



Australian Government  
Department of Defence

# Australia's Joint Approach

Past, Present and Future



**Joint Studies Paper Series No. 1**  
Tim McKenna & Tim McKay



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# **AUSTRALIA'S JOINT APPROACH PAST, PRESENT AND FUTURE**

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by  
Tim McKenna & Tim McKay

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Welcome to Defence's Joint Studies Paper Series, launched as we continue the strategic shift towards the Australian Defence Force (ADF) being a more integrated joint force.

This series aims to broaden and deepen our ideas about joint and focus our vision through a single warfighting lens. The ADF's activities have not existed this coherently in the joint context for quite some time. With the innovative ideas presented in these pages and those of future submissions, we are aiming to provoke debate on strategy-led and evidence-based ideas for the potent, agile and capable joint future force.

The simple nature of 'joint'—'shared, held, or made by two or more together'—means it cannot occur in splendid isolation. We need to draw on experts and information sources both from within the Department of Defence and beyond; from Core Agencies, academia, industry and our allied partners. You are the experts within your domains; we respect that, and need your engagement to tell a full story. We encourage the submission of detailed research papers examining the elements of Australian Defence 'jointness'—officially defined as 'activities, operations and organisations in which elements of at least two Services participate', and which is reliant upon support from the Australian Public Service, industry and other government agencies.

This series expands on the success of the three Services, which have each published research papers that have enhanced ADF understanding and practice in the sea, land, air and space domains. Now, within the overarching theme of 'joint', this series will examine a range of topics as diverse as force design, organisational culture, history, planning, experimentation, capability, evaluation, and professional military education.

To achieve the best capability and to inspire we need to work in partnerships with a focus on innovation and agility. We need your input to encourage open and academic thought and debate, to stretch our ideas and take academic risks with sound evidence to support these ideas. This is an opportunity to think outside the box and raise ideas that might be controversial or not yet heard of in the joint dialogue. Challenge us; lead the way; help design the joint fighting force of the future to protect Australia and its national interests. Help us to be agile and responsive so that we, as a small defence force, ensure that we can always achieve an asymmetric advantage through our integrated joint capabilities.

As US General Colin Powell once wrote, 'joint warfare is team warfare'. This Joint Studies Paper Series is no exception. In the spirit of the One Defence approach set out within the First Principles Review, this series has been developed in collaboration between Australian Defence Force Headquarters, Defence Science and Technology Group and the Australian Defence College. Accordingly, it is an excellent example of what Defence and our partners can achieve as a joint team.

Turning from the series in general to this, its first paper, it is fitting that the paper is titled 'Australia's Joint Approach: Past, Present and Future'. This title not only reflects the tripartite focus of the paper—it's second, third and fourth chapters in particular—but also the series' intent to examine the joint force in the broadest possible sense. In this paper, Tim McKenna and Tim McKay analyse the history of Australian joint operations and the management of the current joint force, with these aspects supporting a detailed examination of joint force design undertaken in the fourth chapter. In conclusion, they offer a series of general observations on the nature of joint force development and management that are worthy of consideration as the Joint Force Authority's responsibilities and accountabilities evolve.

This paper is the first in what will be a series of innovative and thought-provoking papers that will enhance the study and practice of joint in the ADF.

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## Abbreviations

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ACSC	Australian Command and Staff College
ADC	Australian Defence College
ADDP	Australian Defence Doctrine Publication
ADDP-D	Australian Defence Doctrine Publication–Doctrine
ADF	Australian Defence Force
ADFA	Australian Defence Force Academy
ADFHQ	Australian Defence Force Headquarters
ADFP	Australian Defence Force Publication
ADFWC	Australian Defence Force Warfare Centre
ADHQ	Australian Defence Headquarters
AJMWC	Australian Joint Maritime Warfare Centre
AJWE	Australian Joint Warfare Establishment
ANAO	Australian National Audit Office
ANZUK	Australia, New Zealand and United Kingdom
CCDG	Chief of Capability Development Group
CDF	Chief of Defence Force
CDFS	Chief of Defence Force Staff
CDG	Capability Development Group
CDSS	Centre for Defence and Strategic Studies
CIMIC	Civil-Military Coordination
CIO	Chief Information Officer
CJC	Chief of Joint Capabilities
CJFA	Commander Joint Force Australia
CJOPS	Chief of Joint Operations
COMAST	Commander Australian Theatre
COSC	Chiefs of Service Committee
CPD	Chief of Defence Force’s Preparedness Directive
CSLCMM	Capability Systems Life Cycle Management Manual
DBM	Defence Business Model
DCDH	Defence Capability Development Handbook
DCDM	Defence Capability Development Manual
DCP	Defence Capability Plan
DCPG	Defence Capability Planning Guidance
DEFPREPMAN	Defence Preparedness Manual
DOD	Department of Defence
DOEF	Defence operational and enabling functions
DPG	Defence Planning Guidance
DPR	Defence Preparedness Requirements
DRP	Defence Reform Program
DSTO	Defence Science and Technology Organisation
FDA	Force Development and Analysis
FJOC	Future Joint Operating Concept
FOT	Force Options Testing
FPR	First Principles Review

FSDD FSR	Force Structure Development Directorate force structure review
HFD HJE HMAS HQADF HQJOC	Head Force Design Head Joint Enablers Her Majesty's Australian Ship Headquarters Australian Defence Force Headquarters Joint Operations Command
ICT IIP IOCD	information and communications technology Integrated Investment Program Integrated Operational Concept Documents
JCA JCMi JET JPME JSP (AS) JWDTC	Joint Capability Authority Joint Capability Management and Integration Joint Education and Training joint professional military education Joint Staff Publications (Australia) Joint Warfare, Doctrine and Training Centre
NCW NGS NORCOM NZ	network centric warfare naval gunfire support Northern Command New Zealand
OPR	Operational Preparedness Requirement
RAAF RAN	Royal Australian Air Force Royal Australian Navy
UK US	United Kingdom United States
VCDF	Vice Chief of Defence Force

# INTRODUCTION

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The Australian Defence Force (ADF) has been busy conducting a wide range of operations in recent years. All of these operations have been joint, involving the participation of at least two Services, the simplest Australian Defence definition of joint.<sup>1</sup> Further, each of these operations has relied upon ‘joint enablers’ such as logistics and intelligence. These operations have expanded the early concepts of joint because they have required support from civilian elements from the Department of Defence, as well as contractors.

Australia’s joint approach extends well beyond operations. In preparing the ADF for operations, in sustaining those operations and in managing the force in peacetime, Australia has also 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 in the 1990s, the Strategic Reform Program in 2009 and the *First Principles Review* (FPR) of the Department of Defence in 2015.<sup>2</sup> These two key joint functions, operations and preparing the current force-in-being, were listed as the two joint outputs of Defence in its 2013-14 annual report.<sup>3</sup> The *2016-17 Defence Corporate Plan* combined these two functions into a single Defence purpose, but added another purpose, developing future Defence capability—also an important joint function.<sup>4</sup>

Australia’s joint approach to designing and building the future ADF has developed significantly in recent years, 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. It is in the area of force design and development that implementation of the FPR is delivering significant changes for Defence’s joint approach. The most notable of these changes include the VCDF’s new responsibilities for force design and future investment decisions, not only for the ADF, but also for facilities and all Defence capabilities, including information and communications technology. These changes also involve the establishment of a permanent joint force design team under VCDF after the disbandment of Capability Development Group in 2016.

Despite the reduction in operational tempo after 2014, Defence still faces significant challenges in managing the current force, with the FPR being the most recent effort to address them. The FPR’s emphasis on ‘One Defence’ and a ‘Strong Strategic Centre’ makes it clear that a continuing joint approach within Defence is key to meeting these challenges.<sup>5</sup> Australia has 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 and suggest some next steps for the future.

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. These functions correspond to the key functions of the strategic joint staff described in a recent CDF Message from Air Chief Marshal Binskin.<sup>6</sup>

David Horner has already produced an excellent history, *Making of the Australian Defence Force*, which presents the story of the ADF up until 2001.<sup>7</sup> Our work draws on this book and a range of other sources, including interviews with a number of serving and retired officers. In 2015, the authors produced a Defence Science and Technology Report on this subject.<sup>8</sup> The current paper updates that report, including for the significant changes resulting from FPR 2015 and the 2016 Defence white paper.

The second chapter of this 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.

The third chapter deals with management of the current force. It considers doctrine and training, the first major steps in the 1970s to enable ADF preparation for joint operations. The chapter considers ADF preparedness since the 1987 Defence White Paper and summarises the evolution of both the Chief Defence Force Preparedness Directive and the Defence Preparedness Manual. And finally it considers capability management and integration, which had their origins in the 1997 Defence Reform Program and the 'knowledge edge' concept in *Australia's Strategic Policy 1997*.

The fourth chapter examines designing and building the future force. It focuses on force design, because Defence has written much less about this aspect of the function, compared with the decades of reform to building the force through capability development and acquisition. The chapter considers the history of force design from the 1987 Sanderson Review to FPR implementation from mid-2015. Since these improvements are in their infancy, the chapter discusses the future of force design: the broad approach to be taken; the key tools (concepts, experimentation and analysis); and the role of the joint force design team.

The fifth chapter concludes the paper by providing some general observations on Australia's joint approach, including summarising that approach and establishing five key principles that underlie it. The chapter also provides a summary of this joint approach from the perspective of each of the three key joint functions: operations; current force management; and future force design and development. It recommends ways to improve the implementation of these functions, in particular through the formalisation of the strategic joint staff structure and the continued resourcing of the new permanent joint force design team established as a result of the FPR.

## Notes

<sup>1</sup> 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'.

<sup>2</sup> Department of Defence (Defence), *First Principles Review: Creating One Defence* (Canberra: Defence Publishing Service, 1 April 2015).

<sup>3</sup> Defence, *Defence Annual Report 2013-14, Volume 1* (Canberra: Defence Publishing Service, 24 October 2014), p 10.

<sup>4</sup> Defence, *2016-17 Defence Corporate Plan* (Canberra: Defence Publishing Service, 23 August 2016), p. 3.

<sup>5</sup> Defence, *First Principles Review*, pp. 17 & 21.

<sup>6</sup> Air Chief Marshal Mark Binskin, *Implementing the Defence Headquarters Review: Update and CDF Intent* (unpublished email to all Defence personnel, 11 January 2017), states that 'the Strategic Joint Staff will be redefined, ensuring a more integrated approach to directing ADF activity across Force Development, Force Generation and Force Employment'. These three joint functions correspond well to our terms of designing and building the future force, management of the current force and the planning and conduct of operations (respectively).

<sup>7</sup> David Horner, *Making the Australian Defence Force*, The Australian Centenary History of Defence, Volume 4 (South Melbourne: Oxford University Press, 2001).

<sup>8</sup> Tim McKenna & Tim McKay, *Australia's Joint Approach*, Defence Science and Technology Group Report No. TR 3200, September 2015.





## PLANNING AND CONDUCT OF OPERATIONS

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Australia's first joint military operation occurred in late 1914 with a minor action against German New Guinea. 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 at Nowra in 1951.<sup>1</sup> But, as Horner notes in an extensive history of joint command up until 2007, there was no Australian joint command structure until 1966. In that year Commander Australian Force Vietnam was established as national commander responsible for administration of the Australian forces directly to the Chiefs of Service Committee (COSC) through its Chairman, General Sir John Wilton.<sup>2</sup> But other than this national joint command arrangement, Australian forces in Vietnam operated largely under US single 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 the Australia, New Zealand and United Kingdom (ANZUK) Force from 1971-1973. The headquarters of the ANZUK Force was both combined and joint, commanding assigned forces from the three Services of the UK, Australia and New Zealand. Owing to its short life, the ANZUK Force only offered some limited opportunities in working in a joint command environment and employing joint doctrine and procedures.<sup>3</sup>

With the withdrawal of forces from Vietnam and from the rest of South East Asia in 1972-73, Australia commenced a long period of peace that allowed the newly formed Department of Defence (in 1974) and the newly established Australian Defence Force (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 (Australia) (JSP (AS)). For example, JSP (AS) 8—*Procedures for Joint Command and Control*, outlined the organisation and manning for a Joint Force Headquarters.<sup>4</sup> Nevertheless it was not until the 1980s that significant change commenced. In the following sections we examine these changes at three levels – strategic, operational and tactical – and their implications for the emergence of a unified joint approach to operations.

### Strategic level

Australian military doctrine defines the strategic level 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'.<sup>5</sup>

At the centre of Australia's approach to joint command of operations at the strategic level is the Chief of Defence Force (CDF), supported and advised by the Chiefs of Navy, Army and Air Force. One of Australia's first joint institutions was the COSC, which initially included the three Service Chiefs, with one of them nominated as chairman. During World War II, the COSC exercised strategic command at the national level, assisted by a war room and intelligence centre located in Melbourne.<sup>6</sup> 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. However, since that time there had remained some uncertainty about the scope of CDF's command power. But it wasn't until 2015, after a recommendation from the *First Principles Review* (FPR), that CDF's formal authority was clarified with legislative action to give CDF full command of the ADF and to provide for the Service Chiefs to be subject to CDF direction.<sup>7</sup>

Also in 1984, to better support CDF, Headquarters Australian Defence Force (HQADF) was established, based on the joint staff initially established in the late 1960s. In 1986 the first joint three-star position, Vice Chief of Defence Force (VCDF), was established to command 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 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.<sup>8</sup> In 1997, as a result of the *Defence Efficiency Review* and its implementation through the Defence Reform Program, 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 *Defence Efficiency Review* noted that there were several areas of duplication in the staffs of VCDF and the Deputy Secretary Strategy and Intelligence, and it recommended a split of responsibilities between the two. It then somewhat confused matters by recommending both positions also be joint leaders of ADHQ.<sup>9</sup> 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 Chief of Joint Operations (CJOPS) but lost responsibility for capability development when the second joint three-star position (Chief of Capability Development Group) 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 a strategic role in operations and regained other strategic responsibilities. By 2009 these responsibilities included education and training, logistics, and Reserves. VCDF was also given a new role in joint capability coordination. More recently Defence implemented the 2015 FPR recommendations that VCDF be given both greater authority as deputy to CDF and even more responsibilities, most notably in the area of designing the future force and in the management of joint military enabling capabilities.<sup>10</sup>

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, VCDF needed the support of staff across the joint (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.

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, the two-star military officers at the strategic level performing these roles include: J1 – the senior military officer in Defence People Group; J2 – Director Defence Intelligence Organisation; 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; J7 – Commander Australian Defence College in VCDF Group; and J8 – Head Force Design also in VCDF Group.<sup>11</sup> The designation of J5 is more complex and will be discussed in Chapter 3.<sup>12</sup>

For several years CDF, assisted by VCDF, has drawn together support for the strategic command of operations from across Defence through the Strategic Command Group. Through this Group, CDF has access to the officers mentioned in the previous paragraph plus key civilian officers including the Secretary. 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, and this need is prompting further change in the strategic command architecture.

Air Chief Marshal Mark Binskin (in his first CDF Order of the Day in July 2014) set as one of his priorities to 'evolve the strategic level ADF headquarters command and control architecture ... to support successful joint operations'.<sup>13</sup> A study to determine what changes needed to be made to these headquarters arrangements was included as Recommendation 5.5 of the 2015 FPR. The study was undertaken in 2016 and the key outcome has been to form the Australian Defence Force Headquarters (ADFHQ), established on 3 April 2017 by combining existing single Service headquarters and VCDF staff. At the same time the Strategic Joint Staff (while not taking the J staff designations) is being redefined to ensure a more integrated approach to directing ADF activity across the conduct of operations, the management of the current force and force design and development.<sup>14</sup> These changes will set the direction for the joint arrangements at the strategic level for next few years.

These changes also impact of the future role for the VCDF, who's role is being redefined to be the Joint Force Authority (replacing previous roles) and accountable for specific aspects of management of the current force, namely its generation and its preparedness. In an effort to reduce VCDF's direct responsibilities, CDF recently appointed a Chief of Joint Capabilities 'to advise on capability in the information environment, as well as military enablers, complementary to the current sea, land and air environmental advice of the Service Chiefs'. This position was established on 1 July 2017.<sup>15</sup>

The many changes in role for VCDF, including in 1997, 1999, 2003, 2004, 2007, 2015 and 2017, indicate an ongoing concern for the nature of the position, with each change seeking to adjust VCDF's span of responsibility. With the changes in 2017 VCDF's role in designing the future force remains paramount and in managing

current capability continues to be substantial. We will discuss these responsibilities later in the paper. But for all but a short period from 1999-2003 VCDF has remained CDF's principal supporter in relation to the conduct of operations at the strategic level, from which military strategic guidance is given to CJOPS at the operational level. This VCDF responsibility seems set to continue.

## Operational level

The operational level of command is concerned with the planning and conduct of operations to achieve strategic-level objectives.<sup>16</sup> David Horner points out that there has been an operational level stretching back at least to the campaigns of Alexander and Caesar, even if it has not been so named. He notes that US General Douglas 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, Lieutenant General Sir Phillip Bennett, directed its introduction into Australian Army doctrine.<sup>17</sup> When Bennett became CDFS in early 1984 the term caught on in HQADF and the three-level approach to command formed the basis for (then) Brigadier John Baker's Study into ADF Command Arrangements in 1987, initiated by Bennett's successor, General Peter Gratton.<sup>18</sup>

At the operational level the ADF has made significant progress in its joint approach. By 1986 the existing single Service headquarters (Fleet, Field Force Command and Operational Command) had been given joint operational functions as Maritime, Land and Air Headquarters. In 1987, these became joint commands reporting to CDF for operations, while retaining their raise, train and sustain responsibilities to their Service Chiefs.<sup>19</sup> 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.<sup>20</sup>

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 COMAST's component commanders. COMAST also had the option to command operations directly through joint task forces based on a Deployable Joint Force Headquarters drawn from Headquarters 1st Division, the headquarters of Commodore Flotillas, HQ NORCOM or a specifically constituted headquarters.<sup>21</sup> 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.<sup>22</sup>

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 until the end of the 1990s, the commander of the operations conducted was at the two-star level. For the subset of operations during that period, which 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.<sup>23</sup> After the most significant of these operations, the deployment to East Timor in 1999, Defence reviewed its approach to command and control of operations.<sup>24</sup> 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'.<sup>25</sup> The CDF at the time, General Gratton, accepted this recommendation, noting in 1992 that Defence was contemplating the collocation of the joint headquarters 'later in the decade'.<sup>26</sup> After a number of reviews the decision to build a collocated headquarters at Bungendore was announced in 2004. But the structure of this new headquarters, to be known as Headquarters Joint Operations Command (HQJOC) was not resolved until a review by Major General Richard Wilson in 2005.

