, May 2014.

²⁵⁹ Coalition Attack Guidance Experiment (CAGE II) Final Report, 2013.

²⁶⁰ DEFGRAM 266/2013 dated 7 May 2013. A Joint Capability Instruction (JCI 13/2013) was issued in December 2013 to provide governance for a joint experimentation program in Defence.

²⁶¹ Defence Capability Plan 2009, Minister's Foreword.

²⁶² Defence Capability Plan 2009 (Update 2, 2010), Minister's Foreword.

²⁶³ Defence Capability Plan 2011, Minister's Foreword.

²⁶⁴ Defence Capability Plan 2012, Minister's Foreword.

At the end of 2012, CDG produced an update to DCDM 2006, the Defence Capability Development Handbook (DCDH) 2012. The handbook described the process changes to capability development that had occurred in the previous few years as a result of the 2008 Mortimer Review, the SRP and CDG's internal (and ongoing) Capability Development Improvement Program (CDIP).²⁶⁵ In relation to the Needs Phase it expanded on the brief description in Strategy Framework 2010 describing three tools to support the Needs Phase aspects of force design: gap analysis, the FSM and force structure workshops mentioned above. It stated that during the five year period between white papers a range of activities occur to identify capability gaps. These included experimentation, simulation, studies, and activities with allies or reviews of operations. But the DCDH also noted that "the majority of these activities are independent programs run by the Services and Groups" with coordination provided by FSDD in the Strategy Executive.²⁶⁶ The term capability analysis was not used in either Strategy Framework 2010 or DCDH 2012.

But all this activity was also impacted by a Government decision in early 2012 to impose additional savings on Defence, including the reduction in its APS workforce by 1000. This was duly implemented, but it is unclear whether, in the time available, Defence was able to implement these reductions in a way that best preserved its important enabling capabilities which are staffed by significant numbers of civilians. Recently the Secretary of Defence, Dennis Richardson, noted that such fiscal measures "not only led to a moving of the goal posts but to their cutting down for use as firewood."²⁶⁷

White Paper 2013 noted that FSR 12 "assessed capability priorities against the backdrop of Australia's contemporary strategic environment and Defence's budget position in light of fiscal realities (and) confirmed the need to deliver priority ADF capabilities within available resources in the near-term, while continuing to progress enabling capabilities essential to the ADF being a capable, integrated joint force."²⁶⁸ The paper gave particular emphasis to cyber capabilities and electronic warfare, including the procurement of twelve EA-18G Growler electronic attack aircraft. The 2013 White Paper also acknowledged that work to improve the links between strategy and capability that had begun with Strategy Framework 2010 would continue, as would implementation of defence capability and procurement reform.²⁶⁹ A new strategy framework handbook was planned to be published following the release of the 2013 White Paper²⁷⁰ and work on it did begin in Defence, including work to improve the strategy framework process, but the new handbook has not yet been produced.

In 2013 CDG commenced an initiative to use the DOEF framework to produce what it called Umbrella Operational Concept Documents (UOCD). The purpose of these UOCD is to describe how the ADF intends to fight in the future, to support an 'integration by design' approach to the development of future capabilities. CDG hoped that by using these documents, all project documentation will be developed with 'the same battlespace

²⁶⁵ DCDH 2012, Foreword. dated December 2012

²⁶⁶ Ibid, paras 2.4.2 – 2.4.6.

²⁶⁷ Secretary of the Department of Defence, Mr Dennis Richardson – Speech to ASPI Dinner, 12 November 2013 <http://news.defence.gov.au/2013/11/13/secretary-of-the-department-of-defence-mr-dennis-richardson-speech-to-aspi-dinner-12-november-2013/> as sighted on 4 February 2014.

²⁶⁸ 2013 Defence White Paper, para 8.3.

²⁶⁹ Ibid, para 8.4

²⁷⁰ Defence Report 2011-12, p 37.

in mind'. This initiative sought to balance joint versus single Service approaches to concepts noting that "this is a joint framework that recognises domain dominance by Services where appropriate and enables these core capabilities by optimising the 'glue' capabilities that enhance and force multiply the Australian Defence Force's capability."²⁷¹ Throughout 2014 CDG continued to develop this joint functional approach, with the documents being designated Integrated Operational Concept Documents (IOCD).

And also in 2014-15 there has been some progress in re-invigorating the joint concepts work within JCC, including development of a new joint concepts framework, a strategic guidance-based joint operating concept and functional-based supporting concepts.²⁷² Given the lack of progress in joint concepts in the last few years and the lack of resources available to develop them, the key issues will be whether implementing this new plan will be given the priority and resources to succeed; and whether these concepts will be effectively focussed on delivering an input into joint force design.

Using a functional approach, which includes the combination of joint and single Service concepts into a single joint approach, is following a similar path to the ADF's operational thinking in 1980s which saw all operations being joint, eliminating the concept of single Service operations. And it makes sense to consider all ADF concepts (which focus on force design for future operations) to be joint, in the same way that we consider all operations to be joint. Although this conceptual idea is quite old, as we've seen in this paper, sometimes joint proposals in the ADF take some time to implement.

In June 2014 CDG issued an updated Defence Capability Development Handbook 2014 (DCDH 2014). In line with its scope to provide guidance for the effective development of capability proposals, most of the changes in the document compared with the 2012 edition relate to the Requirements Phase. Since Strategy Framework 2010 has not been updated, it is not surprising to find little change in the chapter on the Needs Phase, Chapter 2. The most significant change is that the section on tools for the Needs Phase, mentioned earlier in this paper, has been deleted.

In late 2014 Defence issued the first chapter of a new Defence Capability Development Manual (DCDM 2014). The return to the 2006 nomenclature of a 'manual' rather than the later term 'handbook' is significant. While the handbook (DCDH 2014) is described as "a guide to the Capability Development body of knowledge and processes for Defence," the manual (DCDM 2012) issued policy which "all Services and groups involved in capability development are to apply."²⁷³ This added authority for the manual is reinforced by it being jointly signed by VCDF and Defence's Associate Secretary, with CCDG as their adviser and sponsor of the document.

The FPR report makes significant recommendations in relation to force design, in particular the establishment of a two- star Head Force Design (HFD) to lead a permanent joint force design team.²⁷⁴ But once the decision was made to strengthen contestability for

²⁷¹ Umbrella Operational Concept Documents (Initial Draft), Foreword by MAJ GEN John Cagliari, Head Capability Systems, dated 9 December 2013.

²⁷² Private communications with LTCOL Nick Floyd, Deputy Director Joint Concepts, JCC, March - August 2014.