This review resulted in a move from the 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.<sup>27</sup> 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'.<sup>28</sup> 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.<sup>29</sup>

This approach has also seen the development of an ADF joint culture in relation to operations. In 2004, Australian Defence Doctrine Publication (ADDP) D.4—*Joint*

*Warfighting* stated that to fight effectively as a joint force the ADF needed to understand its own culture and have a joint warfighting ethos.<sup>30</sup> 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'.<sup>31</sup> ADF culture is discussed in the 2007 publication ADDP 00.6—*Leadership* and in Major General Craig Orme's 2011 study *Beyond Compliance: Professionalism, Trust and Capability in the Australian Profession of Arms*.<sup>32</sup> 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'.<sup>33</sup> The continuing operations since that time, together with the establishment of the new HQJOC commanded by a full-time three star officer, have provided just that opportunity in the last few years.

A significant development in operations in recent years has been the increasing importance of cyber and space. The 2016 Defence white paper notes that cyber-attacks are a 'direct threat to the ADF's warfighting capability given its reliance on information networks', that we are seeing greater use of offensive cyber operations and that this trend 'is likely to continue'. The white paper also notes that some countries are developing capabilities to attack the satellites upon which the ADF depends for information collection and communications. In response, the paper states that national and Defence cyber security capabilities, as well as space surveillance capabilities, will be strengthened.<sup>34</sup>

The Defence white paper groups cyber-attack, anti-satellite weapons and ballistic missile systems as 'non-geographic threats' against which Australia must be protected.<sup>35</sup> From an operational perspective, retired Major General Steve Meekin recently described cyber and space as new domains within the operational environment, alongside the existing maritime, land and air domains. The 2017 CDF announcement of the establishment of a Deputy Chief for Information Warfare (under Chief of Joint Capabilities), with responsibilities for information, cyber, electronic warfare, intelligence, targeting and space capabilities, is consistent with the increased importance of cyber and space for the future.<sup>36</sup>

Another recent development in ADF operations has been greater involvement of civilians (including their deployment to operational theatres), both from Defence's integrated workforce and from other Government and non-Government agencies, as well as from industry.<sup>37</sup> In the *Defence 2015-16 Annual Report*, Secretary of Defence Dennis Richardson outlined the wide range of Defence civilian involvement with the ADF.<sup>38</sup> Recent operations in Afghanistan involved a whole of government approach. 'New mechanisms and approaches were developed and adopted across government departments' to facilitate this approach, including 'significant field deployment of civilian and policing expertise' with '17 lessons (identified) that might guide our approach to any future stabilisation missions'.<sup>39</sup> This deployment of civilians into the field is but one aspect of the joint developments at the tactical level that are discussed below.

## Tactical level

The tactical level of conflict involves the planning and conduct of battles and engagements.<sup>40</sup> 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.

### Naval-land cooperation

Navies have transported armies into battle since ancient Egyptian times.<sup>41</sup> 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).

Since the end of World War II, in relation to transport, the former aircraft carrier Her Majesty's Australian Ship (HMAS) *Sydney* led the RAN's efforts to transport heavy equipment and stores to and from Vietnam. Then in the early 1970s the 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.<sup>42</sup>

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 HMAS *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 in May of that year the RAN leased a large catamaran, HMAS *Jervis Bay*, for a two year period.<sup>43</sup>

The 2000 Defence white paper gave greater priority to regional operations. 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*, entering service in 2014 and 2015 respectively. 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.<sup>44</sup> 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 Australia Regiment 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 five inch guns. All three ships engaged in NGS operations in Vietnam and since then NGS has been used regularly in exercises.<sup>45</sup> The RAN continues to maintain a significant NGS capability with both the in-service Anzac Class frigates and the new Air Warfare Destroyers having a similar five-inch gun.

In the early 1990s, and again in the early 2000s, the Army made a small contribution to air defence of the RAN's support and amphibious ships deploying to the Gulf, with RBS-70 missile systems and detachments operating on these ships.<sup>46</sup> The first of

these deployments had not been pre-planned, and required significant adaptations to both equipment and training for the Army personnel.

### **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 for air transport and tactical manoeuvre.<sup>47</sup> 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 of these activities were enshrined in joint doctrine.<sup>48</sup> As well, an effective joint liaison system had been established with RAAF air liaison officers attached to divisional and brigade headquarters, Army ground liaison officers 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 jet fighter aircraft from Sabres through to F/A 18s. In relation to aerial reconnaissance of the land, the RAAF has provided a capability initially through Canberra bombers and subsequently through RF-111s and F/A 18s. A recent innovation during conflict in the Middle East over the last decade has been the use of AP-3C Orion maritime patrol aircraft in an over-land intelligence, surveillance and reconnaissance role in support of operations on land.<sup>49</sup>

In the 1980s, the Army's 3rd Brigade in Townsville became the combat component of the Operational Deployment Force and was required to be air-portable in RAAF tactical transport aircraft and medium lift helicopters.<sup>50</sup> At the same time, the RAAF and the 1st Brigade in Sydney began developing an airborne (parachute) capability based on 3rd Battalion, Royal Australian Regiment, deployed and supported by RAAF C-130 Hercules 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 RAAF and in 1989 it was decided to withdraw the RAAF's medium lift Chinook helicopters from service.<sup>51</sup> In the early 1990s, four of these aircraft were re-introduced into service, but with the Army.<sup>52</sup>

The major change since then has been the procurement of the C-17 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'.<sup>53</sup> This latter change has grown out of recent operational experience, but also from developments in information and communications technology, encapsulated in Network Centric Warfare developments within the ADF. But 'joint fires' is a modern development of the older ADF term 'offensive support', both of which apply 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.



## 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 was established.<sup>54</sup> 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.<sup>55</sup> 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.<sup>56</sup> 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 Poseidon and, subject to successful completion of the United States development program, the MQ-4C Triton unmanned aerial system.<sup>57</sup>

In 1983, a major change occurred with the Government's decision 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 greater level of cooperation between the RAN and RAAF in the maritime environment. A significant innovation was to use the F111 to provide limited but long range air defence for the fleet.<sup>58</sup> 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.

In the late 1960s the RAN increased its ability to contribute to the maritime air battle with the introduction of 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 Defence 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'.<sup>59</sup>

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, and which is essentially solved by the existence of a three-star CJOPS who is able to make operational judgements about relative priorities for the use of scarce air assets.<sup>60</sup>

## 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 (for example, air defence and strike). The second theme is that joint tactical cooperation involves provision of one Service's *enabling* capability (for example, 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, RF-111 and RBS-70 for fleet air defence and AP3-C 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. The establishment of the three-star CJOPS position and an integrated headquarters has seen tactical-level joint coordination develop on exercises and then be employed on operations.

Continuing advances in information and communications technology have led to an increasingly joint approach to surveillance and other information capabilities, now grouped in Defence under the umbrella of information warfare. 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, intelligence, communications, logistics, movements and other administrative functions.<sup>61</sup>

The littoral nature of our strategic environment, the continuing impact of improved computing power and communications on operations, and the continuing need for 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 *Future Land Warfare Report 2014* discusses these themes in its consideration of the greater importance of joint (among other things) for land forces operating in a future operating environment that is 'connected, collective and constrained'.<sup>62</sup> The peacetime joint management (known as joint capability coordination or joint capability management) of an increasing range of joint tactical capabilities also reflects this trend, with the amphibious capability the most substantial among them.<sup>63</sup> The next chapter discusses joint developments in managing the current force.

## Notes

<sup>1</sup> David Horner, *Making the Australian Defence Force*, The Australian Centenary History of Defence, Volume 4 (South Melbourne: Oxford University Press, 2001), pp. 282-283.

<sup>2</sup> David Horner, 'The Higher Command Structure for Joint ADF Operations' in: Ron Huisken & Meredith Thatcher, Eds., *History as Policy: Framing the Debate on the Future of Australia's Defence Policy* (Canberra: ANU E Press, 2007), p. 146.

<sup>3</sup> Authors' private communications with Mr Jeff Malone, DST Group analyst, 30 March 2015.

<sup>4</sup> JSP (AS) 8—*Procedures for Joint Command and Control* was published jointly by the Flag Officer Commanding Her Majesty's Australian Fleet, General Officer Commanding Field Force Command and Air Officer Commanding Operational Command. It was approved sometime between 1974 and 1976.

<sup>5</sup> Department of Defence (Defence), Australian Defence Doctrine Publication-Doctrine (ADDP-D)—*Foundations of Australian Military Doctrine* (Canberra: Defence Publishing Service, 2012), para 2.12.

<sup>6</sup> Horner, 'The Higher Command Structure for Joint ADF Operations', p. 145.

<sup>7</sup> *Defence Legislation Amendment (First Principles) Bill* (Cwth) 2015, Explanatory Memorandum, pp. 4-5.

<sup>8</sup> Defence, *Defence Annual Report 1995-96* (Canberra: DOD, 1996), pp. 47-52. The Joint Staff functions include: J0 – executive; J1 – personnel; J2 – intelligence; J3 – operations; J4 – logistics; J5 – plans; J6 – communications and information systems; J7 – training; and J8 – development.

<sup>9</sup> Defence, *Future Directions for the Management of Australia's Defence: Report of the Defence Efficiency Review* (Canberra: Defence Publishing Service, 1997), pp. 12 & 21.

<sup>10</sup> Defence, *First Principles Review: Creating One Defence* (Canberra: Defence Publishing Service, 2015), Recommendation 1.8 & pp. 27-28.

<sup>11</sup> Defence, Australian Defence Doctrine Publication (ADDP) 00.1—*Command and Control* (Canberra: Defence Publishing Service, 2009), Chap. 5, Annex A, para 9.

<sup>12</sup> The only areas where the US J staff definitions differ are for J7 and J8. The US strategic J7 is designated as 'Force Development' but includes training, education and doctrine (which in Australia are functions of the Australian Defence College, and latterly, Head Force Design in relation to doctrine). It also includes exercises, lessons learnt and concepts, functions that are more appropriately allocated elsewhere in the Australian context including Chief of Joint Operations and Head Force Design. 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. US Department of Defense, *Official Website of the Joint Chiefs of Staff* (online, [www.jcs.mil](http://www.jcs.mil), accessed 28 July 2014). Defence, ADDP 00.1—*Command and Control*, also recognises a J9 function (Civil-Military Coordination (CIMIC)), but notes that CIMIC can also be part of J3 Operations. At the strategic level, CIMIC is a critical J3 function, although VCDF's J3 staff could also draw advice from the Australian Civil-Military Centre, which was part of VCDF Group at the time of writing.

<sup>13</sup> Air Chief Marshall Mark Binskin, *CDF Order of the Day: Chief of Defence Force Change of Command* (unpublished order distributed to ADF members, 1 July 2014). CDF repeated this intention in his review of the year in: Defence, *Defence Annual Report 2013-14* (Canberra: Defence Publishing Service, September 2014).

<sup>14</sup> Air Chief Marshall Mark Binskin, *Implementing the Defence Headquarters Review: Update and CDF Intent* (unpublished email to all Defence personnel, 11 January 2017); Defence, *DEFGRAM 138/2017*:

*Establishment of the Australian Defence Force Headquarters on Monday 3 Apr 2017* (unpublished, dated 31 March 2017).

<sup>15</sup> Binskin, *Implementing the Defence Headquarters Review*; Defence, DEFGRAM 138/2017.

<sup>16</sup> Defence, ADDP-D—*Foundations of Australian Military Doctrine* (2012), para 2.13.

<sup>17</sup> Horner, *Making the Australian Defence Force*, pp. 109-111.

<sup>18</sup> Brigadier J.S. Baker, *Report of the Study into ADF Command Arrangements* (Canberra: Defence Publishing Service, March 1988). This is an abridged version of the original report, which was prepared in November 1987.

<sup>19</sup> Baker, *Report of the Study into ADF Command Arrangements*, Chap. 2.

<sup>20</sup> Horner, 'The Higher Command Structure for Joint ADF Operations', pp. 152-153.

<sup>21</sup> Horner, *Making the Australian Defence Force*, pp. 142-147.

<sup>22</sup> Horner, *Making the Australian Defence Force*, pp. 124-128.

<sup>23</sup> Bob Breen, *Australian Military Force Projection in the late 1980s and the 1990s: What Happened and Why* (PhD Thesis, Australian National University, 2006), p. v.

<sup>24</sup> Bob Breen, 'Struggling for Self-Reliance: Four Case Studies of Australian Force Projection in the Late 1980s and the 1990s', *Canberra Papers on Defence No. 171* (Canberra: Strategic and Defence Studies Centre, 2008), p. 155.

<sup>25</sup> Baker, *Report of the Study into ADF Command Arrangements*, para 1023.

<sup>26</sup> General Peter Gratton, *The ADF Today and Tomorrow*, CDF Address to the United Services Institute of Canberra, 2 December 1992. Quoted in: Horner, *Making the Australian Defence Force*, p. 121.

<sup>27</sup> Brian Hanlon & Richard Davis, 'Strengthening ADF Higher Command and Control through Scrutiny, Forecasting and Audit', *Australian Defence Force Journal*, No. 176 (2008), pp. 12-33.

<sup>28</sup> Defence, ADDP 3.0—*Campaigns and Operations*, 2nd ed. (Canberra: Defence Publishing Service, 2012), para. 1.13.

<sup>29</sup> Defence, JSP (AS) 1(A)—*Joint Operations Doctrine* (Canberra: DOD, 27 June 1979), Chap. 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.

<sup>30</sup> Defence, ADDP-D.4—*Joint Warfighting* (unsigned, unpublished draft, 2003), para 3.40. We have sighted a draft copy of this publication but have been unable to locate a signed, published copy. However, 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 'ADDP-D.4—*Joint Warfighting* (was) being merged with ADDP 3.0—*Operations* and (would) be formally withdrawn once ADDP 3.0 (was) published'. Defence, *Joint Doctrine Steering Group Minutes* (unpublished, dated 4 July 2006), para 15. The first edition of ADDP 3.0 was published in 2008.

<sup>31</sup> Irena Ali, Derek Bopping, Dennis Hart, Celina Pascoe & Leoni Warne, *The Transition from Network-Centric Warfare to Networker-Centric Warfare: Outcomes of the Human Dimension of Future Warfighting Task*, DSTO Report No. DSTO-CR-2007-0311, June 2007, para 3.4.5.

<sup>32</sup> Defence, ADDP 00.6—*Leadership* (Canberra: Defence Publishing Service, 2007); Major General C.W. Orme, *Beyond Compliance: Professionalism, Trust and Capability in the Australian Profession of Arms, Report of the Australian Defence Force Personal Conduct Review* (Canberra: Defence Publishing Service, 2011).

<sup>33</sup> Ali et al, *The Transition from Network-Centric Warfare to Networker-Centric Warfare*, para 3.4.5.

<sup>34</sup> Defence, *2016 Defence White Paper* (Canberra: Defence Publishing Service, 2016), paras 2.50, 2.53, 2.55 & 3.19.

<sup>35</sup> Defence, *2016 Defence White Paper*, para 3.5.

<sup>36</sup> Steve Meekin, '2016 Blamey Oration: The Cyber and Space Domains in 21st Century Warfare', *Journal of the Royal United Services Institute of New South Wales*, Vol. 67, No. 3 (September 2016), pp. 9-13; Binskin, *Implementing the Defence Headquarters Review*.

<sup>37</sup> Defence, ADDP 00.9—*Multiagency Coordination: Defence's Contribution to Australian Government Responses* (Canberra: Defence Publishing Service, 2013).

<sup>38</sup> Defence, *Defence Annual Report 2015-16* (Canberra: Defence Publishing Service, 2016), p. 1.

<sup>39</sup> Australian Civil-Military Centre, *Afghanistan: Lessons from Australia's Whole-of-Government Mission* (Canberra: Defence Publishing Service, 2016), pp. 6-7.

<sup>40</sup> Defence, ADDP-D—*Foundations of Australian Military Doctrine* (2012), para 2.14.

<sup>41</sup> Gregory P Gilbert, *Ancient Egyptian Sea Power and the Origin of Maritime Forces* (Canberra: Sea Power Centre—Australia, 2008).

<sup>42</sup> Lieutenant General Phillip Bennett, *The Army in the 1980s* (Canberra: Defence, 1982), p. 9.

<sup>43</sup> Horner, *Making the Australian Defence Force*, p. 174.

<sup>44</sup> RAN, *Ships, Boats and Craft* (online, <http://www.navy.gov.au/fleet/ships-boats-craft>, accessed 27 November 2013).

<sup>45</sup> One of the authors participated in one such exercise of joint offensive support (including NGS): Exercise Tasman Link, held at Shoalwater Bay in 1986. A similar joint and combined exercise was held as part of Exercise Talisman Sabre in 2013.

<sup>46</sup> Defence, *The Australian Defence Force Capability Fact Book* (Canberra: Defence Publishing Service, 2003), p. 24; Australian Air Defence Artillery Association, *16 Air Defence Regiment History* (online, <https://aadaa.asn.au/Unit%20History.html>, accessed 11 February 2017).

<sup>47</sup> Australian Land-Air Coordination during World War II, Korea and Vietnam is summarised in: Jeffery Grey & Peter Dennis Eds., *From Past to Future: The Australian Experience of Land/Air Operations: Proceedings of the 1995 Australian Army History Conference* (Canberra: Department of History, University College, Australian Defence Force Academy, 1995).

<sup>48</sup> The joint procedural manual JSP (AS) 8—*Procedures for Joint Command and Control*, produced in the mid-1970s, 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*.

<sup>49</sup> Bryan Littlely, 'Mission complete on Wings of a Dream Aircraft', *Adelaide Advertiser*, 29 November 2012 (online, <http://www.adelaidenow.com.au/news/orion-crews-end-10-year-middle-east-mission-with-last-plane-touching-down-at-edinburgh-raaf-base/story-e6frea6u-1226526827264?nk=27d37df59d6e0f7b23ecf986f19aaf38>, accessed 23 February 2015).

<sup>50</sup> Bennett, *The Army in the 1980s*, p. 10.

<sup>51</sup> Horner, *Making the Australian Defence Force*, p. 53; RAAF Museum, *A15 Boeing-Vertol CH-47 Chinook* (online, <http://www.airforce.gov.au/raafmuseum/research/aircraft/series3/A15.htm>, accessed 16 April 2014).

<sup>52</sup> Horner, *Making the Australian Defence Force*, p. 92.

<sup>53</sup> 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.

<sup>54</sup> RAAF Museum, *A89 Lockheed Neptune* (online, <http://www.airforce.gov.au/raafmuseum/research/aircraft/series2/A89.htm>, accessed 22 November 2013).

<sup>55</sup> Defence, JSP (AS) 1(A)—*Joint Operations Doctrine* (1979), Chap 18. Also, a 1981 amendment to this publication noted that the more detailed procedural publication *Joint Maritime Operations* had been issued as AJTP 01(B).

<sup>56</sup> Interview with Air Vice Marshal Kym Osley, 23 January 2014.

<sup>57</sup> RAAF, *P-8A Poseidon* (online, <http://www.airforce.gov.au/Boeing-P8-A-Poseidon/?RAAF-Z4PUOpGXH/eLtWmc6qxYI9xYycb+rKng>, accessed 1 September 2015); Air Force Headquarters, *Australia's Voice Loud and Clear in the Global F-35 Test Team*, RAAF, 17 March 2014 (online, <http://www.airforce.gov.au/News/Triton-acquisition-announced/?RAAF-cni9s6k6kBw0BL5bjzDBZNYZUbTFvoUE>, accessed 1 September 2015).

<sup>58</sup> Interview with Air Vice Marshal Kym Osley, 23 January 2014.

<sup>59</sup> RAN, *Ships, Boats and Craft*.

<sup>60</sup> Baker, *Report of the Study into ADF Command Arrangements*, Chap. 4 & 8.

<sup>61</sup> Defence, *Fact Sheets on Afghanistan* (online, <http://www.defence.gov.au/defencenews/articles/1017/1017.htm>, accessed 15 May 2017).

<sup>62</sup> Modernisation and Strategic Planning Division, *Future Land Warfare Report 2014* (Canberra: Australian Army Headquarters, 2014), pp 11-18.

<sup>63</sup> Thirteen joint and enabling capabilities are listed in: Defence, *Defence White Paper 2013* (Canberra: Defence Publishing Service, 2013), para 8.12-8.43.

## MANAGING THE CURRENT FORCE

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As with the tactical level of conflict, the Services have always had (and continue to have) a key role in managing 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 Defence Reform Program (DRP) centralised many functions supporting these responsibilities from the Services into joint or integrated enabling programs. As a result the Service Chiefs were designated as 'Capability Managers' to prepare and sustain their forces, not only using the resources still directly under their control but also through influencing the enabling programs. These programs now had increased roles in supporting the Services, but the Service Chiefs had lost direct control over them.

However, 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 Commander Australian Defence College (ADC) being given responsibility for all joint and Defence civilian education and individual training.<sup>1</sup> 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 Joint Staff Publications (Australia) (JSP (AS)) series.

Following the release of the 1987 Defence white paper, Defence gave greater priority to preparing for shorter term conflict. As a result Chief of the Defence Force (CDF) issued the Australian Defence Force's (ADF's) first readiness directive in 1989, which had become the CDF's Preparedness Directive (CPD) by 1992. Over the last 25 years Defence's preparedness management system has continued to develop. In 2009, a more joint approach was introduced to augment the Service capability management function that supported Defence preparedness. Vice Chief of the Defence Force (VCDF) was given a joint capability coordination role in relation to several ADF functions that had evolved into joint capabilities. VCDF was also given a role in the integration of all ADF capabilities, both joint and single Service, into an integrated joint force.

In this chapter we address these functions: individual training and education; collective training; doctrine; preparedness; and capability coordination and integration. In addition to examining their development, we also suggest possible future approaches.<sup>2</sup>

### Individual training and education

The School of Land Air Warfare started its life in 1947 as a Royal Australian Air Force (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 basis of a new joint school, the Australian Joint Warfare Establishment (AJWE). For Naval-Air cooperation the Australian Joint Anti-Submarine School (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.<sup>3</sup> 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.<sup>4</sup>

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. Again progress was slow and it was 31 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, was established for senior ADF officers and Defence civilians. In 1999, the Joint Services Staff College and the Australian College of Defence and Strategic Studies were amalgamated and briefly designated the 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, ACSC and the previous ADC, which was renamed the Centre for Defence and Strategic Studies (CDSS).<sup>5</sup>

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.<sup>6</sup> 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.<sup>7</sup>

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.<sup>8</sup> Most of these reviews resulted in the establishment of Defence schools. 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.<sup>9</sup>

Several years later in 2004, Commander ADC took up the cause for further development in joint education and training, proposing to the Chiefs of Service Committee (COSC) that 'ADC further increase its scope of command to include several other institutions delivering joint and common (all-Corps) education and training.' Although nothing came of this immediately, in 2007 Commander ADC was appointed by COSC to coordinate joint professional military education (JPME).<sup>10</sup>



In 2010, ADFWC was demerged, with responsibility for exercise planning and evaluation transferred to Headquarters Joint Operations Command (HQJOC). ADFWC was renamed Joint Warfare, Doctrine and Training Centre (JWDTC) and retained responsibility for joint individual training, doctrine and the Peacekeeping Operations Training Centre under Commander ADC.<sup>11</sup> 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.<sup>12</sup>

As a result of both the Strategic Reform Program 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.<sup>13</sup> 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.<sup>14</sup>

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 professional military education 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.<sup>15</sup> 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) set two strategic targets in relation to JPME, namely:

- to develop a JPME framework that will underpin the joint education requirements of the ADF; and
- to develop a JPME curriculum management system to deliver the joint war fighting and Defence education program, which is responsive to single Service and ADF capability requirements.<sup>16</sup>

While most joint education initiatives have focused on officers, one particularly important course was established in 2003 for warrant officers and non-commissioned officers. In that year, then CDF General Peter Cosgrove initiated the CDF Warrant Officer and Non-Commissioned Officers Leadership Forum. This forum provides an opportunity selected warrant officers and non-commissioned officers 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.<sup>17</sup>

The 2015 *First Principles Review* (FPR) increased VCDF's responsibilities by adding the significant role of force design and future investment to his existing roles in strategic oversight of operations and managing joint enablers. The FPR also made a

suggestion to reduce VCDF's span of command in the management of joint enablers.<sup>18</sup> In implementing this idea, Defence established the position of Head Joint Enablers (HJE) and allocated it to Commander ADC as a second responsibility. In addition to joint individual training and education, HJE became responsible to VCDF for logistics, health and the Australian Civil-Military Centre. CDSS and ADFA report directly to HJE. Defence Learning Branch was returned to the Defence People Group, where it retains responsibility for Australian Public Service learning policies and delivers education and training services to meet common ADF-Australian Public Service and Australian Public Service-specific learning requirements.

This arrangement has only been short-lived, with the 2017 Defence Headquarters review establishing a Commander Joint Capabilities, reporting directly to CDF but with responsibilities including all those of the current HJE as well as military information.<sup>19</sup> From 1 July 2017, Commander ADC has once again regained responsibility for joint individual training and education as a sole responsibility, effectively becoming the strategic J7.<sup>20</sup> As a result, Commander ADC again has the capacity to address future challenges to the ADF education and training capability.

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 Force School of Intelligence; Defence Force School of Policing (all of which are under the Defence Command and Support 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.

So 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 JPME and this is reflected in the framework COSC subsequently adopted.<sup>21</sup> 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 warfighter. In the US, their National Defense University is tasked to implement JPME through this competency-based education model.<sup>22</sup>

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 New South Wales. Postgraduate degrees have also been made available at ADFA for ADF officers, including through the Capability and Technology Management College. Both ACSC

and CDSS provide access to one year postgraduate degrees through shorter term arrangements with other universities as part of their principal courses.

The first step will be to get the curriculum content right and establish management arrangements for control of its implementation. 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, possibly even including the establishment of an Australian equivalent to the US National Defense University.<sup>23</sup>

Establishment of an Australian Defence University could also provide a joint benefit beyond JPME. An Australian Defence University 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, Defence Science and Technology Group, the Australian Civil-Military Centre, and other security research centres in Australia and overseas. One small step has already been made towards such a joint research capability at ADC with the establishment of the Centre for Defence Research in 2013.<sup>24</sup> In 2016, another small step was the enhancement of Defence senior leadership capability through CDSS offering senior leaders a 'PhD by Port Folio' program, which is 'a scholarly research extension of a senior leader's prior professional practice and writing'.<sup>25</sup> Expanding these capabilities to conduct a wider range of joint studies might be part of the initial steps towards building a greater joint research capability at ADC.<sup>26</sup>

In relation to joint training, the wider need to find savings in training will continue and ensuring that this is done without a reduction in important capabilities in either the Services or in the joint training institutions will be a key challenge. For example, 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 aimed at improving the ADF's ability to develop doctrine and conduct individual training.

## 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 happened for a long time in Australia. The Air Power Development Centre, in one of its regular bulletins, describes a joint Royal Australian Navy/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.<sup>27</sup>

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 (AS) series. For 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.<sup>28</sup> Exercise Kangaroo 1981 (K81) extended the scope of these exercises to include testing of joint strategic command and intelligence, and joint logistics.<sup>29</sup> Exercise K89, which involved the deployment of

most combat elements of the ADF across northern Australia, aimed to test the 1987 Defence 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 Commander Australian Theatre (COMAST) sought to solve in 1996.<sup>30</sup> 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.<sup>31</sup>

All Kangaroo exercises had significant participation from other nations including the US. Then, after a strategic policy shift to greater emphasis on off-shore operations in 1997, another change occurred in 1999. The exercise series was re-named Crocodile, and Crocodile 99 became an Australian-led bilateral exercise with the US.<sup>32</sup> After another Crocodile exercise in 2003, the exercise series was again re-named Talisman Sabre 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 2nd Battalion, Royal Australian Regiment, from HMAS *Choules*.<sup>33</sup> The 2015 exercise served as a certification function for formally validating the preparedness of the ADF's amphibious capabilities, an activity that continued during Talisman Sabre 2017.

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 Chief of Joint Operations (CJOPS) and the Service Chiefs to 'sort it out in the near future'.<sup>34</sup> As operations become more joint, it is logical that collective training needs more effective joint coordination, particularly by CJOPS. This has now happened. 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'.<sup>35</sup> In late 2013, a major step was taken in implementing this CJOPS responsibility with the establishment of Australian Defence Simulation and Training Centre, commanded by the J7 at HQJOC. The Australian Defence Simulation and Training Centre, as its name suggests, also took on the responsibility for simulation in Defence, which had previously been the responsibility of Head Joint Capability Coordination 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 extensive period of low operational tempo from the 1970s to the 1990s.

## Doctrine

Australian Defence Doctrine Publication—Doctrine (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'.<sup>36</sup>

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.<sup>37</sup> Beginning with eight manuals of the JSP (AS) series in the early 1970s, Australian joint doctrine has expanded to over eighty manuals at two levels; Australian Defence Doctrine Publications (ADDP), which provide the philosophical basis and high level guidance for the application of force; and Australian Defence Force Publications (ADFP), 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. Five procedural manuals covered command and control, communications, offensive support, air defence and air transport.<sup>38</sup> The last three described the key tactical tasks on which the Australian Services had cooperated for many years. However, regarding the manual on joint command and control, a 1978 *Australian Defence Force Journal* article noted that JSP (AS) 8 was 'derived almost exclusively' from US joint task force headquarters standard operating procedures.<sup>39</sup> The influence of UK joint doctrine also continued with UK publications authorised for ADF usage until sufficient Australian publications were available.<sup>40</sup>

To ensure that this joint doctrine was effectively developed and taught, these tasks were given to AJWE when it 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.<sup>41</sup>

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'.<sup>42</sup> 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 conflict in line with introduction of this concept into the ADF's lexicon in the late 1980s.<sup>43</sup>

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.<sup>44</sup>

After the initial establishment of Headquarters Australian Theatre 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.<sup>45</sup>

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.<sup>46</sup>

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'.<sup>47</sup> From the beginning of 1999, the focus of the new COMAST, Air Vice Marshal Bob Treloar, became 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. 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 was established, chaired by the VCDF. The Joint Doctrine Steering Group was tasked with establishing joint doctrine development priorities and overseeing doctrine development and review. Secondly, the ADF commenced 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.<sup>48</sup>

When VCDF regained operational responsibilities in 2003 and took COMAST under command, VCDF 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 became the responsibility of the Joint Doctrine Centre in the ADFWC Precinct at Williamstown, within the ADC's chain of command, and was 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. This directive spread the responsibility for joint doctrine across seven series sponsors, and assigned management production tasks to the Joint Doctrine Centre. New and developing subjects were added to joint doctrine through a system of ADF Joint Doctrine Notes, covering subjects such as stabilisation and force protection.

In 2016 the doctrine centre was transferred from ADC to the new Force Design Division established as a result of the 2015 FPR. With this transfer the centre became the Joint Doctrine Directorate, headed by a civilian Executive Level 2 officer, who commenced his appointment in early 2017. Also in 2016, it was decided to move the joint doctrine organisation to Canberra by the end of 2017. A new Joint Force Authority directive, which centralised joint doctrine development under the VCDF once more, was published in September 2017.<sup>49</sup>

With recent changes in operational tempo and the resultant greater significance of joint collective training, the relationship between collective training and 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. Then, from 1997, when the joint exercise staff and the joint doctrine team were brought together in ADFWC, until the demerger of ADFWC in 2010, the close links between doctrine and joint exercises were sustained. Today, however, it seems that the validation of joint

doctrine is rarely listed as an explicit exercise objective. This is a missed opportunity. There is significant value to be gained from improving the current linkages between joint doctrine and collective training, particularly in testing and understanding new technologies and the procedures to utilise them, as many parts of the ADF 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.

## Preparedness

In the foreword to *The Defence Preparedness Manual* (DEFPREPMAN; published in 2012) the then-Secretary and CDF defined 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’.<sup>50</sup> The *Defence Corporate Plan 2016-17* lists ‘deliver and sustain Defence capability and conduct operations’ as one of three Defence Purposes and notes that such capability ‘is achieved by developing a force structure appropriately prepared for a range of military operations’.<sup>51</sup>

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’.<sup>52</sup> 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.<sup>53</sup> 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 in Townsville, based on the 3rd Brigade.

The 1987 Defence 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.<sup>54</sup> Based on this guidance a study was conducted in 1988 entitled *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.<sup>55</sup> 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.<sup>56</sup> In what has proved to be a continuing theme of subsequent preparedness arrangements, as part of the introduction of program management and budgeting in Defence, Development Division in Headquarters ADF began ‘developing procedures to quantify the resource costs for maintaining force elements at different levels of readiness’.<sup>57</sup>

The *Force Structure Review 1991* summarised developments in ‘readiness and sustainability’ up until that time, including using the term ‘preparedness’.<sup>58</sup> 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'.<sup>59</sup> 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.<sup>60</sup> CPD 92 also included the terms minimum and operational levels of capability, which continue to be used in Defence preparedness documents.<sup>61</sup>

In 1995, the joint doctrine publication ADFP 00.2—*Preparedness and Mobilisation* was first published, and a history of Operations Division (within Headquarters ADF) noted that its Directorate of Joint Planning managed the CDF Preparedness Directive and Preparedness Reports.<sup>62</sup> 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'.<sup>63</sup>

In the late 1990s, the newly established COMAST issued preparedness requirements in an Operational Preparedness Requirement (OPR) based on the CPD. In 1997-98, additional funding was provided to address priority preparedness requirements.<sup>64</sup> 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.<sup>65</sup> As a result, two reviews were established in 2000 to determine these improvements.<sup>66</sup>

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 implemented and set the stage for a more comprehensive approach to preparedness with a particular focus on the resource implications.<sup>67</sup> In 2004, reflecting this broader Defence approach, preparedness doctrine was updated in a Defence doctrine publication, ADDP 00.2—*Preparedness and Mobilisation*, which replaced the edition of ADFP 00.2 that had been published in 1995. Not surprisingly, in the same year, a second ANAO audit of defence preparedness found that Defence's Preparedness Management System was a sound framework with effective linkages between strategic guidance and the Service outputs.<sup>68</sup>

The increase in operational tempo from 2005 resulted in 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 the 2009 Defence white paper. This white paper endorsed preparedness reform, and 'preparedness and operating costs' became a stream in the Strategic Reform Program.

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, with HQJOC responsible for preparedness reporting.<sup>69</sup> Secondly, the procedural manual (DEFPREPMAN) was drafted and doctrine was updated in 2013 with the publication of a new version of ADDP 00.2. Thirdly, a new information system project was funded to integrate information from the three Service systems, the Defence financial and personnel



information systems, and the Defence deficiencies database. Fourthly, there was an effort to improve costing information.<sup>70</sup>

DEFPREPMAN outlined the processes Defence used to define requirements in the CPD and to report on the achievement of these requirements. It also provided guidance on linking Defence activity and resource allocation to these requirements.<sup>71</sup> It listed eight Defence Preparedness Requirements (DPR), which covered 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 noted that this assignment allowed capability management directives and training requirements to be developed for each of these Defence elements.<sup>72</sup>

Eighteen Defence operational and enabling functions were defined in the DEFPREPMAN. These described the generic functions that Defence elements undertake to support various DPR.<sup>73</sup> The operational functions included 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 stated that the Defence operational and enabling functions described in functional terms ‘what Defence does’ and supports better enterprise management of preparedness.<sup>74</sup>

In 2015, Defence reported that it had ‘established sustainable Defence preparedness levels to provide military response options for Government’.<sup>75</sup> In 2016, it reported that all three Services had achieved a level of training that maintained ‘core skills, professional standards and baseline preparedness’, but there were ‘some issues affecting preparedness performance, such as ongoing maintenance of the Armidale class patrol boat fleet and skill shortages in specialist areas; however, these have not affected Defence’s ability to meet Government-directed tasks’. The report observed that work to address these issues would continue in 2016–17.<sup>76</sup>

In late 2016, Defence produced a new Defence Preparedness Manual to replace the DEFPREPMAN. This new manual updated responsibilities and processes resulting from changes established in the FPR. It took a different approach from DEFPREPMAN 2012, noting that:

*As Defence is a complex organisation with a diverse range of responsibilities, one simple framework or metric used across the Department to manage and assess preparedness from the tactical through to the strategic level is not possible. This handbook therefore, takes a broader view of preparedness than we have in the past and proposes additional reporting methodologies that may prove more useful to those organisations that do not directly manage combat capability but nonetheless need to be included in the preparedness reporting system.<sup>77</sup>*

This 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, making hard decisions on the priority of what Defence must be prepared to do within its resource envelope will require particular priority to be

given to the better analysis of preparedness reporting. In early 2017, Defence presented some of its improvements in preparedness analysis through the use of data visualisation tools.<sup>78</sup>

Any approach to determine what Defence 'no longer needs to do' requires a culture in senior leadership that clearly focusses on the objectives of the whole organisation, rather than on individual Services or Groups. Since 2012, with the issue of *Pathway to Change: Evolving Defence Culture*, Defence has been specific about this necessity. While *Pathway to Change* was focussed principally on Defence's need for change in the way its people deal with each other, it also provided 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)'.<sup>79</sup> This approach was reinforced in FPR 2015, which was entitled *One Defence*, with its Recommendation 4.7 proposing that Defence create 'a culture where leadership, professionalism and corporate behaviour are valued and rewarded'.<sup>80</sup>

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 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 and other aspects of current force management also require the Services and Groups to have a joint- and corporate-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.<sup>81</sup> 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.<sup>82</sup> The history of single Service capability management, together with the development of joint capability coordination, management and integration, demonstrates Defence's attempts to achieve this 'bringing together' at a management level.