²⁷³ DCDM 2014, pp ii and iii.

²⁷⁴ First Principles Review, pp 27-28.

the capability development by moving one of CDG's two divisions under the new DEPSEC Policy and Intelligence, CDG was no longer sustainable as a separate group and is to be disbanded.²⁷⁵

Dealing with the disbandment of CDG will involve significant challenges for Defence and for VCDF in particular, because VCDF inherits key roles of CCDG. The joint approach to designing and building the future force began by establishing the joint Development Division in 1990, when the Services' requirements staff were centralised in this organisation. CDG was the final stage of a 25 year joint requirements approach which the FPR notes has "improved elements of the capability development process".²⁷⁶ With FPR these requirements staff return to the Services. So there is a risk that aspects of the ineffective pre-1990 approach might re-emerge. But the new joint force design and integration arrangements for VCDF should mitigate this risk, if they are properly resourced and implemented using the lessons of CDG's experience.

In summary, joint force design since 1990 has involved two broad approaches: a series of FSRs and white papers every few years (more recently conducted in conjunction with each other), and some degree of continuing activity in the intervening periods between these major events. Each of the FSRs and white papers has been supported by a range of force design techniques, and in the years before 2000, this included drawing on joint force design work conducted prior to those events. In the period 2001-06 there was an extended period of continuing force design activity focussed on *Defence Updates 2003, 2005 and 2007*. From 2008 until the present the force design focus has shifted to supporting three combined FSR/white paper processes with little joint force design activity undertaken in between these major activities. Some more specific observations on the development of joint force design are listed below.

²⁷⁵ Ibid, Recommendations 1.10 and 2.1.

²⁷⁶ Ibid, p 32.

Designing the Future Force **Observations**

- *Assessments of Defence force design efforts up until 1990 concluded that single Service approaches, which had little joint involvement, were ineffective for joint force design.*
- *After 1990 the joint Development Division and ASP 90 allowed for a significant effort in joint force design including the force structure changes of FSR 91 and subsequent role-based concepts and capability analysis, which contributed to the 'knowledge edge' capability enhancements (including AEW&C) announced in ASP 97.*
- *The more externally focused strategic guidance in ASP 97, a focus on strategy (rather than concepts), and force options testing (FOT) contributed to the development of the 2000 White Paper and the subsequent DCP 2001. During the same period Defence took its first steps in joint and single Service experimentation.*
- *After the September 11 attacks in 2001 Defence's capability focus shifted somewhat towards more short-term changes to Defence capability for current operational needs. FOT activities continued in the period 2001-06, focussed on Defence Updates 2003, 2005 and 2007 and the related DCP updates in 2004 and 2006.*
- *Joint concepts re-emerged in 2002 with the publication of AAW and Force 2020 by CDF Admiral Barrie and were followed by subsequent CDFs with FWC (2003) and FJOC (2007).*
- *CSLCMM 2002 published force design procedures and was updated by DCDM 2006, which included changes that had resulted from the implementation of the 2003 Kinnaird Review and the establishment of CDG in 2004. A key focus of both documents was on the achievement of joint capability goals using a range of force design tools operating on a continual basis.*
- *Assessments of Defence work on both concepts and experimentation over the period 1996-2007 concluded that neither single Service nor joint activity were sufficiently coordinated to contribute to joint force design.*
- *In 2008 Defence force design focus shifted to the conduct of FSR 08 which was an input into White Paper 2009.*
- *Strategic Framework 2010 outlined a new force design approach - a five year cycle and limited joint involvement in the intervening years, instead leaving Capability Managers as principal drivers. As a result little joint force design activity was done through concepts, experimentation or capability analysis before FSR 12, while there were several updates to the DCP in the period.*
- *The FPR proposes a new two-star to lead a permanent force design team, a positive outcome, but also proposes disbandment of CDG, introducing some risk which needs to be managed.*

But what of the future? As mentioned at the beginning of this paper, the Government plans to publish its own white paper in 2016, including 'a clear military strategy and an affordable ADF structure'. The development of this paper is being supported by significant joint design activity, in the form of another FSR. And the recently released FPR provides guidance on the involvement of force design in the consideration of joint and enterprise enabling functions that support the ADF. These Government initiatives provide an important opportunity to make improvements to Defence's force design approach. But we should be careful to take account of the lessons of the past.

From our review of past Defence approaches to joint force design a number of key questions emerge:

- What should be the future role of joint force design?
- Given that role, what should be the suite of activities used in joint force design?
- What resources should Defence devote to such activities?
- What adjustments does Defence have to make in its culture to improve force design?

4.2 The Future Role of Joint Force Design

The 2013 DSTO paper on force design noted that budgetary circumstances facing Defence have some similarity to the situation in 1990-91, where Defence realised it was unable to fund the proposals outlined in the 1987 White Paper. The paper suggested that “similar analytic methods or approaches may be necessary for overseeing force design and the analysis that supports it.”²⁷⁷

But in contrast with that period, the preparedness to re-engage in operations is more important in the current unstable strategic environment. As well our strategic guidance is more complex than just defence of Australia. And finally the ADF is now a more tightly integrated joint force, and force design is often required to make a contribution to Government guidance rather than just to implement it. But all these contrasts just reinforce the point that political, bureaucratic and military judgement will not be sufficient to design the future force; a sophisticated analytical approach will be required as well.

A particular concern in the most recent approaches to joint force design has been the lack of any significant joint force design activity in the period 2009-11 between FSR 08 and FSR 12. Restricting the preparation activity in this period to independent gap analyses by Capability Managers, with loose joint coordination, was insufficient to prepare for an FSR seeking to build a joint and integrated force and to provide joint force design input into DCP updates between FSRs. Somewhat surprisingly Defence’s definition of capability helps the reinforce this point.

The Australian Defence Glossary defines capability as “the power to achieve a desired operational effect in a nominated environment within a specified time and to sustain that effect for a designated period”²⁷⁸; reflecting the joint effects-based nature of capability. But importantly Defence capability manuals from CSLCMM 2002 to DCDM 2014 have always added a second sentence to this definition, stating that capability “is generated by the fundamental inputs to capability (FIC)”²⁷⁹, which is of course the responsibility of Capability Managers supported by Defence Groups. This dual understanding of capability goes to the heart of an issue that has existed in force design activities since the late 1980s, namely the balance between a joint approach to gap analysis, concepts and experimentation versus a single Service approach.

²⁷⁷ Guiding Principles, p 15.

²⁷⁸ Australian Defence Glossary. and DCDM 2014, Chapter 1, Annex A.

²⁷⁹ CSLCMM 2002 para 1.3 and DCDM 2014, Chapter 1, Annex A.