## Capability management, coordination, interoperability and integration

The improvements in joint preparedness, training and doctrine, together with the joint command arrangements discussed in the previous chapter, 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. We also discuss further joint capability coordination and integration initiatives taken after 1997, in particular to address the increasing impact of information and communications technology (ICT), which was described in *Australia's Strategic Policy 1997* as the 'knowledge edge'. Since the 1990s, Defence's implementation of improved ICT has resulted in enhanced networking and interconnectivity, more pervasive situational awareness and the emergence of 'cyber' as a separate domain for conflict – all drivers of an increasingly joint approach across the traditional domains of sea, land and air.

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' responsibilities. These functions are important elements of Defence's fundamental inputs to capability through which the Services deliver their capabilities.<sup>83</sup> 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.

As well, additional logistics funds had to be allocated to address urgent and priority requirements for current Service capabilities. In July 1998, a review was established 'to explore options and make recommendations for improving capability management'.<sup>84</sup> 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'.<sup>85</sup>

In 2000, the terminology for the Service Chiefs' responsibility for delivering current capability was changed to Output Executive and by 2002 their roles were outlined in the Capability Systems Life Cycle Management Manual issued in November of that year.<sup>86</sup> By 2006, the terminology for these Service Chief responsibilities had become Capability Manager, the expression still used today.<sup>87</sup> The Australian Defence Glossary defines a 'Capability Manager' as being responsible for delivering their respective capabilities at the levels of preparedness described in the CPD.<sup>88</sup>

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 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.<sup>89</sup> 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), Deputy Secretary Intelligence and Security and CIO were listed as Capability Managers along with the Service Chiefs.<sup>90</sup>

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 procure new larger amphibious ships was a catalyst for a more joint approach to amphibious capability management. In 2003, the Joint Amphibious Steering Group was formed as a one-star committee to coordinate amphibious capability and associated management activities. In 2006, as the project to acquire these ships gained momentum, a Joint Amphibious Capability Implementation Team was formed to coordinate the introduction into service of the project's capability. In the same year, a three-star Joint Amphibious Council, chaired by Chief of Navy, was established to provide 'strategic guidance for the continued improvement and development of current and future ADF amphibious capability'.<sup>91</sup> 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 command responsibilities 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 network centric warfare (NCW). In 2009, VCDF established the Joint Capability Coordination Division. From then Head Joint Capability Coordination took on a coordination role for a range of joint capabilities, numbering at least fourteen by 2016 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; counter-improvised explosive devices; and (until recently) simulation. In addition, logistics and health were given similar joint coordination functions through the two commands also under VCDF.

By 2013, VCDF had become the Joint Capability Authority (JCA) with the role to strengthen leadership, coordination and coherence in the design, development and operation of the ADF. This change intended to create an integrated, joint force across sea, land and air domains.<sup>92</sup> As a result, the joint approach to capability management was adjusted, with only the Service Chiefs and Deputy Secretary Intelligence and Security being designated Capability Managers.<sup>93</sup> Consequently, the joint function became 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'.<sup>94</sup>

This different approach to capability management for single Service and joint capabilities seemed difficult to justify. Emerging joint capabilities are as important as those of the single Services and as much in need of proper management, as distinct from coordination, as those of the Services. The establishment of a joint capability manager seemed the obvious next step. In 2017, Defence took that step, establishing a Chief of Joint Capabilities (CJC), reporting directly to CDF, 'to advise on capability in the information environment, as well as military enablers, complementary to the current sea, land and air environmental advice of the Service Chiefs'.<sup>95</sup>

As part of this latest change, CDF stated that VCDF's role would be 'redefined to be the Joint Force Authority (replacing previous roles) and accountable for the generation and preparedness of Joint Forces'.<sup>96</sup> One key aspect of this role is integration, a joint responsibility that VCDF has had for a number of years as the JCA.

From a capability perspective, Defence defines integration as 'the bringing together of components and ensuring that they function together'.<sup>97</sup> Integration first became a significant term in Australian Defence organisational language when the Defence efficiency review noted that Defence in 1997 was 'well placed to pursue further integration of civilian and military staffs so that the full range of skills and intellects [could] be applied to common objectives'.<sup>98</sup> As a result, Defence was re-organised to include an integrated civil-military Australian Defence Headquarters and a number of similarly integrated enabling programs. This organisational construct is reflected in

defence instructions and continues today in the phrase that Defence ‘has an integrated workforce’.<sup>99</sup>

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.<sup>100</sup> He embraced the notion of a future ‘seamlessly integrated force’ that not only included the ADF ‘but also includes Defence civilians, our embedded contractors and defence industry, and where necessary, our allies and coalition partners’.<sup>101</sup> His successors, General Sir Peter Cosgrove and Air Chief Marshal Sir Angus Houston, continued with the idea of an integrated, seamless force in their subsequent concepts published in 2003 and 2007 respectively, with the implementation of NCW seen as a key mechanism to achieve integration.<sup>102</sup>

Since such NCW integration was seen as a future ambition 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 within CDG ‘as a solution to cross project integration’.<sup>103</sup> Thus, Defence integration also became closely associated with program coordination of projects and ICT interoperability.

The *Defence Capability Development Manual 2006* (DCDM) articulated the role of the NCW Program Office, 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.<sup>104</sup> To support combined interoperability in capability development, an Office of Interoperability was established in CDG, which also provided support to CJOPS and the then Strategy Group on interoperability issues.<sup>105</sup> By 2012, the concept of integration had become more significant in a capability sense, with VCDF having the role of JCA and with one of the branches of CDG (Integrated Capability Development Branch) having its main focus on the delivery of integrated capability.<sup>106</sup> With the disbandment of CDG in 2016, the enterprise integration functions of that organisation were transferred to VCDF’s new Joint Capability Management and Integration (JCMI) Division, with VCDF’s enterprise integration title being re-named the Joint Force Authority in 2017.

In issuing Defence’s 2016 Integrated Investment Program (IIP), Defence again expanded the meaning of integration to involve the bringing together of ‘the key elements of investment needed to deliver and sustain Australia’s defence capabilities [including] equipment, infrastructure, information and communications technology, science and technology, and workforce’.<sup>107</sup> This view of integration is closely related to VCDF’s enterprise integration function, with VCDF also being responsible for the ongoing development and execution of the IIP.

Thus, within Defence, integration now operates at three 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 and CIO Group now have organisations that advance integration of these information capabilities within the force.
- Secondly, there is integration of capability at the enterprise level, the responsibility of VCDF as JFA. 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.

- Finally, and related to the second level, there is Defence as an integrated military-civilian organisation with an integrated (i.e. military and civilian) workforce.

To emphasise the relationship between the second and third 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. This has involved policy and structural responses which themselves have changed over the ensuing decades.

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 [Defence elements]'.<sup>108</sup> On allied capabilities, the 2014 *Defence Capability Development Handbook* emphasised the importance of combined interoperability, particularly with the United States (as mentioned in DCDM 2006), as well as continuing to emphasise joint ADF interoperability.<sup>109</sup> When the Office of Interoperability was disbanded around 2007, the function was transferred to CDG's Directorate of Industry and International Engagement.<sup>110</sup> When CDG itself was disbanded in 2016, interoperability became the responsibility of VCDF's JCMI Division.<sup>111</sup>

The DCDM 2014 repeated these interoperability definitions but expanded combined interoperability to 'combined and coalition'. The manual also highlighted the necessity of interoperability with Australia's civilian agencies, the Australian intelligence community and key national transport and logistics agencies. It noted that this 'will become more important in the future as the Australian Defence Force participates in Joint Interagency Task Forces', reflecting the greater involvement of civilians and civilian agencies in recent operations.<sup>112</sup> Defence's most recent definition of interoperability pulls all this together by including the following sentence: 'Defence seeks to operate effectively as a joint force, interoperable with allies and, where applicable, other government and national agencies'.<sup>113</sup>

Of the three levels of integration described above, the most important strategic function for VCDF is enterprise capability integration as the Joint Force Authority. VCDF is the only senior joint position that, as deputy to CDF, has the authority to oversee all aspects of Defence involved with capability, which is 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, but also the personnel and financial resources devoted to each. There is also the issue of balance between various functions (both military and enabling) and the issue of determining the appropriate level of combined interoperability.

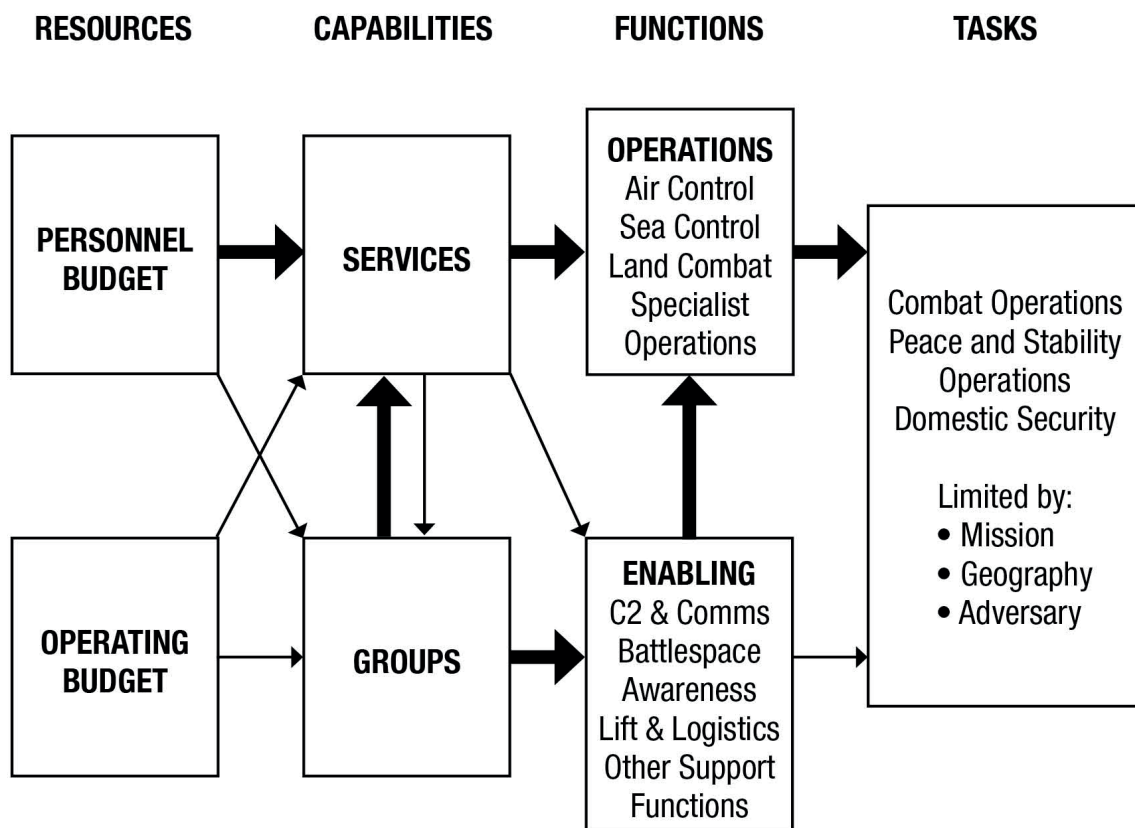
## A new model for joint capability integration

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. The challenge increased in the late 2000s, as Defence sought to design, build and prepare an integrated joint force based on the three Services, ready to operate in

a networked battlespace. It was also made more challenging by further centralisation of enabling functions under the Strategic Reform Program from 2009. These dependencies have been recently articulated in Defence’s Simplified Business Model.<sup>114</sup> From our analysis of developments in Defence over the last two decades, we present a model for managing the current force in Figure 3.1. This model is based on Defence’s Simplified Business Model 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), each constrained by mission, geography and the threat.<sup>115</sup> 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.

**Figure 3.1: 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 the many ADF personnel posted to these Groups. Examples of this arrangement are the two Groups under Defence's Associated Secretary, the Chief Operating Officer – ICT and support.<sup>116</sup> 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 properly trained Service personnel to undertake this support.

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.

Finally the operational functions perform the majority of the tasks, particularly in relation to combat operations, supported by the enabling functions. But the enabling functions (for example lift and logistics) often perform independent tasks in non-violent peace and stability operations.

Hopefully this model will assist VCDF Group 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 enablers. It also indicates that cuts to the civilian workforce, on the basis that they are in the 'back-end', might have very direct impacts on the Services themselves and on the enabling functions, which together provide and support combat operations. It further indicates that such civilian reductions may also result in the ADF having to shoulder additional burdens in enabling functions that could be performed by civilians. Equally, it suggests what elements of Groups are more critical than others should further adjustments be necessary.

As a result of the FPR Defence gave a more prominent place to enabling functions that acknowledged both the joint and integrated nature of these functions. VCDF remained responsible for ensuring joint force integration and for military enabling functions while the Associate Secretary was given responsibility for integration of corporate enabling functions.<sup>117</sup>

Under these new arrangements it seemed to the authors that VCDF's responsibility for enhancing strategic enterprise capability integration would be difficult to implement within the JCMI Division, while the division also had the specific responsibility (i.e. tactical responsibility) for at least fourteen diverse joint capabilities. We noted that with the need for greater efficiency and connectivity that number would go up. We also noted that all of these enabling capabilities had gained increased importance as a result of recent operations and often had been, at least in part, sustained by operations funding that has now reduced for many of them.<sup>118</sup>

The new CJC established in July 2017 takes responsibility for many of these joint capabilities, including the military and operational aspects of information, cyber, electronic warfare, intelligence, targeting systems and space capabilities, assisted in this responsibility by a Deputy Chief of Information Warfare.<sup>119</sup> Based on CDF's intent CJC will take responsibility for the management of specific joint capabilities currently assigned to VCDF, including Joint Health, Logistics, Education and Training, and Information Warfare.<sup>120</sup> This will allow VCDF to focus on the enterprise functions of



management of the current force, including preparedness, integration and planning. It will allow VCDF to be a more effective 'umpire' in guiding both single Service and joint enabling capability management and preparedness at the enterprise level. It will also give VCDF more time to focus on designing the joint force and managing the IIP.

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 those under a joint Capability Manager. 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 chapter, 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 in Defence 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 Defence corporate and business planning over the four years of the Budget forward estimates.
4. Capability planning, resulting in the Defence IIP 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 IIP and Service and Group modernisation plans, capability management plans and activities.
6. Specific joint capability management planning such as for ICT and surveillance, where until recently there was a joint capability coordinator, will now be the responsibility of CJC as the joint capability manager.

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 under VCDF's Military Strategic Commitments Division, with the majority of the operational planning effort conducted by CJOPS and HQJOC. Since 2004, capability planning, at least for the DCP, was the responsibility of Capability Development Group. But, since 2015, that has been transferred to Force Design Division (in VCDF Group), which also has responsibility for preparedness. Enterprise integration planning also resides with VCDF and should remain there, while joint capability management for specific capabilities will soon properly reside with CJC.

Leaving aside the long term military strategic planning function, which is appropriately placed with strategic policy, and specific joint capability management that is best done by CJC, the four other joint strategic planning functions should and will remain under VCDF. In addition, with the establishment of CJC, VCDF's role is changing from having responsibility for specific joint capabilities to being the Joint Force Authority responsible at the enterprise level for 'the generation and

preparedness of Joint Forces', which includes all single Service and joint capabilities contributing to the joint force.<sup>121</sup>

This arrangement also changes VCDF's role on the Enterprise Business Committee proposed by FPR 2015, and implemented by Defence, which is 'chaired by the Associate Secretary and [is] responsible for ensuring the effective running of the Defence organisation, [including] planning, performance monitoring and reporting, enterprise risk management, information management and service delivery reform'.<sup>122</sup> VCDF is a member of this committee and alternate chair. After the establishment of CJC, who as a separate Group Head we assume will become a member of the Enterprise Business Committee, VCDF's role will focus solely on his enterprise role of 'generation and preparedness of Joint Forces'.

To perform this role most effectively, VCDF needs the support of a two star officer and staff performing the key J5 staff function. With Head of Military Strategic Commitments as the J3 and Head of Force Design as the J8, the obvious candidate two star candidate for J5 would be the new Head of Force Generation, who replaces and retains some of the enterprise functions of the current Head CJMI in the Strategic Joint Staff that was established in July 2017.<sup>123</sup> This J5 position should take over Head of Force Design's current responsibilities for preparedness, a clear current force management function, as well as lessons capture relevant to the whole of Defence. The position would also be VCDF's representative in giving senior ADF oversight into the Defence Enterprise Performance management approach.<sup>124</sup> Such an arrangement would ensure the 'more integrated approach to directing ADF activity' in Force Generation, which CDF is seeking with the new ADF Headquarters arrangements.<sup>125</sup>

The authors have identified two types of joint capability management tasks: enterprise preparedness and integration; and management of specific joint capabilities. These tasks have significantly different characteristics and should be undertaken by different people, something that has been adopted within the new ADFHQ. Enterprise preparedness and integration (points 3 and 5 of the above list) are high-level strategic functions that are reasonably static in nature. They are also concerned with balancing resources for various capabilities in the Services (both combat and enabling) and in the Groups. These responsibilities should remain with VCDF and the J5 strategic staff function, working closely with the civilian side of Defence as well as the Services.

Management or coordination of specific joint capabilities, principally enabling functions (point 6 of the above list), is analogous to the capability management functions of the Services and Intelligence. This area is developing quickly, particularly as technology provides new joint opportunities. It requires deep knowledge of individual capabilities and of the likely directions for their future development, and should be the responsibility of the new CJC.

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 implementing the force structure review and Defence Integrated Investment Program associated with the 2016 Defence white paper, an equally important function comes to the fore, namely designing and building the future Australian Defence Force, the subject of the next chapter.

## Notes

<sup>1</sup> Australian Defence College (ADC), *The Evolution of the Australian Defence College: Leading Defence Learning*, July 2013 (online, [http://www.defence.gov.au/ADC/Docs/About/ADC\\_Evolution.pdf](http://www.defence.gov.au/ADC/Docs/About/ADC_Evolution.pdf), accessed 15 May 2017), p. 12.

<sup>2</sup> There is 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.

<sup>3</sup> David Horner, *Making the Australian Defence Force*, The Australian Centenary History of Defence, Volume 4 (South Melbourne: Oxford University Press, 2001), p. 283.

<sup>4</sup> Horner, *Making the Australian Defence Force*, p. 286.

<sup>5</sup> Horner, *Making the Australian Defence Force*, pp. 288-290.

<sup>6</sup> Department of Defence (Defence), *Defence Annual Report 1997-98* (Canberra: Defence, 1998), Program 7: Joint Education and Training.

<sup>7</sup> Horner, *Making the Australian Defence Force*, p. 292.

<sup>8</sup> Horner, *Making the Australian Defence Force*, p. 293.

<sup>9</sup> Horner, *Making the Australian Defence Force*, pp. 291-292.

<sup>10</sup> ADC, *The Evolution of the Australian Defence College*, p. 5; ADC, *Australian Defence College Strategic Plan 2013-2017: 'Leading Defence Learning'*, July 2013 (online, [http://www.defence.gov.au/ADC/Docs/About/ADC-Strategic-Plan\\_2013-2017.pdf](http://www.defence.gov.au/ADC/Docs/About/ADC-Strategic-Plan_2013-2017.pdf), accessed 15 May 2017), p. 6.

<sup>11</sup> Defence, *Australian Defence Force Warfare Centre: History* (online, <http://www.defence.gov.au/adfwc/about.html>, accessed 29 October 2012).

<sup>12</sup> Defence, *Australian Defence Force Warfare Centre: Recent History* (online, <http://www.defence.gov.au/adfwc/about.html>, accessed 17 March 2014).

<sup>13</sup> ADC, *The Evolution of the Australian Defence College*, p. 12.

<sup>14</sup> ADC, *Transforming Defence Education and Training*, July 2012 (online, [http://www.defence.gov.au/ADC/Docs/About/HQADC\\_120213\\_TransformingADC.pdf](http://www.defence.gov.au/ADC/Docs/About/HQADC_120213_TransformingADC.pdf), accessed 15 May 2017), pp. 10-11.

<sup>15</sup> ADC, *The Evolution of the Australian Defence College*, p. 14.

<sup>16</sup> ADC, *Australian Defence College Strategic Plan 2013-2017*, p. 12.

<sup>17</sup> Defence, *DEFGRAM 017/2017: Chief of the Defence Force Senior and Non-Commissioned Leadership Forum* (unpublished, dated 17 January 2017).

<sup>18</sup> Defence, *First Principles Review: Creating One Defence* (Canberra: Defence Publishing Service, 1 April 2015), p. 28.

<sup>19</sup> Air Chief Marshall Mark Binskin, *Implementing the Defence Headquarters Review: Update and CDF Intent* (unpublished email to all Defence personnel, 11 January 2017).

<sup>20</sup> Defence, *Australian Defence Force Headquarters Cascade Brief No. 1* (unpublished presentation, 16 May 2017).

<sup>21</sup> ADC, *Transforming Defence Education and Training*, pp. 10-11.

<sup>22</sup> US Department of Defense, *CJCS [Chairman of the Joint Chiefs of Staff] Vision for Joint Officer Development*, November 2005, (online, [http://www.dtic.mil/doctrine/education/officer\\_JPME/cjcsvision\\_jod.pdf](http://www.dtic.mil/doctrine/education/officer_JPME/cjcsvision_jod.pdf), accessed 15 May 15), p. 2; US National Defense University, *Vision and Mission* (online, <http://www.ndu.edu/About/Vision-Mission/>, accessed 23 July 2014).

<sup>23</sup> 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.

<sup>24</sup> In 2010, Dr Aaron P. Jackson proposed the establishment of a 'joint warfare studies centre'. In 2012, this proposal was adopted as a recommendation within an Australian Strategic Policy Institute paper on JPME. The timing of the establishment of the Defence Research Centre in 2013 indicates that the decision to establish it may have been influenced by these proposals. Aaron P. Jackson, 'It's Time for an ADF Joint Warfare Studies Centre', *Australian Defence Force Journal*, No. 181 (March/April 2010), pp 41-51; Hugh Smith & Anthony Bergin, 'Educating for the Profession of Arms in Australia', *Special Report No. 48* (Canberra: Australian Strategic Policy Institute, August 2012), pp. 28-29.

<sup>25</sup> Defence, *DEFGRAM 447/2016: Enhancing Defence Senior Leader Capability: PhD by Port Folio* (unpublished, dated 22 September 2016).

<sup>26</sup> Jackson, 'It's Time for an ADF Joint Warfare Studies Centre', pp. 41-51.

<sup>27</sup> RAAF, "'N.Z.3": First Joint Exercise for the RAAF', *Pathfinder: Air Power Development Centre Bulletin*, No. 56 (November 2006).

<sup>28</sup> Defence, Joint Staff Publication (Australia) (JSP (AS)) 1(A)—*Joint Operations Doctrine* (Canberra: Defence, 27 June 1979), Foreword.

<sup>29</sup> Brigadier R. A. Sunderland, 'Exercise Kangaroo 81: The Stage is Set', *Australian Defence Force Journal*, No. 30 (September/October 1981), pp. 5-10.

<sup>30</sup> Horner, *Making the Australian Defence Force*, p. 124.

<sup>31</sup> Bob Breen, *Australian Military Force Projection in the late 1980s and the 1990s: What Happened and Why* (PhD Thesis, Australian National University, 2006), p. v; and authors' subsequent interview with Dr Bob Breen, Australian National University, 17 July 2014.

<sup>32</sup> Globalsecurity.org, *Exercise Crocodile* (online, <http://www.globalsecurity.org/military/ops/crocodile.htm>, accessed 19 June 2013).

<sup>33</sup> Defence, 'Exercise Talisman Sabre 2013 Begins', *Defence News* (online, <http://www.defence.gov.au/defencenews/stories/2013/jul/0715.htm>, accessed 22 May 2017).

<sup>34</sup> General David Hurley, 'The Australian Defence Force Today and Tomorrow', *United Service*, Vol. 64, No. 4 (Summer 2013), pp. 11-16.

<sup>35</sup> Defence, *Joint Capability Instruction No. 8/13: Joint Collective Training and Supporting Simulation Framework*, (unpublished, dated 19 December 2013), para 16. VCDF (through Head Joint Capability Coordination) retains responsibility for policy.

<sup>36</sup> Defence, Australian Defence Doctrine Publication-Doctrine (ADDP-D)—*Foundations of Australian Military Doctrine* (Canberra: Defence Publishing Service, 2012), Foreword & paras 3.8-3.9.

- <sup>37</sup> Author's private communications with Mr Jeff Malone, DST Group analyst, 29 July 2014.
- <sup>38</sup> Defence, JSP (AS) 8—*Procedures for Joint Command and Control* (Canberra: Defence, date of publication unknown but sometime between 1974 and 1976), Foreword.
- <sup>39</sup> J.M Chesterfield, 'Australian Joint Force Operations', *Australian Defence Force Journal*, No. 9 (March/April 1978), pp. 12-15.
- <sup>40</sup> Author's private communications with Mr Jeff Malone, DST Group analyst, 30 March 2015.
- <sup>41</sup> Defence, JSP (AS) 1A—*Joint Operations Doctrine* (Canberra: Defence, June 1979; amended October 1981), Foreword. This Foreword also notes that the suffix 'A' indicates that the manual is a second edition.
- <sup>42</sup> Horner, *Making the Australian Defence Force*, p. 283.
- <sup>43</sup> Aaron P. Jackson, *Doctrine, Strategy and Military Culture: Military-Strategic Doctrine Development in Australia, Canada and New Zealand, 1987–2007* (Trenton, ON: Canadian Forces Aerospace Warfare Centre, 2013), p. 147.
- <sup>44</sup> Tomas-Durell Young, "'Top down" Planning and Joint Doctrine: The Australian Experience', *Joint Force Quarterly*, No. 12 (Summer 1996), pp. 61-66.
- <sup>45</sup> Horner, *Making the Australian Defence Force*, p. 155.
- <sup>46</sup> Defence, *Decisive Manoeuvre: Australian Warfighting Concepts to Guide Campaign Planning* (Canberra: Defence Publishing and Visual Communications, 1998), Foreword.
- <sup>47</sup> Defence, *Defence Annual Report 1998-99* (Canberra: Defence, 1999), p. 181.
- <sup>48</sup> Jackson, *Doctrine, Strategy and Military Culture*, p. 148.
- <sup>49</sup> Defence, *Joint Force Authority Directive 05/2017: Centralisation of Joint Doctrine* (unpublished directive dated 14 September 2017).
- <sup>50</sup> Approved by the Secretary and CDF, *The Defence Preparedness Manual* (Canberra: Defence Publishing Service, 2012), Part One, Chapter One, Para. 1.1.
- <sup>51</sup> Defence, *Defence Corporate Plan 2016-17* (Canberra: Defence Publishing Service, 2016), pp. 2- 3.
- <sup>52</sup> National Archives of Australia, *Universal Military Training in Australia, 1911-29 – Fact Sheet 160* (online, <http://www.naa.gov.au/collection/fact-sheets/fs160.aspx>, accessed 5 March 2013).
- <sup>53</sup> Defence, *Defence of Australia* [1987 Defence white paper] (Canberra: Defence, 1987), para 3.36-3.37.
- <sup>54</sup> Defence, *Defence of Australia*, para 3.42-3.43.
- <sup>55</sup> ANAO, *Audit Report No. 17: Management of Australian Defence Force Preparedness, Preliminary Study 1995-96* (Canberra: ANAO, 1996), p. 14.
- <sup>56</sup> Defence, *Defence Annual Report 1989-90* (Canberra: Defence, 1990), p. 23.
- <sup>57</sup> Defence, *Defence Annual Report 1989-90*, p. 23
- <sup>58</sup> Defence, *Force Structure Review: Report to the Minister of Defence* (Canberra: Defence, 1991), para 1.5-1.7.

<sup>59</sup> Defence, *Defence Annual Report 1990-91* (Canberra: Defence, 1991), p. 25.

<sup>60</sup> 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'.

<sup>61</sup> Assistant CDF (Operations), *ADF Preparedness*, address to Joint Services Staff College, November 1992. From one of the authors' notes taken during attendance at this lecture.

<sup>62</sup> Defence, Australian Defence Doctrine Publication (ADDP) 00.2—*Preparedness and Mobilisation (Provisional)* (Canberra: Defence Publishing Service, 2004), p. 2; 'The Operations Division and Its History', pp. 2-3. The second source referenced here is chapter two of an Inspector General's review of Operations Division, which itself references *Defence Annual Report 1994-95* (Canberra: Defence, 1995).

<sup>63</sup> ANAO, *Audit Report No. 17*, p. 11.

<sup>64</sup> Defence, *Defence Annual Report 1997-98*, p. 10.

<sup>65</sup> Defence, *Defence Annual Report 2000-01* (Canberra: Defence, 2001), p. 14.

<sup>66</sup> The two reviews are: *A Review of Decision Making for Preparedness*, led by Dr Peter Preston from DSTO; and *Preparedness Task Force Review of ADF Preparedness Management*, led by Air Vice Marshall Peter Criss.

<sup>67</sup> Defence, *Defence Annual Report 2000-01*, p. 14.

<sup>68</sup> ANAO, *Audit Report No. 43: Defence Force Preparedness Management Systems, 2003-04* (Canberra: ANAO, 2004), p. 12.

<sup>69</sup> Interview with Mr Mark Thorek, Director Preparedness and Evaluation, 14 December 2013.

<sup>70</sup> Interview with Commodore Phillip Spedding, Director General Preparedness, 23 November 2012; Lieutenant Colonel Andrew Stevens, 'Preparing Defence', *Defence Magazine*, No. 6 (2012).

<sup>71</sup> Defence, *Defence Preparedness Manual* (draft version, sighted 10 December 2014), Part 1, Chap. 1, Annex B.

<sup>72</sup> Defence, *Defence Preparedness Manual*, Part 1, Chapter 1, Annex A & Part 2, (draft) para 1.29. The Australian Defence Glossary defines a Defence element as '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 has the ability to achieve a desired effect in a nominated environment, within a specific time, and to sustain that effect for a designated period'. This definition is almost identical to that of the older, better known term 'force element'. We assume that 'Defence element' is used for preparedness because an increasing numbers of these elements are from the civilian component of Defence.

<sup>73</sup> Defence, *Defence Preparedness Manual*, Part 2, para 1.31-1.33.

<sup>74</sup> Defence, *Defence Preparedness Manual*, Part 2, (draft) para 1.31-1.33.

<sup>75</sup> Defence, *Defence Annual Report 2014-15* (Canberra: Defence Publishing Service, 2015), p. 60.

<sup>76</sup> Defence, *Defence Annual Report 2015-16* (Canberra: Defence Publishing Service, 2015), pp. 32-34.

<sup>77</sup> Joint Force Analysis Branch, *Defence Preparedness Handbook*, version 1.0 (unpublished Department of Defence document, dated September 2016), p. 6.

<sup>78</sup> Cheryl Durrant, *Analysing Humanitarian Assistance and Disaster Relief: A Case Study in how Data Visualisation can Improve Preparedness Analysis*, presentation to the 2017 Preparedness Forum, 27 February to 1 March 2017.

<sup>79</sup> Defence, *Pathway to Change: Evolving Defence Culture* (Canberra: Defence Publishing Service, 2012), p. 13.

<sup>80</sup> Defence, *First Principles Review*, Recommendation 4.7.

<sup>81</sup> Defence, ADDP 00.6—*Leadership* (Canberra, Defence Publishing Service, 2007), para 3.17-3.18.

<sup>82</sup> Interview with Lieutenant General (retired) Des Mueller, January 2015.

<sup>83</sup> Defence, *Capability Systems Life Cycle Management Manual 2002* (Canberra: Defence, 2002), para 1.1. Regarding the fundamental inputs to capability, the latest Defence definition is a standardised checklist of nine inputs, designed to enable the effective generation of Defence capabilities. The inputs are: organisation; command and management; personnel; collective training; major systems; facilities and training areas; supplies; support; and industry. See: Defence, *Interim Capability Life Cycle Manual* (Canberra: Defence, 2017), para 1.38-1.41.

<sup>84</sup> Defence, *Defence Annual Report 1997-98*, pp. 10-11.

<sup>85</sup> Defence Executive, *A Message to all Defence Personnel from the Executive* (internal Defence memorandum, dated 6 July 1998), quoted in: ANAO, *Audit Report No. 13: Management of Major Equipment Acquisition Projects 1999-00* (Canberra: ANAO, 2000), p. 58.

<sup>86</sup> Defence, *Defence Annual Report 1999-00* (Canberra: Defence, 2000), p. 56; Defence, *Capability Systems Life Cycle Management Manual 2002*, para 5.11.

<sup>87</sup> Defence, *Defence Capability Development Manual 2006* (Canberra: Defence, 2006), pp 10-11; Defence, *Defence Capability Development Handbook*, 2012 ed. (Canberra: Defence Publishing Service, 2012), p. 17.

<sup>88</sup> 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.

<sup>89</sup> Defence, *Defence Annual Report 2001-02* (Canberra: Defence, 2002), p. 39.

<sup>90</sup> Defence, *Defence Capability Development Manual 2006*, p. 10.

<sup>91</sup> Joint Amphibious Council, *Terms of Reference* (unpublished draft, dated August 2009).

<sup>92</sup> Defence, *Defence White Paper 2013* (Canberra: Defence Publishing Service, 2013), para 5.1.

<sup>93</sup> Defence, *Defence Annual Report 2013-14* (Canberra: Defence Publishing Service, 2014), p. 10. In addition to referring to Capability Managers, this publication 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.

<sup>94</sup> Defence, *Defence Capability Development Handbook*, 2012 ed., para 1.6.14-1.6.22.

<sup>95</sup> Binskin, *Implementing the Defence Headquarters Review*.

<sup>96</sup> Binskin, *Implementing the Defence Headquarters Review*.

<sup>97</sup> Defence, *Defence Capability Development Handbook*, 2012 ed., Glossary, p. 206.

<sup>98</sup> Defence, *Future Directions for the Management of Australia's Defence: Report of the Defence Efficiency Review* (Canberra: Defence, 1997), p. 10.

<sup>99</sup> Defence, *Defence Instruction (General) ADMIN 58-1—Authority in an Integrated Defence Organisation* (unpublished, dated 25 August 2006); Dennis Richardson (Secretary of the Department of Defence), *Speech to Australian Strategic Policy Institute Dinner*, 12 November 2013 (online, <http://news.defence.gov.au/2013/11/13/secretary-of-the-department-of-defence-mr-dennis-richardson-speech-to-aspi-dinner-12-november-2013/>, accessed 4 February 2014).

<sup>100</sup> Defence, ADDP-D.1—*The Australian Approach to Warfare* (Canberra: Defence Publishing Service, 2002), p. 23.

<sup>101</sup> Defence, ADDP-D.2—*Force 2020* (Canberra: Defence Publishing Service, 2002), p. 17.

<sup>102</sup> Defence, ADDP-D.3—*Future Warfighting Concept* (Canberra: Defence Publishing Service, 2002, reprinted 2003), p. 16; Defence, *Joint Operations for the 21st Century* (Canberra: Defence Publishing Service, 2007), pp. 3 & 12.

<sup>103</sup> Defence, *Defence Capability Development Manual 2006*, para 7.71.

<sup>104</sup> 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'. Peter Jennings, 'Integration, Strategy and the ADF', *The Strategist* (blog), Australian Strategic Policy Institute, 6 March 2015 (online, <http://www.aspistrategist.org.au/integration-strategy-and-the-adf/>, accessed 7 July 2017).

<sup>105</sup> Defence, *Defence Capability Development Manual 2006*, para 1.17d; Defence, *Defence Annual Report 2005-06* (Canberra: Defence Publishing Service, 2006), web section (supplementary information), (online, [http://www.defence.gov.au/AnnualReports/05-06/web\\_only\\_section/index.html](http://www.defence.gov.au/AnnualReports/05-06/web_only_section/index.html), accessed 2 June 2016).