Both these views of capability are important, the first sentence is the joint, integrated, effects-based, functional view. It looks at capability not as a system operating in a particular environment but as an effect in an environment that could be generated by systems operating in many environments. The second sentence is a Service and Group focus looking at the systems which we have to acquire, sustain and operate effectively, efficiently and safely. The latter issue is important, particularly in managing the current force where things may remain much as they are until capabilities are taken out of service.

But in considering future force design, priority should be given to the former, with Defence needing always to be prepared to consider new ways of doing things – ways that are more effective and efficient than the way we do things now. So as with any planning function, force design should be centralised to ensure all aspects of the enterprise are considered in setting the parameters for subsequent execution by Services and Groups.²⁸⁰

In the previous section on management of the current force we identified two important elements of joint management namely: command, control and integration at the enterprise level; and management of the increasingly important joint and integrated enabling capabilities. But for force design we must also take into account a third element of joint discussed in the first section on operations. At the tactical level joint arrangements have always included ensuring the capabilities of one Service are able to either apply effects into the operating environment of another Service to achieve the best outcome or provide support capabilities to enable another Service to achieve the best outcome in its operating environment. This third element of joint is particularly important in force design, in that it allows Defence to ensure that the joint priority of Service capabilities able to achieve effects in other environments is recognised, even if a Service itself puts a lower priority on that capability. And it allows fuller exploration of better ways to achieve joint effects from forces operating in all environments rather than just by means currently used, particularly where those current capabilities are operated by one Service or Group in one environment.

A joint approach to force design **between** FSRs is as important as a joint focus **during** FSRs to ensure that at all times Defence develops well researched proposals to the develop capabilities that are focussed on providing the most effective and efficient improvements to the priority joint capability gaps. Furthermore it is very difficult to do effective joint capability analysis during an FSR if Defence doesn't have an analytical capability operating between FSRs.

4.3 Force Design Activities

4.3.1 Force Design Approach

From 1987 to the present, Defence's force design efforts have centred on various, but similar, approaches involving combinations of techniques including: different forms of Government guidance, military strategy, concepts, FOT, FSRs, experimentation and

²⁸⁰ ADDP 00.1 Command and Control, 2nd edition, May 2009, para 2.10 notes that an underlying principle of delegation of command is centralised direction and decentralised execution. Major General Sanderson, in his 1989 Review of Higher ADF Staff Arrangements makes a similar point in relation to the military policy and force development.

capability analysis. All these techniques are incorporated in the framework known as Capability Based Planning (CBP).²⁸¹ ²⁸² ²⁸³ So we would argue that Defence has been trying to implement forms of CBP over the years with various degrees of success at various times. Part of the problem has been achieving a balance between the contributions of military and policy expertise on the one hand, and of analysis on the other. In dealing with some of the specific short term problems in the period from 2002 until recently, the former can often be close to sufficient. But to examine the complex Defence system being applied to a wide range of future uncertain tasks, an analytical approach (such as CBP) becomes more critical. Figure 2 (on the next page) is a Generic Process Chart of Capability-Based Planning produced by a working group of the Technical Cooperation Program (TTCP)²⁸⁴.

Although this model seems quite complex at first sight, the underlying force design processes are quite simple and can be reduced to four steps:

1. The first step is to advise Government and gain its guidance on national strategic and defence policy, and national strategy. This guidance is given in white papers and other strategic updates, both classified and unclassified. The output of this step is a set of Defence tasks, the restraints on those tasks and the resources available to implement them.
2. The second step is military guidance, ultimately from CDF, on how the future ADF will conduct defence tasks. This guidance includes military strategy, scenarios and concepts (based on joint functional approaches); and experimentation to validate these concepts. The outputs are joint Defence goals with sufficient detail to enable analysis of the ADF's gaps in capability to undertake those goals.
3. The third step is joint gap analysis which includes FSRs, analytical studies, FOT, experimentation, operational lessons learnt, exercise reports and current capability reports. CDG's IOCD and its earlier work on roadmaps also appear to fit into this category. The outcomes of this step are priority capability gaps and options to address these gaps, including sufficient guidance (such as Defence Planning Guidance or the earlier Defence Capability Planning Guidance) to enable the development of the DCP.
4. The final step is the development and update of the DCP, which involves applying capability guidance to a program with financial and procurement constraints, that also needs to consider interdependencies between projects.

²⁸¹ The Technical Cooperation Program (TTCP), TTCP Technical Report: Guide to Capability Based Planning, October 2004.

²⁸² Capability-Based Planning for Australia's National Security, Leung Chim, Rick Nunes-Vaz and Robert Prandolini, Security Challenges, Vol. 6, No. 3 (Spring 2010), pp. 79-96.

²⁸³ The Technical Cooperation Program (TTCP), TTCP Technical Report: Analysis Support to Strategic Planning v2, October 2014.

²⁸⁴ TTCP Technical Report: Guide to Capability Based Planning, October 2004. Figure 1