<sup>106</sup> Defence, *Defence Capability Development Handbook*, 2012 ed., para 1.6.7 (d).

<sup>107</sup> Defence, *2016 Defence Integrated Investment Program* (Canberra: Defence Publishing Service, 2016), p. 7.

<sup>108</sup> Defence, *Defence Preparedness Manual*, Part 2, para 1.15.

<sup>109</sup> Defence, *Defence Capability Development Handbook*, 2014 ed. (Canberra: Defence Publishing Service, 2014), para 1.6.7 (d), Additional Guidance on Integration.

<sup>110</sup> Defence, *Defence Capability Development Handbook*, 2014 ed., para 1.6.12c.

<sup>111</sup> Defence, *Integrating Operational Concept Document* (unpublished, Version 2.1, June 2016), Foreword.

<sup>112</sup> Defence, *Defence Capability Development Manual 2014* (Canberra: Defence, 2014), Chapter 2, para 2.31.

<sup>113</sup> Defence, *Interim Capability Life Cycle Manual* (unpublished version, dated 2016), Annex A.

<sup>114</sup> Defence, *Defence Corporate Plan 2012-17* (Canberra: Defence Publishing Service, 2012), p. 8.



<sup>115</sup> There are a range of other Defence peacetime tasks but these are not determinants of force structure.

<sup>116</sup> The Chief Operating Officer has the rank of Associate Secretary. As a result of the FPR, the position is now usually referred to by its rank only. This reflects the wider responsibilities the position has been given.

<sup>117</sup> Defence, *First Principles Review*, Recommendation 1.7 and pp. 22-23.

<sup>118</sup> Tim McKenna & Tim McKay, *Australia's Joint Approach*, DST Group Report No. TR 3200, September 2015, p. 35.

<sup>119</sup> Binskin, *Implementing the Defence Headquarters Review*.

<sup>120</sup> Defence, *Joint Capabilities Group* (unpublished article on Defence's intranet, accessed 4 July 2017). The Group consists of the Australian Defence College, Information Warfare Division, Joint Health Command and Joint Logistics Command.

<sup>121</sup> Binskin, *Implementing the Defence Headquarters Review*.

<sup>122</sup> Defence, *First Principles Review*, Recommendation 1.13 & p 27.

<sup>123</sup> Defence, *Australian Defence Force Headquarters Cascade Brief No. 1* (unpublished presentation, 16 May 2017).

<sup>124</sup> Defence, *The Strategy Framework 2017* (Canberra: Defence, 2017), p. 4.

<sup>125</sup> Binskin, *Implementing the Defence Headquarters Review*.



## DESIGNING AND BUILDING THE FUTURE FORCE

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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 devoted significant effort to the reform of building the force through capability development and procurement reform. This chapter focuses on how Defence approaches the task of designing the future force, noting that it not only influences building the force, but may also provide input into Government's guidance to Defence.

Force design is a term that has gained some currency in Defence in recent years to describe the processes by which Defence conceives and produces a plan for its future capabilities.<sup>1</sup> This description includes the processes of the Strategy and Concepts Phase of the Capability Life Cycle (which was known as the Needs Phase up until the publication of the 2015 *First Principles Review* (FPR)). This phase results in projects entering the Defence's Integrated Investment Program (IIP), which replaced the Defence Capability Plan (DCP) as a result of the FPR and the 2016 white paper.<sup>2</sup> But as the *Defence Capability Development Handbook* (DCDH) 2014 notes 'the planned force is developed, [only] in part, through a mix of individual projects that are entered into the DCP'.<sup>3</sup> 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, FSR have been the primary mechanism of force design in Defence.<sup>4</sup> That said, DCDH 2014 also lists a range of other force design activities including concepts, experimentation and assessment, activities that have played a force design role in the past.<sup>5</sup>

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

### 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 one of the divisions of Defence's Central Office, Force Development and Analysis (FDA) Division, in consultation with the Services.<sup>6</sup> This and other similar mechanisms continued into the 1980s, with only limited involvement from the joint military staff, which became Headquarters Australian Defence Force (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 [Chief of Defence Force Staff] to fulfil his responsibility for the preparation of policy advice on force development ... [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'.<sup>7</sup>

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 Defence white paper and the more specific guidance given in *Australia's Strategic Planning in the 1990s*. The establishment of Development Division also heralded a cultural change. General Sanderson and the then-Deputy Secretary Strategy and Intelligence Paul Dibb, under whom FDA Division 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 Division still performed a contestability function which grated with the military 'can do' culture.

*Australia's Strategic Planning in the 1990s* defined eight Defence roles for the defence of Australia and an additional role related to activities in the South Pacific.<sup>8</sup> From 1990 until 1996, the eight roles for defence of Australia were used as the basis for force structure changes (including major projects) that were associated with FSR 1991 and the 1994 Defence white paper, *Defending Australia*. FSR 1991 directed a reduction in the size of the full-time Australian Defence Force (ADF) associated with the introduction of the Ready Reserve and the civilianisation or commercialisation of many military positions as part of the Commercial Support Program. The 1994 Defence white paper 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.<sup>9</sup>

During the period 1988 to 1996, Defence used two principal tools to make the link between strategic guidance and 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 were developed, one overarching concept and one for each of the three environments.<sup>10</sup> But these environmental concepts 'did not meet the requirements of the force development process for examining ADF capabilities'.<sup>11</sup> Instead, from 1990, *Australia's Strategic Planning in the 1990s* roles were used as the subjects for each concept to ensure a more joint approach.

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 project, after years of debate about the capability in Defence.<sup>12</sup>

In 1997, the Howard Government issued new strategic guidance through *Australia's Strategic Policy*, 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'.<sup>13</sup> The period 1997 to 2000 saw a move away from using concepts to a focus on a military strategy (based on the three *Australia's Strategic Policy* tasks) as the starting point for force design. Even so there was still some concept work, which influenced the design of Defence's information capabilities, including Commander Australian Theatre'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 program), the Army started an experimentation program in 1997 supported by Defence Science and Technology Organisation (DSTO), which informed Army's decision-making. In 2000, DSTO formed a joint experimentation branch to contribute to concept development and experimentation across Defence. During this period capability studies continued within Australian Defence Headquarters and (on behalf of Australian Defence Headquarters) 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*.<sup>14</sup>

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.<sup>15</sup> FOT and existing capability studies informed the capability sections of the 2000 Defence 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 the 2000 Defence white paper 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 Royal Australian Air Force's F/A 18 and F111, replacements for the Royal Australian Navy's amphibious ships and significant enhancement to Defence's joint information and intelligence capabilities.

Force design processes used up until 2002 were described for the first time in a public document published that year, the *Capability Systems Life Cycle Management Manual* (CSLCMM). This document defined the Needs Phase, in which the initial processes of force design occur, 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 Vice Chief of Defence Force (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.<sup>16</sup> The CSLCMM described the various processes of capability development, and also included a host of hints for working within processes.<sup>17</sup>

The CSLCMM described 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.*<sup>18</sup>

The DCPG dealt with domains such as maritime, land and littoral, aerospace, strategic strike, information and support to operations.<sup>19</sup> DCPG assessments were produced from 2001 to 2003.<sup>20</sup> The manual also described a four stage process of capability analysis by which capability gaps were identified and ways in which they

could be reduced were determined.<sup>21</sup> This process was very similar to the process described in the internal Defence guide mentioned above.

After the 11 September 2001 terrorist attacks against the US, 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 to 2006 and focussed on updates for the DCP in 2004 and 2006, and on supporting the related Defence Updates of 2003, 2005 and 2007. Input to these FOT assessments was primarily from the Services (including their experimentation results).<sup>22</sup>

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*.<sup>23</sup> 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.<sup>24</sup> Two major force structure changes during the period 2001 to 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.

The first Chief of Capability Development Group, then Lieutenant General David Hurley, produced the first *Defence Capability Development Manual* (DCDM) in February 2005. This manual replaced the CSLCMM and was superseded by DCDM 2006 in February of the next year. DCDM 2006 described the updated processes associated with the new Capability Development Group (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: strategic priorities; concepts, capability goals; performance assessment; and program development.<sup>25</sup>

The first two steps (strategic priorities and concepts) were the responsibility of Strategy Group. The third step, undertaken by CDG, was the development of the Defence Capability Strategy that 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'.<sup>26</sup> 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 had 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 Defence Capability Strategy.<sup>27</sup> The 'effects-based' capability goals (although not specified in the document) were based on domains similar to those of the 2002 CSLCMM.<sup>28</sup>

Concepts re-emerged in 2002 when Chief of Defence Force (CDF) Admiral Chris Barrie oversaw production of *Force 2020* and *The Australian Approach to Warfare*. *Force 2020* described three key future concepts – the seamless force, effects-based operations and network enabled operations (later termed network centric warfare

(NCW)), all of which have continuing relevance to Defence today. *The Australian Approach to Warfare* identified a series of key warfare attributes for Australia, which were listed again in the *Future Joint Operating Concept 2030* (FJOC) published in 2011. In 2003, CDF General Peter Cosgrove published a *Future Warfighting Concept* that expanded on the ideas contained 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'.<sup>29</sup>

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'.<sup>30</sup> The framework was planned to enable Defence to have, among other things, 'a concept-led capability development process'.<sup>31</sup> In 2007, CDF Air Chief Marshal Angus Houston issued the first iteration of the FJOC, which was supported by additional concepts that examined '*operation in the three major combat environments*' – a single Service focus quite distinct from the joint focus described for capability goals in DCDM 2006.<sup>32</sup>

In 2008, a review of ADF concept development in the previous decade by the US/UK/Canada/Australia/NZ Technical Cooperation Program 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 focused and are not necessarily able to be brought together in a congruent and coherent manner.*<sup>33</sup>

A 2013 DSTO paper (to which the authors of this 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.*<sup>34</sup>

For example, joint experimentation was undertaken to test the 2003 *Future Warfighting Concept*. But this concept was too high level to have a direct influence on force design.<sup>35</sup>

One other force design technique that emerged in the early 2000s was the roadmap. In 2003, Defence released the inaugural *Network Centric Warfare 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.<sup>36</sup> The guidance for these roadmaps, outlined in DCDM 2006, included elements of the capability analysis processes outlined in CSLCMM and the guidance paper used in the 1990s.<sup>37</sup> But the 2013 DSTO paper noted 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'.<sup>38</sup> The most effective was probably the *Network Centric Warfare 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 Defence 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 in Defence history, FSR 2008, and was hailed as 'the most comprehensive force structure analysis ever undertaken in support of a white paper'.<sup>39</sup> The most significant force structure initiative of this 2009 Defence white paper was the plan to double the size of the submarine fleet by procuring twelve new submarines. In FSR 2008, 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.<sup>40</sup>

Following publication of the 2009 Defence 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 within the Strategy Executive to provide strategic guidance on matters arising from FSR 2008. 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'.<sup>41</sup> 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 released in 2010. It provided direction for improving capabilities 'in response to emerging challenges in space, missile defence and cyber security'.<sup>42</sup> 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. This was a wider scope but a shorter timeframe, and focused more on management issues than the other DCP, the *Defence Capability Plan*.<sup>43</sup>

*Strategy Framework 2010* also changed the way in which the Needs Phase of the capability life cycle was 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 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'.<sup>44</sup>

Furthermore, *Strategy Framework 2010* proposed 'an institutionalised FSR process' operating within a 'five year planning cycle for major Defence decisions'.<sup>45</sup> 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'.<sup>46</sup> 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.<sup>47</sup>

Although it defined 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 Deputy Secretary Intelligence and Security) would conduct their own gap analysis as an input to the FSR process.<sup>48</sup> At the joint level, FSDD maintained a Force Structure Matrix and conducted Force Structure Matrix workshops as initial preparation for the next FSR. However, no joint force design studies, assessments or review activities (such as FOT) were conducted prior to the next FSR, which was undertaken before development of *Defence White Paper 2013*.<sup>49</sup>

*Strategy Framework 2010* 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'.<sup>50</sup> In March 2011, Defence released an unclassified version of the FJOC, 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.<sup>51</sup> The concept notes that it retains elements of both *The Australian Approach to Warfare* (2002) and *Joint Operations in the 21st Century* (2007).<sup>52</sup>

By 2012, the decision had been taken to combine the environmental concepts and the enabling concepts into a single framework based on the Defence operational and enabling functions (DOEF) terminology already being applied to preparedness. This joint concepts framework changed the maritime and aerospace concepts from describing how they *operate* in these environments to how the ADF *controls* these environments. This change was less clear within 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 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 was undertaken using this framework. Instead, the only joint concept produced in 2012 and 2013 was 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.<sup>53</sup> However, this joint concept work was done after the major capability

decision to acquire Her Majesty's Australian Ships *Adelaide* and *Canberra* had already been made, rather than beforehand. The latter is the arena of force design, where the joint concept work in the early 1990s was done.

During the period 2010 to 2013, joint experimentation was also limited to one program on joint fires issues conducted with DSTO.<sup>54</sup> At the same time significant single Service experimentation programs continued. In 2013, Defence (through Joint Capability Coordination Division in VCDF Group) 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'.<sup>55</sup> But again up until the end of 2016, no joint experiments were conducted 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 2012, which had been brought forward with the announcement of a new white paper to be produced in 2013, a year earlier than originally planned. Similarly, in 2014, force design activity also focussed on the FSR being conducted in preparation for the white paper which was published in 2016.

Defence Capability Plans continued to be developed during the period 2009 to 2012 with the aim to give greater certainty to industry. DCP 2009 reflected the strategic requirements outlined in the 2009 Defence white paper. It also promised to provide an electronic update every six months, with a particular focus on providing up-to-date information for industry.<sup>56</sup> The first online updates were published in February and December 2010 with no indication of any significant changes.<sup>57</sup> 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.<sup>58</sup> The last DCP was produced in 2012 and was reduced to covering a period of only four years. It 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.<sup>59</sup>

At the end of 2012, CDG produced an update to DCDM 2006, which was renamed 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 Strategic Reform Program and CDG's internal (and ongoing) Capability Development Improvement Program.<sup>60</sup> 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 Force Structure Matrix; and the 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.<sup>61</sup> The term 'capability analysis' was not used in either *Strategy Framework 2010* or DCDH 2012.

All this activity was also impacted by a Government decision in early 2012 to impose additional savings on Defence, including the reduction in its Australian Public Service workforce by 1000 personnel. In 2013, 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’.<sup>62</sup>

*Defence White Paper 2013* noted that FSR 2012:

*[A]ssessed 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.*<sup>63</sup>

The paper gave particular emphasis to cyber capabilities and electronic warfare, including the procurement of twelve EA-18G Growler electronic attack aircraft. *Defence White Paper 2013* 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.<sup>64</sup> A new strategy framework handbook was planned to be published following the release of *Defence White Paper 2013* and work on it did begin in Defence, including work to improve the strategy framework process.<sup>65</sup>

However, it was not until after FPR 2015, when the strategic arrangements within Defence were completely revised, that a new *Strategy Framework* was released in May 2017. The now very short document describes the role of the *Strategy Framework* as to ensure ‘that Government direction on Defence strategy is provided across the Defence enterprise, and [to ensure] the alignment between strategy, funding and capability’.<sup>66</sup> It provides an overview of Defence’s strategic guidance documents. It also sets out how the strong strategic centre within Defence (a key FPR construct) supports the development, approval and implementation of strategic guidance within Defence.<sup>67</sup>

In 2013, CDG commenced an initiative to use the Defence Operational and Enabling Functions framework to produce what it called umbrella operational concept documents. The purpose of these documents 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 would be developed with ‘the same battlespace 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’.<sup>68</sup> Throughout 2014, CDG continued to develop this joint functional approach, with the documents being designated Integrated Operational Concept Documents (IOCD).

Also from 2014, there was some progress within VCDF Group on joint concepts work, including development of a new joint concepts framework, a strategic guidance-based joint operating concept and a start to functional-based supporting concepts.<sup>69</sup> This functional approach, which includes the combination of joint and single Service concepts into a single joint approach, is a similar path to the ADF’s operational thinking in 1980s that saw all operations being joint, eliminating the concept of single Service operations. 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 DCDH 2014.<sup>70</sup> In line with its scope to provide guidance for the effective development of capability proposals, most of the changes in this document, compared with the 2012 edition, relate to the Requirements Phase. Since *Strategy Framework 2010* had not been updated at that time, it was not surprising to find little change in the chapter on the Needs Phase. The most significant change was that the section on tools for the Needs Phase, mentioned earlier in this paper, had been deleted.

In late 2014, Defence issued the first chapter of a new DCDM. The return to the 2006 nomenclature of a 'manual' rather than the later term 'handbook' was significant. While the handbook was described as 'a guide to the Capability Development body of knowledge and processes for Defence', the manual issued policy that 'all Services and groups involved in capability development are to apply'.<sup>71</sup> This added authority for the manual was reinforced by it being jointly signed by VCDF and Defence's Associate Secretary, with Chief of Capability Development Group as their adviser and sponsor of the document.

The 2015 FPR report made 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.<sup>72</sup> But once the decision was made to strengthen contestability for the capability development by moving one of CDG's two divisions under the new Deputy Secretary Policy and Intelligence, CDG was no longer sustainable as a separate group and was disbanded in early 2016, with VCDF taking on the key force design roles of Chief of Capability Development Group.

In February 2016, the Government issued *Defence White Paper 2016* and the 2016 Defence Integrated Investment Program. The IIP replaced the DCP but, unlike the DCP, included details of the major capital investment in information and communications technology (ICT) and facilities, as well as the military and intelligence capabilities. In April 2016, Defence commenced transition to a new streamlined end-to-end capability development process, known as the capability life cycle, developed to implement FPR recommendations. This process was described in the 2016 *Interim Capability Life Cycle Manual* issued in the same month. Key elements of the process included:

1. A new Investment Committee chaired by VCDF with membership including the Associate Secretary, Service Chiefs and key Group Heads.
2. End-to-end management of projects sponsored by a capability manager and project managed by a delivery agency, principally the Capability Acquisition and Sustainment Group (which replaced Defence Materiel Organisation after the FPR).
3. A simplified project document suite and a streamlined process for Defence endorsement of projects.
4. A new permanent force design team, within VCDG Group under HFD.

In early 2017, this force design team developed a force design cycle to meet the objective of a 'joint force by design' and established a Defence Capability Assessment Program (DCAP), which is 'the plan of activities to deliver the Force Design Cycle'. The DCAP will produce its first report in late 2017 on options for how

any emerging capability gaps might be addressed, either through adjustments to the IIP or by changes in policy. Inputs to this process include concepts, lessons, doctrine, preparedness, integration issues and the first joint experiment in three years (Headlight 2017), which was held in April 2017.<sup>73</sup> This assessment process will then be repeated annually to inform the annual update of the IIP, but may occur more frequently if needed.<sup>74</sup> This process has many similarities to the force design activities during the period 2002-06. However, it is strengthened by a greater input from a substantial joint team and will be assisted by the involvement of the new Contestability Division throughout. This assessment process and an experienced team will then form the basis for the next FSR.