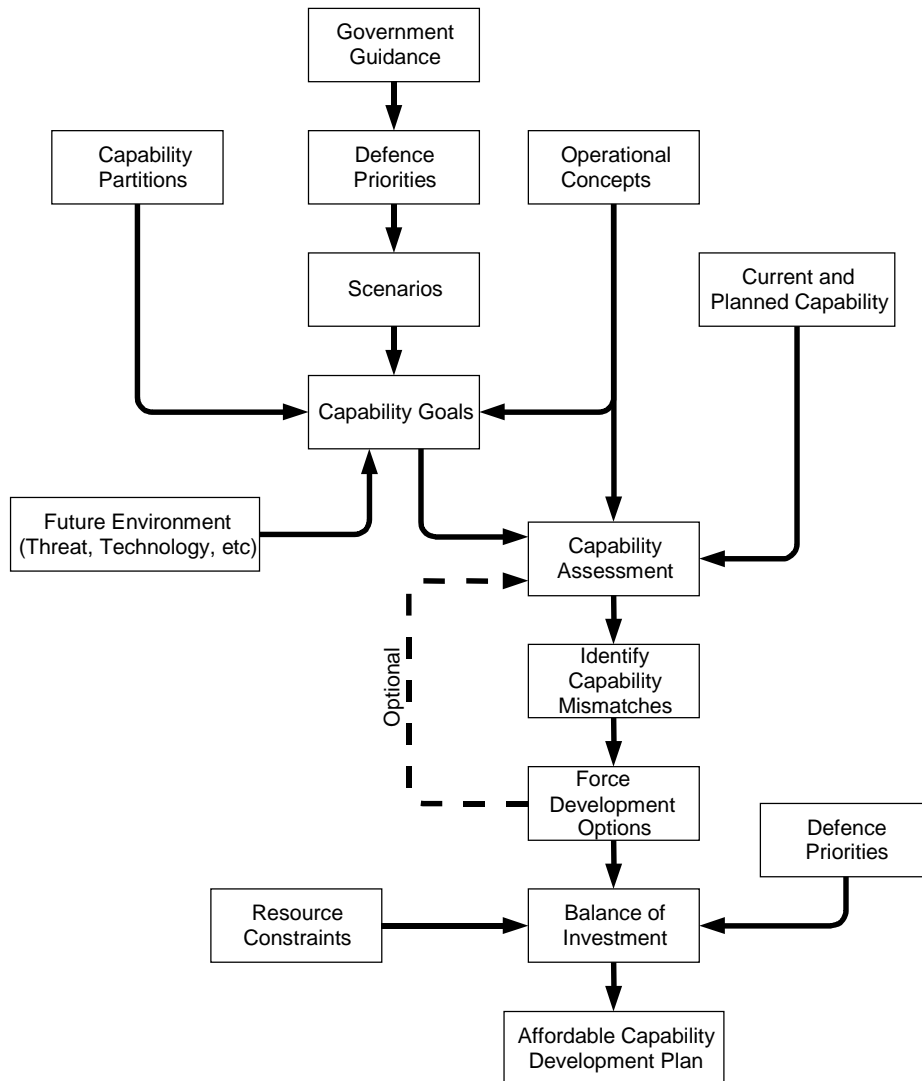


Figure 2. Generic Process Chart of Capability-Based Planning.

For single Service force structure issues, such as the number and type of infantry battalions in the Army, steps one and two as stated above, are still valid. And the third is also still valid except that the outcome is a plan for change within the Service, such as the Restructuring the Army program in the late 1990s and the more recent Plans Beersheba (for the Army)²⁸⁵ and Jericho (for the RAAF)²⁸⁶. These force structure plans then usually influence a number of projects in the DCP under step four.

One point to be emphasised in a joint force design approach is the need to use effects based functions as the basis for identifying new ways to undertake Defence tasks and as a means of identifying capability gaps. The discussion in the previous section associated with Figure 1 in relation to managing the current force is equally, and even more so, applicable to force design. There are several reasons for this:

1. Simply seeking to apply single Service or individual Group capabilities to achieve an effect in relation to Defence tasks, without considering how they can be linked into common joint functions, runs the risk of becoming stuck in a replacement syndrome for capability development.
2. The basis of any systematic analysis of deficiencies must start with a description of how Defence will conduct its tasks. Current and recent operations have been joint, and it's likely that future operations will be similarly so and therefore tasks need to be examined through the lens of a joint functional framework.
3. Operational joint functions such as air and sea control, are based on well proven doctrine and theory (both environmental²⁸⁷ ²⁸⁸and joint²⁸⁹ ²⁹⁰), and conform to the FJOC 2011 concept of seeking control of the environment and an adversary. They are also intrinsic to the conduct of operations in our littoral environment, as practiced by General MacArthur in his 'island hopping' campaign of World War II.
4. To determine and address priority deficiencies in enabling capabilities, Defence needs to define the joint operational approach to be supported by these capabilities and approach the design of these often scarce capabilities in a joint way. The US has long used the term 'focused logistics' to articulate the need for effective but efficient support from this enabler.²⁹¹ Similarly for information capabilities to be most effective and most efficient, Defence uses operational architecture (graphical representation of joint tasks, to define information requirements for individual systems. It is equally possible to scale such architecture up to operational functions.²⁹² A functional approach is needed to design 'focused joint enablers'.
5. And finally, integration of the ADF will be achieved most effectively if the nature of integration can be determined for the joint functions that the ADF needs to perform in the tasks which Peter Jennings, the Head of the Australian Strategic Policy

²⁸⁵ Plan Beersheba – Army's future structure, <http://www.army.gov.au/Our-future/Projects/Plan-BEERSHEBA>, last updated 29 May 2014.

²⁸⁶ Launch of Plan Jericho, Defence Media Release 23 February 2015.

²⁸⁷ Maritime Strategy and the Nuclear Age, Geoffrey Till, St Martin's Press, New York, 1984.

²⁸⁸ The Air Power Manual, AAP 1000–D, Sixth Edition, 2013, p 46.

²⁸⁹ Military Strategy: A General Theory of Power Control, Rear Admiral J.C. Wiley, Australian Naval Institute Press 1967, p.44.

²⁹⁰ Thinking About Warfare, Lieutenant General Philip D. Shutler, USMC (Ret), US Marine Corps Gazette, Nov 87, pp.18-26.

²⁹¹ Joint Vision 2010, Focused Logistics, a Joint Logistics Roadmap, US Joint Chiefs of Staff, 1997.

²⁹² An Effects-Based Approach to Designing an Effective Networked ADF, T.J. McKenna, proceedings of the Systems Engineering Test and Evaluation Conference, September 2007 (SETE 07).

Institute (ASPI), described as the “irreducible core tasks” we must perform without allied assistance in defence of Australia and in our nearer region”. Jennings then poses several questions, which if answered, he believes would help provide a convincing explanation of how the ADF fights as an integrated organisation. One of his questions about the amphibious capability has at least in part been answered by the recent joint amphibious concept work, but we are not aware of any joint studies which address his other four capability questions, all of which he notes are “easy to ask but difficult to answer.” These four questions relate to joint operational effects-based functions (sea, land and air control and operations) and enabling functions (joint fires and situational awareness).²⁹³ We believe that concepts based on a joint functional framework will be the first step in answering these questions. Experimentation to validate these concepts and capability analysis (including IOCD) to identify capability gaps would complete those answers.

So to implement this force design approach, there are three activities which we believe could be used more effectively than is currently the case: developing concepts, conducting experimentation and undertaking capability analysis. As discussed above the joint use of concepts and experimentation in force design has had a chequered history. Concepts made their most notable contribution in the early 1990s to force structure decisions in relation to direct defence of Australia. The major force design contribution of experimentation was to assist Army resolve the difficult questions it faced after the ARMY 21 study. Given the time and resources involved in these two techniques, their use in future force design needs careful consideration.

But even with the best approaches to concepts and experimentation, there is still a need to undertake capability analysis of a range of inputs including strategic guidance, the tasks identified in concepts, the results of experimentation and other evidence both from operations and from assessments of the current force. From this analysis Defence can then derive the broad capability options that may include a project or projects in the DCP and/or other changes to the structure of the Services and Defence Groups.

4.3.2 Concepts

In the late 1980s Defence found that to achieve improved joint thinking on future force design, the focus for concepts had to be on how the ADF would perform joint tasks, not on any current operating component of the force. So in the period 1990-95 concepts contributed to joint force design by providing a joint military framework and guidance for

²⁹³ Jennings four questions are listed below, with our additions to relate them explicitly to DOEFA added in bold:

- How will the Joint Strike Fighter operate with Army's deployed LAND 400 vehicles **to achieve effective control of the land environment?**
- How will Navy's Air Warfare Destroyers operate with the JSF in a forward-deployment scenario **to achieve effective local air control and to provide joint fire support to land forces?**
- What are the integration capabilities required to provide appropriate targeting information for the many capable new weapons and platforms coming into service **so that they can achieve effective joint fires capabilities against targets in the sea, land and air domains?**
- How will our future SEA 1000 submarines operate with the P-8 and Triton capabilities **to conduct effective surveillance and contribute to effective (surface and sub-surface) sea control?**

Integration, Strategy and the ADF, Peter Jennings, The Strategist ASPI Blog, 6 Mar 2015.

capability analysis to provide options for future capability planning.²⁹⁴ But from 1996, despite a succession of high level joint concepts and single Service concepts having been produced, little more detailed lower level joint concept work was done of the sort that might inform force design.

Defence's new joint framework using a functional approach is a start to replacing single Service concepts with ones based on joint functions to inform the joint force design process. If concepts are to inform the design of the force for future operations, and these operations will continue to be 'inherently joint', then it seems logical to conclude that concepts to inform design of the future force too should be 'inherently joint'. This statement does not imply that all concept work needs be joint. Only that concept work associated with force design should be joint. Single service concept work on lower level tactical issues is still required.²⁹⁵ The challenge now is to start producing some concepts which are useful in informing joint capability gap analysis and capability development in an environment where there is limited expertise to undertake such activities and where Defence still has the cultural propensity to favour and resource single Service concepts over joint ones.

The recent joint amphibious concept work, although conducted later in the capability systems life cycle, offers some pointers. Firstly the amphibious task is clearly of high priority at both the joint level and for the two Capability Managers principally involved. Secondly the task is well bounded and deals with a practical problem, where a resolution is needed quickly. As a result appropriate resources and expertise have been made available and the results have been reviewed at the appropriate level and endorsed for further action.

To ensure success with the new joint approach to concepts for force design, Defence will need to be selective in its efforts to commence this conceptual work. As with any FSR, we would expect the latest FSR associated with the 2016 White Paper will result in some capability questions that need further research before capability gap analysis can be undertaken. Continuing rapid ICT developments are likely to suggest new threats and potentially novel tasks, which will require new thinking on how Defence achieves results in the cyber domain and in the use of ICT to support its impact in the physical domains. Focussing on a small number of joint areas such as these for force design concept development should give a greater chance of success than to seek to cover a larger number of areas more thinly. There will need to be close coordination between these force design concepts and the IOCD activities initiated by CDG and now presumably to be continued within VCDF Group. Such coordination would be simplified if both activities were conducted within VCDF's force design division. Once these force design concepts have been completed one important way of testing them will be experimentation.

²⁹⁴ Operational Concepts for ADF Amphibious Capability, Ian Brunskill, Ase Jakobsson and Thomas Keen, DSTO-CR-2013-0094, p 2.

²⁹⁵ As with doctrine for current operations, there is now a large body of joint doctrine. But equally there is still significant single Service doctrine to cover the many lower level tactical tasks which are principally single Service in nature. In the same way lower level single Service concept work is appropriate, particularly associated with systems already identified for procurement by a single Service.

4.3.3 Experimentation

Experimentation is a most resource intensive activity. It potentially involves simulations, war games, command post exercises and field exercises.²⁹⁶ As with concepts, in the last fifteen years significant effort has been put into single Service experimentation, with only limited effort in the joint arena. And, as discussed earlier in the paper, unfortunately neither form of experimentation has had much impact on joint force design. But concepts need validation, since by their very nature they discuss an uncertain future. And experimentation, if properly managed, has demonstrated the ability to undertake that validation. So again, as with concepts, there have been recent efforts to re-invigorate joint experimentation. This new approach sees the program operating in a 'federated' manner with resource allocation remaining with Services and Groups. Such an approach runs the risk of making it difficult to gain the resources, particularly Service personnel, to conduct priority joint experimentation for force design.

Within this federated construct the best short term approach to gaining the resources to undertake priority joint experimentation is in areas which the Services also rate as a high priority. One obvious candidate for such experimentation would be the amphibious capability, in particular since it has been the subject of recent joint concept work, some of which may be in need of validation by experimentation.

However in the longer term, for joint experimentation to be a continuing feature of joint force design, there will need to be a more effective method of accessing resources supported by the cultural readiness to allocate joint activity appropriate priority. Furthermore experimentation is most often conducted as part of a 'campaign' to answer important capability questions involving a range of analytical techniques, where judicious use is made of experimentation.²⁹⁷ So before we address the question of resources for force design as a whole, we need also to examine the place of the final analytical technique we wish to consider in this paper, capability analysis.

4.3.4 Capability Analysis

It is interesting to follow the use of capability analysis (and the use of the term) through the history of force design discussed above. In the 1990s capability analysis was an important tool in deriving capability gaps through the conduct of studies to determine the ability of the ADF to implement strategic guidance through the tasks derived from military strategy and operational concepts. These studies would then assess options to address these gaps. And the process of capability analysis was laid out in both an internal Defence document in the 1990s²⁹⁸ and in the 2002 CSLCMM.²⁹⁹ From 1999 to about 2007 specialist Defence analysts were involved in the related processes (for example FOT) to bridge the gap between strategy and capability, but with few formal joint capability studies being conducted during this period. DCDM 2006 defined capability analysis and

²⁹⁶ Guide for Understanding and Implementing Defense Experimentation (GUIDEx), Version 1.1, February 2006, p viii.

²⁹⁷ Ibid p viii.

²⁹⁸ The Capability Development Process, 1998.

²⁹⁹ CSLCMM, paras 2.29 - 2.34.

included some aspects of the capability analysis technique in its guidance for roadmaps.³⁰⁰ But it only referenced capability analysis directly as a DSTO technique in support of force design.³⁰¹ From 2008 analytical involvement was largely restricted to the FSRs prior to White Papers 2009 and 2013. Neither the 2010 Strategy Framework, nor the subsequent DCDH (2012 and 2014) nor DCDM 2014 mention capability analysis.