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 that the FPR notes has 'improved elements of the capability development process'.<sup>75</sup> With FPR these requirements staff return to the Services, so there is a risk that aspects of the ineffective pre-1990 Service-centric capability development 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 FSR 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 FSR 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. During the period 2001 to 2006, there was an extended period of continuing force design activity focused on *Defence Update 2003*, *Defence Update 2005* and *Defence Update 2007*. From 2008 until 2015, the force design focus shifted to supporting three combined FSR/white paper processes, with little joint force design activity undertaken in between these major activities. The recent establishment of a permanent joint force design team should ensure that force design is more effective in the future.

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?

## The future role of joint force design

A particular concern in recent approaches to joint force design has been the lack of any significant joint force design activity in the period 2009 to 2014, between FSR conducted in 2008, 2012 and 2015. Restricting the force design activity between FSR

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 FSR. Somewhat surprisingly, Defence's definition of capability reinforces 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', reflecting the joint effects-based nature of capability.<sup>76</sup> But importantly Defence capability manuals from CSLCMM 2002 to *Interim Capability Life Cycle Manual 2016* have always added a second sentence to this definition, stating that capability 'is generated by the fundamental inputs to capability', which is of course the responsibility of Capability Managers supported by Defence Groups.<sup>77</sup> 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.

Both of these views of capability are important, however the joint, integrated, effects-based, functional view looks at capability not as a system operating in a particular environment, but as an effect in one particular environment that could be generated by systems operating in any environment. The Service and Group focused view looks at the systems that Defence has to acquire, sustain and operate effectively, efficiently and safely. The latter view 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 view, 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. 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.<sup>78</sup>

In the section of Chapter 3 discussing 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 addressed in the section of Chapter 2 discussing operations. At the tactical level, joint arrangements have always included either ensuring the capabilities of one Service can apply effects into the operating environment of another or that one Service can provide support capabilities to enable another Service to achieve the best outcome in its own 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. It also 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* FSR is as important as a joint focus *during* FSR to ensure that at all times Defence develops well-researched proposals for developing capabilities that are focused on providing the most effective and efficient improvements to 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 FSR. We believe the new arrangements established in 2016 will address this concern.

### Force design approach

Since 1987, 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; force structure reviews; experimentation; and capability analysis. All of these techniques are incorporated in the framework known as Capability Based Planning.<sup>79</sup> Defence has been trying to implement forms of Capability Based Planning 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 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 Capability Based Planning) becomes more critical. Figure 4.1 (below) is a generic process chart of capability-based planning produced by a working group of the US/UK/Canada/Australia/NZ Technical Cooperation Program.<sup>80</sup>

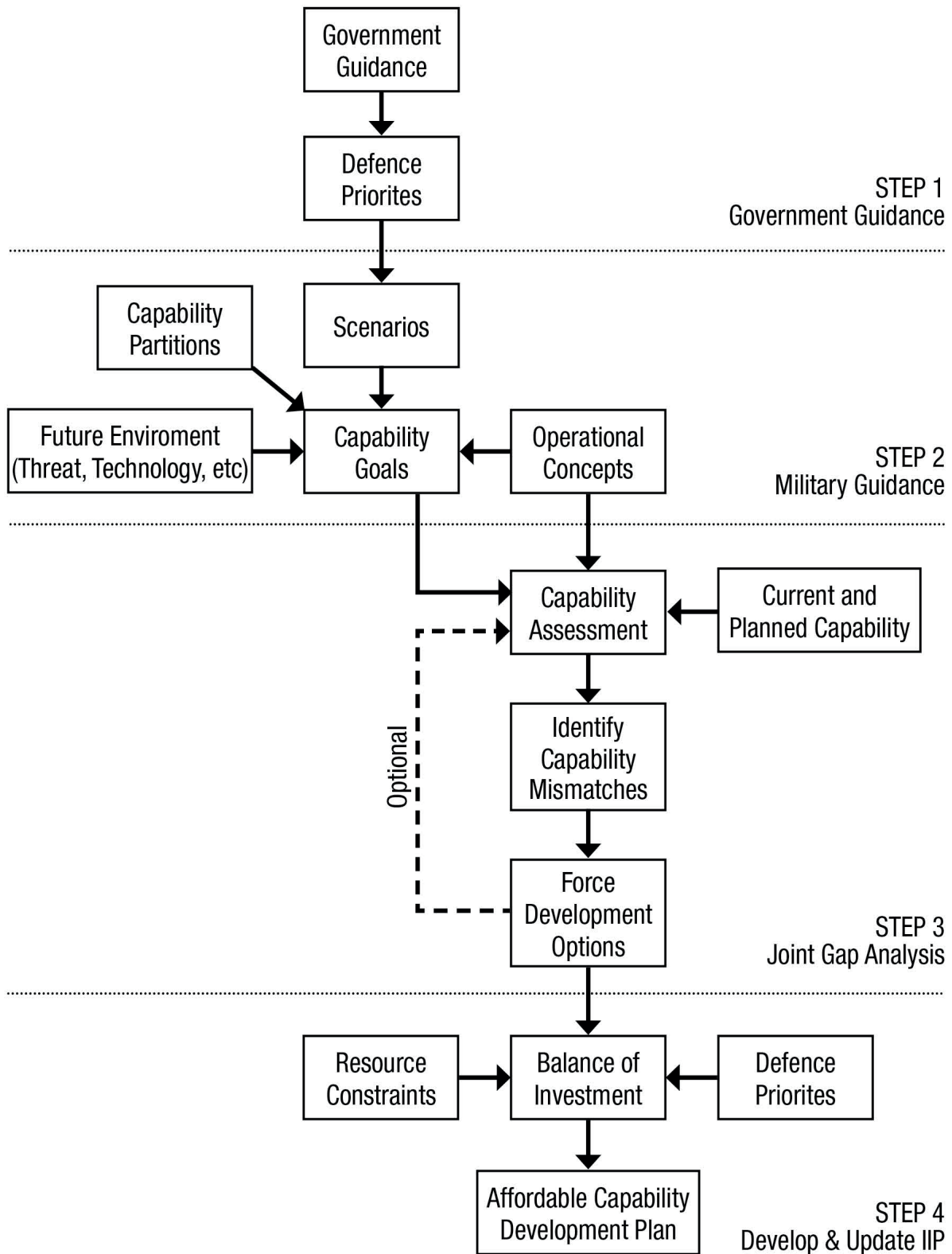
Although this model seems quite complex at first sight, the underlying force design processes are quite simple and can be reduced to four steps, as shown in Figure 4.1 and elaborated below.

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 FSR, analytical studies, FOT, experimentation, operational lessons learnt, exercise reports and current capability reports. CDG's operational concepts 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 IIP.
4. The final step is the development and update of the IIP, which involves applying capability guidance to a program with financial and procurement constraints. It also needs to consider interdependencies between projects.

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. 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) and Jericho (for the Royal Australian Air Force).<sup>81</sup> These force structure plans then usually influence a number of projects in the DCP under step four.

**Figure 4.1: Generic process chart of capability-based planning**





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 associated with Figure 3.1 (see Chapter 3) in relation to managing the current force is even more 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 because we miss the chance to identify how we need to generate effects across the domains.
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 environmental and joint), and conform to the FJOC 2011 concept of seeking control of the environment and an adversary.<sup>82</sup> They are also intrinsic to the conduct of operations in the littoral environment of Australia's region, evident by the growing interest in sea control in the South China Sea.
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.<sup>83</sup> 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.<sup>84</sup> A functional approach is needed to design 'focused joint enablers'. Defence's establishment in July 2017 of a Chief of Joint Capabilities, with capability management responsibility for joint enabling capabilities, provides an opportunity to implement such an approach.
5. 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 support of what Peter Jennings described as the 'irreducible core tasks', which the ADF must perform without allied assistance in defence of Australia and in our nearer region. Jennings poses several questions that, if answered, he believes would help provide a convincing explanation of how the ADF fights as an integrated organisation. One of his questions about amphibious capability has been answered at least in part by the recent joint amphibious concept work, but we are not aware of any joint studies that 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).<sup>85</sup> 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.

To implement this suggested force design approach, there are three activities that 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 to force structure decisions in the early 1990s in relation to direct defence of Australia. The major force design contribution of experimentation was to assist Army to 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.

### **Tools for force design**

**Concepts.** In the late 1980s, Defence found that to achieve improved joint thinking on future force design, the focus of concepts had to be on how the ADF would perform joint tasks, not on any current operating component of the force. In the period 1990 to 1995, concepts contributed to joint force design by providing a joint military framework and guidance for capability analysis to provide options for future capability planning.<sup>86</sup> 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 continue to be 'inherently joint', then it seems logical to conclude that concepts to inform design of the future force should also 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.<sup>87</sup> The challenge now is to start producing some concepts that 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.

The establishment of the new Force Design Division in VCDF Group after FPR 2015 is providing an opportunity for a re-invigorated approach to joint concepts. 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, the latest FSR associated with the 2016 Defence white paper will have left some capability questions that need further research before capability gap analysis can be undertaken, and it is envisaged that some of these questions will be addressed through the gaps and opportunities component of the Defence Capability Assessment Program. 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. Focusing 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 operational concepts activities initiated by CDG and now continuing within VCDF Group. Once these force design concepts have been completed one important way of testing them will be experimentation.

**Experimentation.** Experimentation is a resource intensive activity. It potentially involves simulations, war games, command post exercises and field exercises.<sup>88</sup> 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. As discussed earlier in this 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. Experimentation has demonstrated the ability to undertake that validation, as long as it is properly managed. As with concepts, the establishment of the Force Design Division is also providing the opportunity to re-invigorate joint experimentation. This 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 that the Services also rate as a high priority. One obvious candidate for such experimentation would be amphibious capability, 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 (i.e. within the Defence Capability Assessment Program) 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.<sup>89</sup> 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.

**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. The process of capability analysis was laid out in both an internal Defence document in the 1990s and in the 2002 CSLCMM.<sup>90</sup>

From 1999 to about 2007, specialist Defence analysts were involved in 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 included some aspects of the capability analysis technique in its guidance for roadmaps.<sup>91</sup> But it only referenced capability analysis directly as a DSTO technique in support of force design.<sup>92</sup> From 2008, analytical involvement was largely restricted to the FSR prior to the 2009 and 2013 Defence white papers. Neither the *Strategy Framework 2010*, nor the subsequent DCDH (2012 and 2014), nor DCDM 2014, mention capability analysis.

But capability analysis has continued. The term 'capability analysis' was still used up until 2016 to describe the four analytical teams (maritime, land, air and joint) in the Capability Investment and Resources Division in CDG, the predecessor of Contestability Division. In this new division, established in 2016, its three branches are named Joint Enablers Analysis, Maritime Analysis, and Air and Land Combat Analysis. This division, like its predecessor, continues to conduct capability analysis of major project paperwork prior to government approval in the Requirements (now Risk Mitigation and Requirement Setting) Phase. This function was first performed by FDA Division at least as early as the 1980s. Similarly, DST Group uses the term to describe branches of its Joint and Operations Analysis Division. But for the period 2006 to 2015, capability analysis in force design (prior to entry into the DCP) only occurred during the FSR that preceded each white paper.

As a result of the 2015 FPR this situation has changed for the better. The 2016 *Interim Capability Life Cycle Manual* mentions the term, noting that capability analysis is conducted in the 'Portfolio, Program, and Product/Project levels' of the capability consideration, which it discusses in four of its seven chapters. The DCAP, discussed above, is a form of capability analysis that is now conducted on an annual basis to achieve better force design and is supported by review from capability analysts in Contestability Division.

### **A joint force design team led by the Strategic J8**

Noting the challenges of joint force design in the past, it is 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, 2012 and 2014 from scratch. It is critical that in the future this continuous process of force design be managed on a permanent basis at the joint level. Therefore, we made establishing such a team a key recommendation of our previous paper.<sup>93</sup> It was very pleasing that the FPR also proposed the establishment of such a team under Head Force Design and for Defence to implement that recommendation.

Central to preserving these improvements into the future is the continued existence of the joint force design team under HFD in VCDF Group. This team and its two-star head are key players in assisting VCDF in his new responsibilities to design and build the future force. But VCDF has other important and time-consuming responsibilities for operations and management of the current force. While some of their previous management functions are being re-assigned, VCDF cannot and should not avoid having significant oversight of these functions, 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.

The members of a permanent force design team (both military and civilian) will need to have the appropriate competencies. Effective development of joint professional military education being undertaken by the Australian Defence College is the best means for ensuring that this important competency is gained by relevant officers and officials.<sup>94</sup> Such education would also be an important step in building the necessary improvements in relation to force design, especially in terms of culture.

## Culture in Australian Defence Force design

Defence is 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'.<sup>95</sup> 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 the Strategic Reform Program 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'.<sup>96</sup> Since leadership is key to shaping culture, *Pathway to Change* promises that Defence 'will develop and encourage a pervasive jointery across our senior leadership'. It lists a key action for 'all Colonel/Executive Level 2 equivalent and above to work with jointery and integration as their prime decision-making lens (rather than Group or Service-specific)'.<sup>97</sup>

This improvement in culture has been aided by the FPR's proposal that Defence creates a culture where corporate behaviour is valued and rewarded. In implementing the FPR, Defence established a 'Behaviours Work Stream' under the Associate Secretary. One of its achievements has been to establish 'One Defence's Leadership Behaviours', the first of which calls on Defence leaders to be contributors, living the statement that 'I am a leader who is focused on achieving Defence Outcomes and I ensure my team understands how their work contributes to these outcomes'.<sup>98</sup>

An organisation's culture can be expressed through 'what is done, how it is done, and who is doing it'.<sup>99</sup> 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 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 actually decreased in the period 2006 to 2015, making the development of such a joint force design culture challenging in the future.

The regular joint force design activities that HFD is now leading through joint concept work, joint experimentation and the new Defence capability assessment program give key members of the ADF and the wider Defence organisation the opportunity to 'do' joint force design with a focus on joint and whole-of-Defence outcomes. Defence leadership with a joint focus is supporting this approach, as displayed by the Chief of Army, Lieutenant General Angus Campbell, in an Open Letter to the Army. After stating his priorities for the Army he went on to say:

*Across all these priorities I ask you to keep in mind that Army is a component of, and serves the higher needs of, joint ADF capability directed to achieving Australian strategic policy objectives. This is obvious, but worth restating given the modern norm of joint operations and the need to think, plan and structure to enable joint effects. Moreover, these effects need to be driven by joint command and control, rehearsed through joint collective training, and informed by joint doctrine and joint professional military education. The function, size, structure and interests of Army and the other services are necessarily secondary to this reality. I do not doubt or diminish the unique professional expertise and relevance of land forces. Nor do I ignore the commitment of land forces, by successive Australian governments over our 115 year history, to pursue our national interests. Rather, I wish to emphasis the context of our work. Army contributes to and serves the joint force.<sup>100</sup>*

## Notes

<sup>1</sup> Anthony Ween, Thitima Pitinanondha, Ivan Garanovich, Tim McKenna & Tim McKay, *Guiding Principles for Force Posture Design*, DST Group Report No. TN 1221, August 2013, p. 1.

<sup>2</sup> Department of Defence (Defence), *Interim Capability Life Cycle Manual* (unpublished version, dated 2016), para 1.4a; Defence, *Defence Capability Development Handbook*, 2012 ed. (Canberra: Defence Publishing Service, 2012), para. 1.2.2.a & Figure 2.1.

<sup>3</sup> Defence, *Defence Capability Development Handbook*, 2014 ed. (Canberra: Defence Publishing Service, 2014), para 1.5.2.

<sup>4</sup> Defence, *Defence Capability Development Handbook*, 2014 ed., para 2.2.1.

<sup>5</sup> Defence, *Defence Capability Development Handbook*, 2014 ed., Figure 2.1.

<sup>6</sup> Defence, *A Potted History of Capability Development Group since 1969* (unpublished document, accessed on the Defence intranet, 11 February 2014).

<sup>7</sup> Defence, *Report on the Structural Review of Higher ADF Staff Arrangements* (Canberra: Defence, 1989), para 2.10-2.11. The full statement in paragraph 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.*

<sup>8</sup> The eight defence of Australia roles were: 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. Defence, *Australia's Strategic Planning in the 1990s* (Canberra: Defence, 1992), para 5.9.

<sup>9</sup> David Horner, *Making the Australian Defence Force*, The Australian Centenary History of Defence, Volume 4 (South Melbourne: Oxford University Press, 2001), p. 92.

<sup>10</sup> Defence, *A Potted History of Capability Development Group since 1969*, p. 1.

<sup>11</sup> Defence, *Defence Annual Report 1989-90* (Canberra: Defence, 1990), p. 24.

<sup>12</sup> Interview with Dr Ian Brunskill, who worked in Force Development and Analysis Division, 31 January 2013.

<sup>13</sup> Defence, *Australia's Strategic Policy* (Canberra: Defence, 1997), p. 29.

<sup>14</sup> Defence, *The Capability Development Process: From Strategic Guidance to Specific Capability Proposals – A Summary*, (unpublished document, dated July 1998). This document was written and updated by Tom Ciesniewski, a member of the Capability Analysis Branch in Force Development and Analysis Division, from at least as early as 1992 (when one of authors left the Division) and at least

until July 1998, the date of the copy of the version available to the authors at the time of writing this paper. The document 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 1990s as well.

<sup>15</sup> Richard Hodge, Kym Hendrickson & Geoff Walpole, 'Systems Thinking and Systems Engineering for Defence Strategic Planning', Presentation to a Panel Session at the International Council on Systems Engineering International Symposium 2001, 4 July 2001; Ween et al, *Guiding Principles for Force Posture Design*, pp. 7-8.

<sup>16</sup> Defence, *Capability Systems Life Cycle Management Manual 2002* (Canberra: Defence, 2002), Annex A to Chapter 1.

<sup>17</sup> Defence, *Capability Systems Life Cycle Management Manual 2002*, para 2.4 & 2.12.

<sup>18</sup> Defence, *Capability Systems Life Cycle Management Manual 2002*, para 2.36-2.37

<sup>19</sup> Defence, *Capability Systems Life Cycle Management Manual 2002*, para 2.38.