The term capability analysis is still used to describe the four analytical teams (one for each of maritime, land, air and joint) in the Capability Investment and Resources (CIR) Division in CDG, which conduct analysis of DCP major project paperwork prior to government approval in the Requirements Phase. This function was first performed by FDA at least as early as the 1980s. Similarly DST Group uses the term to describe the branches of its Joint and Operations Analysis Division.

As part of the FSR associated with the 2016 White Paper, it will be important to again conduct analysis on a range of capability issues, including on the questions raised recently by the Minister for Defence on the new submarine capability.³⁰² It would be logical to use a functional framework as the basis for analysis during this FSR.

But a key improvement that is needed is to re-introduce more permanent arrangements for centrally directed capability analysis between white papers and FSRs, rather than just the current coordination arrangements pulling together Service and Group programs. Many capability questions on complex matters require more effort than just analysis associated with FSRs held every few years. And for effective joint force design these issues need to be approached from a joint and enterprise perspective, as Defence has already proposed for all Defence decision-making.

Such improvement in joint force design will be limited until Defence puts the necessary resources into force design by establishing a permanent joint force design team. Such a team will need expertise in the range of tools for effective force design and should undertake continuous joint force design activities, both to address urgent force design questions and to ensure that Defence is jointly prepared for the next FSR. This team will need to be supported by an improvement to Defence's working culture in relation to force design, to enable a joint approach to force design across the organisation.

4.4 A Joint Force Design Team

Noting the challenges of joint force design in the past, it's unlikely to get any easier in the future. Force design activities in the last few years have not been helped by the need to build FSR teams in 2008 and 2012 from scratch. And with Defence undertaking another FSR in 2014-15 this has again been the case. So it is critical that in the future this continuous process of force design be managed on a permanent basis at the joint level. The best way to design an organisation is to consider the tasks it needs to perform. In the case of force design these tasks are the four steps of the CBP outlined earlier in this section of

³⁰⁰ DCDM 2006 para 7.93.

³⁰¹ Ibid para 7.18.

³⁰² Minister for Defence, Speech to the Australian Strategic Policy Institute, 9 April 2014.

the paper, namely advising on national policy, providing military guidance (including military strategy), conducting gap analysis for planning guidance, and developing the DCP together with Service and Group plans.

In a separate internal Defence paper we examined a number of options for an appropriate joint force design team within Defence based on the existing teams within the organisations headed by VCDF, Deputy Secretary Strategy and CCDG.³⁰³ These options all involve an increase in resources to this function and range from making no change in responsibilities to giving VCDF the lead in joint force design. One important consideration was defining the extent of joint force design in Defence. We are strongly of the view that joint force design must not only be considered as the direction which results in an effective DCP but also as the direction to the Services and Groups in their modernisation plans. All these plans contribute to the overall Defence capability. With this joint and enterprise approach to force design, we believe that VCDF, as CDF's deputy and Joint Capability Authority, is therefore best placed to lead force design. The FPR has recommended VCDF be responsible for force design and that this function be the responsibility of a new two-star, Head Force Design (HFD), reporting to VCDF.

But VCDF has other important and time consuming responsibilities for operations and management of the current force. While some of the current management functions could be re-assigned or delegated, VCDF cannot and should not avoid having significant oversight of these functions, admittedly assisted by a joint staff as we recommended earlier in this paper. We propose that HFD be appointed the strategic J8, with the responsibility to assist VCDF in the planning and execution of force design. HFD would lead a permanent force design process end-to-end, with particular responsibilities for the last three steps of the force design process, namely military guidance, gap analysis and capability planning. Responsibility for the first step, national strategy would reside with DEPSEC Policy and Intelligence (currently Strategy Executive). This oversight role by VCDF, supported by HFD, is similar to the arrangement recently specified for capability development in the DCDM 2014. DCDM 2014 is jointly issued by VCDF and Defence's Associate Secretary, the Chief Operating Officer. On the front page of DCDM 2014 both these senior officers note that they have "authorised this manual on advice from the Chief Capability Development as our principal adviser on all aspects of unapproved major capital investment program."³⁰⁴ Given the integrated nature of Defence there would be value in a similar arrangement for force design, with HFD as the principal adviser to VCDF and Associate Secretary on this function.

The documentation of Defence's approach to the Needs Phase of the capability life cycle through Strategy Framework 2010 is in need of an update. In the short term, the development of the new DCDM 2014, which includes a chapter of the Needs Phase, provides an opportunity. Rewriting this chapter to outline an improved force design process and give guidance for its implementation would be an excellent first step in achieving improvement. Subsequently one would expect an update to the Strategy

³⁰³ Considerations for Enhancing Joint Command Arrangements In Defence, Tim McKenna, Tim McKay and Todd Mansell, DSTO Discussion Paper, September 2014.

³⁰⁴ DCDM 2014, p i.

Framework, probably as part of the new arrangements for the Associate Secretary to implement enterprise planning.³⁰⁵

The members of a permanent force design team (both military and civilian) will need to have the appropriate competencies. Effective development of the JPME being undertaken by ADC, and supported by this paper, is the best means for ensuring that this important competency is gained by relevant officers and officials.³⁰⁶ Such education would also be an important step in building the necessary improvements in relation to force design.

4.5 Culture in Defence Force Design

Defence is currently implementing a major cultural change initiative outlined in its 2012 publication, *Pathway to Change: Evolving Defence Culture*. This publication states that Defence has challenges that require Defence to be “even better at our approach to work and in our dealings with each other.”³⁰⁷ Most of the initiatives in this cultural change program deal with overcoming failings in the second aspect of culture ‘dealing with each other’. But it also identifies cultural change is needed in the ‘approach to work’, particularly associated with implementing SRP and associated initiatives. It is in Defence’s approach to force design ‘work’ in particular that we believe cultural change is needed.

In relation to a better Defence approach to work *Pathway to Change* states that “our speed, discipline and clarity on operations needs to translate into all domains of our work” and that “preparedness, capability development and support need to be as highly valued as operations” with the aim of working together so that Defence delivers “greater overall success than we would working individually as Services and Groups.”³⁰⁸ Since leadership is key to shaping culture³⁰⁹, *Pathway to Change* promises that Defence “will develop and encourage a pervasive jointery across our senior leadership”³¹⁰ and lists a key action for “all Colonel/EL2 equivalent and above to work with jointery and integration as their prime decision-making lens (rather than Group or Service-specific).”³¹¹

An organisation's culture can be expressed through “what is done, how it is done, and who is doing it”.³¹² As discussed earlier in this paper, in the last sixteen years the ADF has had plenty of opportunities to ‘do’ joint operations, supporting the development of a joint operational culture. In the management of the current force we note that both a joint culture and strong single Service cultures are needed, and this relationship is playing itself out in doctrine, training, preparedness and capability management. In force design a strong joint culture is particularly important to support the centralised force design

³⁰⁵ First Principles Review, Recommendation 1.17.

³⁰⁶ Discussion with LTCOL Nick Floyd, 29 October 2014.

³⁰⁷ *Pathway to Change: Evolving Defence Culture*, 2012, p1.

³⁰⁸ *Ibid*, p3.

³⁰⁹ Communication with Dr Irena Ali (a DST Group sociologist) in January 2015, where she stated “research into organisational culture seems to indicate that it is shaped primarily through four means: leadership, vision, values, and communication”.

³¹⁰ *Pathway to Change*, p5.

³¹¹ *Ibid*, p13.

³¹² Farmer, D.W. (1990). Strategies for change. In D.W. Steeples (Ed.), *Managing change in higher education* (pp. 7-18). New directions for higher education, Vol. 71. quoted in *Organizational Culture and Institutional Transformation*. ERIC Digest ED464521, 2001 p 2. <http://files.eric.ed.gov/fulltext/ED464521.pdf> sighted on 12 January 2015.

approach necessary to ensure that the design of the future force is not simply based on single Service and Group studies and proposals. However in force design the opportunities to undertake a joint approach have actually decreased in recent years, making the development of such a joint force design culture much more difficult.

Regular joint force design activities (concepts and analysis) were undertaken in the 1990s, culminating in the FOT work to support the 2000 White Paper. From 2001-2007 regular activities continued, admittedly only on a lesser scale, to support the Defence Updates in that period. But from 2008 to the present significant joint force design activity has only occurred when a FSR was conducted, with little activity in between. From 2007 until just recently subordinate concept work focussed on Single Service concepts, while since 2009 between FSRs, gap analysis was also confined to the single Services and Groups. Such an approach means that the three Services are approaching force design very differently, with limited understanding of each other's approaches and, most importantly, without any effective joint exploration of options involving doing things differently. With such little regular joint force design activity being done, it is extremely difficult to develop and maintain a joint or whole of Defence force design culture. And there is no evidence that such a culture exists in any strength.

This paper recommends re-introducing more continual joint force design work, led by a permanent joint, integrated force design team under the direction of VCDF. Such a work program provides the opportunity to improve a joint cultural approach to force design, but this objective needs to be a specified goal of the program. This should be seen as an important element of Defence's wider efforts to use jointery and integration as the prime decision-making lens, as part of the *Pathway to Change* reform. Improvement in joint force design culture would also be aided by incentives for joint and integrated behaviour across Defence in the conduct of this joint force design activity and through the implementation of JPME.

The FPR proposes that a force design team under HFD reside in VCDF Group. So the team will greatly aided by the increased authority of VCDF post-FPR. But it will also need to be supported by the civilian side of Defence, including the new Policy and Intelligence Group and DST Group, and by an improvement to Defence's working culture in relation to force design, to enable a joint approach to force design across the organisation. This improvement in culture will be aided by the FPR's implementation proposal to that Defence creates a culture where corporate behaviour is valued and rewarded.³¹³

³¹³ First Principles Review, Recommendation 4.7.

Force Design
Future Directions

- *Defence capability is the power to achieve an effect in an environment by forces operating in many environments. Joint force design should be about the full exploration of ways to achieve joint effects from forces operating in all environments rather than just by current means.*
- *Joint force design should also ensure that the joint priority of Service capabilities capable of achieving effects in other environments is recognised even if a Service itself puts a lower priority on that capability.*
- *Joint force design between FSRs is also important to ensure that at all times Defence develops well researched proposals for capabilities that are focussed on providing the most effective and efficient improvements to priority joint capability gaps.*
- *Defence should better apply the Capability Based Planning (CBP) methodology to force design (Figure 2 on page 55) with improved use of concepts, experimentation and capability analysis.*
- *Concepts developed for force design should be based on joint functions and focussed on priority areas; such priorities could be achieving effects in the cyber domain and the application of ICT to physical domains.*
- *Experimentation requires significant resources and these resources currently reside with the Services. In the short term, to access these Service resources, assessing well developed joint amphibious concepts appears a good subject for joint experimentation. In the longer term joint experimentation will need to effectively access resources.*
- *More permanent arrangements for jointly directed capability analysis between FSRs need to be established. A permanent joint force design team should be established to conduct force design activity between FSRs and to better prepare for FSRs in support of white papers.*
- *The force design team should be led by VCDF, supported by HFD as the strategic J8. Additional resources will need to be assigned to this team.*
- *Team members (both civilian and military) will need appropriate competencies developed through the JPME and should be supported by a stronger joint force design culture as part of the Pathway to Change joint leadership reform.*
- *Such a joint force design culture will be greatly aided by a well-led and supported force design team, leading the conduct of regular force design activities, with incentives for joint behaviour.*

5. General Observations on Joint

Based on this review of Australia's joint approach to operations, management of the current force and designing the future force, what more general observations might we make about this approach?

Navy, Army and Air Force form the basis of Australia's Defence capability, irrespective of how this capability is employed. And this is unlikely to change any time soon. There will always be a need for specialisation to achieve the required level of professional mastery across the large number of activities that Defence is required to undertake. Equally apparent, however, is the move towards joint action requiring the integration and coordination of elements of the Professions of Arms that have until relatively recently been

operating largely independently. The drivers for this move towards joint include the increasing need for greater efficiency; the desire for finer control over the application of lethal force; and the requirement for the military to be employed in an ever increasing range of missions. A joint approach involving the creation of new capabilities through the synergistic use of separate Service capabilities provides Government with increased flexibility and a more agile Defence capability.

There is an Australian approach to joint and it has been evolving for over 50 years. We can summarise Australia's joint approach in a few sentences:

All operations are planned and conducted by CDF, CJOPS and other joint commanders, supported by joint staff. Service combat capabilities are integrated as a joint force to provide the best coordinated effects into the sea, land and air environments. These combat elements are supported by enablers from all Services and by joint enablers, both of which often include significant numbers of Defence civilians. Current Defence capability is managed by the Services with some enablers managed by joint or integrated civilian-military groups. VCDF oversees these arrangements to ensure preparedness of the ADF as an integrated, joint force. VCDF also oversees the joint design and development of the future ADF, but again with significant involvement of Defence civilians. Australia's joint approach is linked to an integrated civilian-military Australian Defence Organisation.

The authors suggest that joint is underpinned by the following five key principles:

1. **Operational requirement.** Joint is inherently linked to operations; it draws its legitimacy through the need to act jointly on ADF operations. Unlike the Services which draw on long histories that are deeply rooted in the Australian culture and identity, joint is a construct designed to meet the requirements of modern operations in an efficient and effective manner.
2. **Transformation of Service capabilities.** Joint is essentially a transformational process, involving coordination and / or integration of Service capabilities to deliver operational effects, be they JTFs for current operations or novel force structure options for future operations. Joint is intrinsically coupled to the notion of synergistic effect where the resultant capability is more than the sum of the parts.
3. **Interaction of organisational entities.** Key to a joint approach is the interaction of organisational entities, requiring joint command and control structures and processes to be effective. Consequently, joint organisations are necessary to enable the transformation required to achieve operational effects.
4. **Cultural alignment.** Joint relies on alignment between the whole of force (ADF) culture and the more dominant Service cultures. It also follows that this cultural alignment should also exist between the Services. Cultural alignment (or harmony) is necessary to prevent cultural clashes that work against the transformation necessary to deliver operational effects, particularly in the design of the future force.

5. **Enabling capabilities.** Joint requires specific capabilities which enhance, enable and/or connect other capabilities in order to construct effective joint systems.

The increasingly complex operating environment shifts the burden from the conduct of current operations to design of the future force, where decisions made now will determine the ADF's flexibility to form appropriate future joint task forces. Defence has a high base from which to build future joint capability. The ability to master future joint operations will require 'jointery' to be more effective in force design and capability management within the wider Defence.

Implementation of the First Principles Review will enhance a joint approach by strengthening the roles of CDF and VCDF, and establishing a two star Head Force Design.

6. Conclusions and Further Work

This paper presents a review of the Australia's joint approach to the planning and conduct of operations, the management of the current ADF and the design and building of the future force. And along the way we have made a number of suggestions for the future.

The ADF has demonstrated a high degree of competence in the planning and conduct of recent joint operations. The ADF command arrangements at the operational level, including a three-star CJOPS, are appropriate to undertake those tasks. It is also important that these command arrangements remain in place even if the operational tempo decreases, to enable effective preparation for future joint operations. That said CJOPS and HQJOC staff should be able to contribute more to management of the current force.

Since the formation of the ADF in the mid-1970s there has been a steady development in joint cooperation at the tactical level for the conduct of operations. As joint command structures evolved, joint tactical cooperation has increased with the more recent formation of joint units for enabling functions. The littoral nature of our strategic environment, the continuing impact of computing and communications on operations and the need for efficiencies, suggest a strengthening joint approach at the tactical level is likely.

At the strategic level, VCDF's role in operations varied significantly over the period from 1997-2007. The current arrangement involves supporting CDF in the strategic direction of operations, with a small staff within VCDF Group, but with access to the full range of J staff functions, often from two-star military officers embedded in enabling Groups. This arrangement seems quite effective and efficient, but it would be useful to define the full role of this de-facto J staff and VCDF's principal role in leading that staff, to improve understanding across Defence.

The management of the current force (including training and education, doctrine, preparedness, capability management and integration) has been and continues to be a complex business. And the ADF has made significant improvements in joint management of the force since the 1970s. But often progress has been very slow. There may be more

opportunities for developing the JPME, for rationalisation of individual training and for improving links between doctrine and collective training.

VCDF is the joint three-star with the principal responsibility for joint management of the current force. And this role is growing. VCDF's responsibility as JCA is still in its infancy but efforts to improve joint aspects of capability management and preparedness are promising. A more formal definition of the joint J staff function might assist this process, including nominating HJCI as the strategic J5. Certainly, as Figure 1 demonstrates, there are complex interactions in management of Defence's business. While the FPR provides Defence with a unique opportunity to improve Australian joint approach there remains considerable detail to be worked through as part of Defence FPR implementation plan. FPR provides an opportunity for VCDF to ensure any such proposals both improve the management of the current force and inform thinking about the force of the future. We believe that it is important to distinguish two types of joint management for the current force: enterprise preparedness and integration, and specialist management or coordination of joint enabling capabilities. We recommend that VCDF retain responsibility for the enterprise task. For the specialist functions, we suggest that CJOPS should be given additional responsibility in the management of the current force as a joint Capability Manager responsible for managing Defence joint enabling capabilities.

The joint design of the future force has been, and continues to be, a significant challenge for Defence. From 1987 to the present, Defence's force design efforts have centred on various, but similar, approaches involving combinations of techniques including: different forms of Government guidance, military strategy, concepts, force options testing (FOT), FSRs, experimentation and capability analysis. All these techniques are part of the Capability Based Planning (CBP) framework. We summarise this framework as containing four steps: advice to, and guidance from, Government; CDF's military guidance; gap analysis and planning guidance; and development of a major capital program through the DCP and the force modernisation plans of the Services and Groups. In particular we support recent Defence efforts to re-invigorate the more effective use of concepts, experimentation and UOCD/IOCD, and we suggest measures to enhance these initiatives, including better use of concepts, experimentation and capability analysis, undertaking significantly more regular joint force design work between FSRs.

But to ensure that improvement is achieved throughout the force design process, it is necessary that an effective, permanent and well-resourced joint force design team is established. To oversee this team, VCDF should be given the lead in force design and should be assisted by HFD designated as the strategic J8. Force design improvement must be supported by a better Defence joint force design culture, where the focus is on 'decision-making through a joint and integrated lens'.

One other issue related to culture that has emerged from our study has been the role of informal networks in Australia's joint approach. DST Group has already done an investigation of informal networks in the conduct of operations.³¹⁴ We have also been undertaking some further work on the nature of joint personal networks in the ADF. We hope to discuss this issue in a future paper.

And finally Jeff Malone, who has shared his initial findings with us on UK influence on Australia's early approach to joint, is conducting further research on this less well known subject. We look forward to his published work on this topic.

³¹⁴ The Challenge of the Seamless Force: The Role of Informal Networks in Battlespace, Leonie Warne, Derek Bopping, Irena Ali, Dennis Hart and Celina Pascoe, 10th International Command and Control Research and Technology Symposium, June 2005.

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19. ABSTRACT The joint design of the future force has been, and continues to be, a significant challenge for Defence. This paper presents a review of the Australian joint approach to the planning and conduct of operations, the management of the current ADF, and the design and building of the future force. And along the way we make a number of suggestions for enhancing joint force design, most notably, that it is necessary to establish an effective, permanent and well-resourced joint force design team to ensure that improvement is achieved throughout the force design process. Furthermore, force design improvement requires a Defence joint force design culture, where the focus is on decision-making through a joint and integrated lens.				