<sup>20</sup> Ween et al, *Guiding Principles for Force Posture Design*, p. 10.

<sup>21</sup> Defence, *Capability Systems Life Cycle Management Manual 2002*, para 2.29-2.34.

<sup>22</sup> Ween et al, *Guiding Principles for Force Posture Design*, p. 12.

<sup>23</sup> Defence, *Defence Capability Plan 2004-14* (Canberra: Defence, 2004), Minister's Foreword.

<sup>24</sup> Defence, *Defence Capability Plan 2006-16* (Canberra: Defence, 2006), Minister's Foreword.

<sup>25</sup> Defence, *Defence Capability Development Manual 2006* (Canberra: Defence, 2006), Figure 1.

<sup>26</sup> Defence, *Defence Capability Development Manual 2006*, para 2.13.

<sup>27</sup> Defence, *Defence Capability Development Manual 2006*, para 7.18.

<sup>28</sup> The 'effects-based' capability goals are defined, but not specified, in paragraph 2.13 of: Defence, *Defence Capability Development Manual 2006* (DCDM 2006), but they are described in terms of the effects produced in the intelligence, information, aerospace, land, maritime, strike and support domains in *Defence 2015* (pp. 21-22), which is 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: Defence, *Capability Systems Life Cycle Management Manual 2002*, para 2.36-2.38.

<sup>29</sup> Defence, Australian Defence Doctrine Publication (ADDP)-D.3—*Future Warfighting Concept* (Canberra: Defence Publishing Service, 2002, reprinted 2003), p. 2.

<sup>30</sup> Defence, *Strategy Planning Framework Handbook* (Canberra: Defence Publishing Service, 2006), p. 2.

<sup>31</sup> Defence, *Strategy Planning Framework Handbook*, p. 4.

<sup>32</sup> Emphasis added. Defence, *Joint Operations for the 21st Century* (Canberra: Defence Publishing Service, 2007), pp. 2-3.

<sup>33</sup> Technical Cooperation Program, *Concept Development Best Practices*, US/UK/Canada/Australia/NZ Technical Cooperation Program Document JSA-TP7-1 2008, September 2008, p. 11.

<sup>34</sup> Ween et al, *Guiding Principles for Force Posture Design*, pp. 9-10.



- <sup>35</sup> Author's private communications with Dr David Wood, DST Group, 15 July 2015.
- <sup>36</sup> Defence, *Defence Capability Development Manual 2006*, para 7.86.
- <sup>37</sup> Defence, *Defence Capability Development Manual 2006*, para 7.93.
- <sup>38</sup> Ween et al, *Guiding Principles for Force Posture Design*, p. 10.
- <sup>39</sup> Defence, *Defending Australia in the Asia Pacific Century: Force 2030* [2009 Defence white paper] (Canberra: Defence Publishing Service, 2009), p. 58.
- <sup>40</sup> Ween et al, *Guiding Principles for Force Posture Design*, p. 12.
- <sup>41</sup> Defence, *The Strategy Framework 2010* (Canberra: Defence Publishing Service, 2010), para 3.20.
- <sup>42</sup> Defence, *Defence Annual Report 2009-10* (Canberra: Defence Publishing Service, 2010), p. 58.
- <sup>43</sup> Defence, *Defence Annual Report 2011-12* (Canberra: Defence Publishing Service, 2012), p. 37.
- <sup>44</sup> Defence, *The Strategy Framework 2010*, para 7.4.
- <sup>45</sup> *The Strategy Framework 2010*, para 7.5.
- <sup>46</sup> Defence, *The Strategy Framework 2010*, para 7.8.
- <sup>47</sup> Defence, *The Strategy Framework 2010*, para 7.8.
- <sup>48</sup> Defence, *The Strategy Framework 2010*, para 7.3 & Figure 15.
- <sup>49</sup> Ween et al, *Guiding Principles for Force Posture Design*, pp. 12-13.
- <sup>50</sup> Defence, *The Strategy Framework 2010*, paras 3.35-3.40.
- <sup>51</sup> Defence, *Future Joint Operating Concept 2030* (unpublished document, dated 25 March 2011), covering page.
- <sup>52</sup> Defence, *Future Joint Operating Concept 2030*, pp. 3-4; Defence, ADDP-D.1—*The Australian Approach to Warfare* (Canberra: Defence Publishing Service, 2002), pp. 23-24.
- <sup>53</sup> Defence, *Concept for Employment of the Australian Amphibious Force*, version 5.1 (unpublished document, dated May 2014).
- <sup>54</sup> Technical Cooperation Program, *Coalition Attack Guidance Experiment (CAGE II) Final Report*, US/UK/Canada/Australia/NZ Technical Cooperation Program Document TR-AER/JSA-1-2013, 2013.
- <sup>55</sup> Defence, *DEFGRAM 266/2013: Joint Experimentation Program* (unpublished, 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.
- <sup>56</sup> Defence, *Defence Capability Plan 2009* (Canberra: Defence Publishing Service, 2009), Minister's Foreword.
- <sup>57</sup> Defence, *Defence Capability Plan 2009 (Update 2, 2010)* (Canberra: Defence Publishing Service, 2010), Minister's Foreword.
- <sup>58</sup> Defence, *Defence Capability Plan 2011* (Canberra: Defence Publishing Service, 2011), Minister's Foreword.

- <sup>59</sup> Defence, *Defence Capability Plan 2012* (Canberra: Defence Publishing Service, 2012), Minister's Foreword.
- <sup>60</sup> Defence, *Defence Capability Development Handbook*, 2012 ed., Foreword.
- <sup>61</sup> Defence, *Defence Capability Development Handbook*, 2012 ed., para 2.4.2-2.4.6.
- <sup>62</sup> Dennis Richardson (Secretary of the Department of Defence), *Speech to Australian Strategic Policy Institute Dinner*, 12 November 2013 (online, <http://news.defence.gov.au/2013/11/13/secretary-of-the-department-of-defence-mr-dennis-richardson-speech-to-aspi-dinner-12-november-2013/>, accessed 4 February 2014).
- <sup>63</sup> Defence, *Defence White Paper 2013* (Canberra: Defence Publishing Service, 2013), para 8.3.
- <sup>64</sup> Defence, *Defence White Paper 2013*, para 8.4.
- <sup>65</sup> Defence, *Defence Annual Report 2011-12* (Canberra: Defence Publishing Service, 2012), p. 37.
- <sup>66</sup> Defence, *The Strategy Framework 2017* (Canberra: Defence, 2017), pp. 3-4. The *Framework* was released on 4 May 2017. See: Defence, *DEFGRAM 185/2017: Release of the Strategy Framework* (unpublished, dated 4 May 2017).
- <sup>67</sup> Defence, *The Strategy Framework 2017*, pp. 3-4.
- <sup>68</sup> Defence, *Umbrella Operational Concept Documents (Initial Draft)* (unpublished draft, 9 December 2013), Foreword by Major General John Cagliari (Head Capability Systems).
- <sup>69</sup> Author's private communications with Lieutenant Colonel Nick Floyd, Deputy Director Joint Concepts, Joint Capability Coordination Division, March 2014 to March 2017.
- <sup>70</sup> Defence, *Defence Capability Development Handbook*, 2014 ed.
- <sup>71</sup> Defence, *Defence Capability Development Manual 2006*, pp. ii-iii.
- <sup>72</sup> Defence, *First Principles Review: Creating One Defence* (Canberra: Defence Publishing Service, 2015), pp. 27-28.
- <sup>73</sup> Defence, 'Strategic-level Wargame for Future Force Fitness: Using Science to Illuminate Gaps and Opportunities', *Connections: Defence Science and Technology Group Monthly Staff Magazine*, No. 226 (July 2017), pp. 15-16.
- <sup>74</sup> Brigadier Jason Blain (Director General Force Options and Plans Branch), *Force Design: A Presentation to the C4ISR Environmental Working Group*, PowerPoint presentation prepared for the Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) Environmental Working Group, sighted by the authors on 17 May 2017; Interview with Mr Anthony Ween, Director, Force Planning and Prioritisation, Force Options and Plans Branch, 17 March 2017.
- <sup>75</sup> Defence, *First Principles Review*, p. 32.
- <sup>76</sup> Defence, *Australian Defence Glossary* (unpublished Defence intranet site, accessed 6 July 2017); Defence, *Defence Capability Development Handbook*, 2014 ed., Chapter 1, Annex A.
- <sup>77</sup> Defence, *Capability Systems Life Cycle Management Manual 2002*, para 1.3; Defence, *Interim Capability Life Cycle Manual*, Annex A, p. 84.
- <sup>78</sup> Defence, ADDP 00.1—*Command and Control* (Canberra: Defence Publishing Service, 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.

<sup>79</sup> Technical Cooperation Program, *Technical Report: Analysis Support to Strategic Planning v2*, The US/UK/Canada/Australia/NZ Technical Cooperation Program, October 2014; Leung Chim, Rick Nunes-Vaz & Robert Prandolini, 'Capability-Based Planning for Australia's National Security', *Security Challenges*, Vol. 6, No. 3 (Spring 2010), pp. 79-96.

<sup>80</sup> Technical Cooperation Program, *Technical Report: Guide to Capability Based Planning*, US/UK/Canada/Australia/NZ Technical Cooperation Program, October 2004, Figure 1.

<sup>81</sup> Australian Army, *Plan Beersheba – Army's Future Structure*, updated 29 May 2014 (online, <http://www.army.gov.au/Our-future/Projects/Plan-BEERSHEBA>, accessed 6 July 2017); Defence, *Launch of Plan Jericho*, Defence Media Release, 23 February 2015.

<sup>82</sup> Geoffrey Till, *Maritime Strategy and the Nuclear Age* (New York: St Martin's Press, 1984); Royal Australian Air Force, Australian Air Publication 1000-D—*The Air Power Manual*, 6th ed. (Canberra: Air Power Development Centre, 2013), p. 46; Rear Admiral J.C. Wiley, *Military Strategy: A General Theory of Power Control* (Canberra: Australian Naval Institute Press, 1967), p. 44; Lieutenant General Philip D. Shutler, USMC (Ret), 'Thinking About Warfare', *US Marine Corps Gazette*, November 1987, pp. 18-26.

<sup>83</sup> US Joint Chiefs of Staff, *Joint Vision 2010: Focused Logistics: A Joint Logistics Roadmap*, (Fort Monroe: Joint Warfighting Centre, 1997).

<sup>84</sup> T.J. McKenna, 'An Effects-Based Approach to Designing an Effective Networked ADF', proceedings of the Systems Engineering Test and Evaluation Conference, September 2007.

<sup>85</sup> Peter Jennings, 'Integration, Strategy and the ADF', *The Strategist* (blog), Australian Strategic Policy Institute, 6 Mar 2015 (available online, <https://www.aspistrategist.org.au/integration-strategy-and-the-adf/>, accessed 7 July 2017). Jennings' four questions are listed below, with our additions to relate them explicitly to Defence operational and enabling functions added in italics:

- 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?

<sup>86</sup> Ian Brunskill, Ase Jakobsson & Thomas Keen, *Operational Concepts for ADF Amphibious Capability*, Defence Science and Technology Organisation Client Report No. DSTO-CR-2013-0094, p. 2.

<sup>87</sup> 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 that are principally single Service in nature. In the same way, lower level single Service concept work is appropriate, particularly if associated with systems already identified for procurement by a single Service.

<sup>88</sup> Technical Cooperation Program, *Guide for Understanding and Implementing Defense Experimentation: GUIDEx*, version 1.1 (Ottawa: US/UK/Canada/Australia/NZ Technical Cooperation Program, 2006), p. viii.

<sup>89</sup> Technical Cooperation Program, *Guide for Understanding and Implementing Defense Experimentation*, p. viii.

<sup>90</sup> Defence, *The Capability Development Process*; Defence, *Capability Systems Life Cycle Management Manual 2002*, para 2.29-2.34.

<sup>91</sup> Defence, *Defence Capability Development Manual 2006*, para 7.93.

<sup>92</sup> Defence, *Defence Capability Development Manual 2006*, para 7.18.

<sup>93</sup> Tim McKenna & Tim McKay, *Australia's Joint Approach*, DST Group Report No. TR 3200, September 2015, p. 64.

<sup>94</sup> Author's private communications with Lieutenant Colonel Nick Floyd, Deputy Director Joint Concepts, Joint Capability Coordination Division, 29 October 2014.

<sup>95</sup> Defence, *Pathway to Change: Evolving Defence Culture* (Canberra: Defence Publishing Service, 2012), p. 1.

<sup>96</sup> Defence, *Pathway to Change*, p. 3.

<sup>97</sup> Defence, *Pathway to Change*, pp. 5 & 13; Author's private communications with Dr Irena Ali, DST Group sociologist, January 2015, in which she stated 'research into organisational culture seems to indicate that it is shaped primarily through four means: leadership; vision; values; and communication'.

<sup>98</sup> Defence, *One Defence Leadership Behaviours* (unpublished poster, accessed on the Defence intranet, 27 March 2017).

<sup>99</sup> D. W. Farmer, 'Strategies for Change' in: Douglas Steeples, Ed., *Organizational Culture and Institutional Transformation* (San Francisco: Jossey-Bass, 1990), pp. 7-18, as quoted in: ERIC Development Team, 'ED464521 2001-00-00 Organizational Culture and Institutional Transformation', *ERIC Digest*, 2001, p. 2 (online, <http://files.eric.ed.gov/fulltext/ED464521.pdf>, accessed 12 January 2015).

<sup>100</sup> Lieutenant General Angus Campbell, *Chief of Army's Open Letter to the Army* (unpublished document, dated 1 September 2016), p. 1.

## CONCLUSION

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This paper has reviewed Australia's joint approach to the planning and conduct of operations, the management of the current Australian Defence Force (ADF), and the design and building of the future force. This concluding chapter offers some general observations about joint force design, force generation and modernisation, before offering a summary of the paper and related recommendations.

### General observations on joint

Navy, Army and Air Force form the basis of Australia's defence capability, irrespective of how this capability is employed. 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.

Having reviewed the Australian approach to joint, what general observations might we make about this particularly Australian approach?

Firstly, there is an Australian approach to joint that has evolved over the last 50 years and this approach can be summarised in a few sentences:

*Today, all operations are planned and conducted as joint forces under the command of Chief of the Defence Force (CDF), Chief of Joint Operations 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 (or domains), and more recently, into those of space and cyberspace.<sup>1</sup> 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. On behalf of CDF, Vice Chief of the Defence Force (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 Defence organisation.*

Secondly, the authors (based on the research for this paper and using earlier work conducted by one of them)<sup>2</sup> 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. But modern operations are providing challenges for a joint approach. The 16 year 'war against terror' has blurred the boundaries between peace and war, between police and military action, and has involved an unprecedented involvement of civilians deployed in operational theatres. All of these aspects test the boundaries of joint in operations as reflected in the recent Australian whole-of-Government operational efforts in the Middle East.<sup>3</sup> At the same time, the emergence of new operational environments in space and cyber space require new joint responses, such as Australia's recent establishment of a Deputy Chief of Information Warfare.<sup>4</sup>

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 joint task forces 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. The recent *First Principles Review* (FPR) offers the opportunity for such transformation in the development of the future force through a new permanent joint force design team under an empowered VCDF, as part of Defence's integrated military-civilian Strong Strategic Centre. However, there remain challenges in this new approach, including the devolution of many of the joint capability development functions to the Services and Group Heads, as capability managers. Such devolution of the execution of the joint design has many benefits because the capability managers are the experts in the operation of these capabilities and they and their successors will have to maintain and operate these capabilities once they enter service. But such arrangements will only work with oversight by effective joint organisational constructs, a joint culture across the higher echelons of the ADF and an effective joint approach to the enabling capabilities no longer controlled by the Services.

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. It took Australia more than 20 years from the mid-1980s until the late 2000s to establish an effective joint command and staff capability at the operational level, now called Headquarters Joint Operations Command. Efforts to get the right joint command and staff arrangements at the strategic level have been even more ponderous. It was 33 years from the establishment of Headquarters Australian Defence Force in 1984 until the recent establishment of the Australian Defence Force Headquarters (ADFHQ) in 2017. During that time, Defence has dealt with the challenges of: relationships between CDF, VCDF and the Service Chiefs; the establishment and disbandment of Chief of Capability Development; and the complex and changing responsibilities for the Secretary and senior civilian officials on one side, and CDF and senior military officers on the other, culminating in the FPR concept of a Strong Strategic Centre.

For a period in the late 1990s and early 2000s, Defence attempted an integrated military-civilian Australian Defence Headquarters, but it never took hold.

The latest ADFHQ initiative is an attempt by CDF to establish a 'comprehensive approach to managing the ADF as an integral part of One Defence' through a strategic joint staff 'directing ADF activity across Force Development, Force Generation and Force Employment',<sup>5</sup> effectively the three joint functions of force design, management of the current force and the conduct of operations that have been the subject of this paper. In a welcome move, the new strategic staff structure for ADFHQ includes three principal staff officers, one responsible for each of these functions.<sup>6</sup> We recommend going one step further and designating these officers as the strategic J8, J5 and J3 respectively, as part of the introduction of a formal joint (J) strategic staff structure (J1-J8), along the lines of that used at the tactical and operational levels in Australia and at all three levels in the United States.

4. **Cultural alignment.** Joint relies on alignment between the whole of force (ADF) culture and the more dominant Service cultures. It 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. But as noted in the earlier chapters of this paper, a joint culture is also important in both operations and the management of the current force. Furthermore, all joint activity is dependent on informal networks of ADF personnel with a culture aligned to achieving CDF's Defence outcomes.<sup>7</sup> But a joint culture is not enough; it must be linked to the wider Defence culture where the military and Defence civilians work collaboratively to achieve 'One Defence' as envisaged in the FPR. Such an effective Defence culture is particularly important in its enabling capabilities in which military-civilian teams are widespread at all levels.

5. **Enabling capabilities.** Joint requires specific capabilities that enhance, enable and/or connect other capabilities to construct effective joint systems. The *2016 Defence White Paper* lists enabling capabilities as including bases, information and communications technology, logistics, science and technology, training, and health services; and announces an increased investment in these 'vital enabling capabilities'.<sup>8</sup> The white paper also uses the phrase 'corporate and military enablers', which formed the basis of a whole chapter in the 2015 FPR. While all the enablers have military and civilian components, the FPR identifies the military enabling services as joint logistics, joint health, the Australian Defence College and the Australian Civil-Military Centre, all organisations until recently under VCDF's control.<sup>9</sup> In July 2017, a new 'two and a half' star position, Chief of Joint Capabilities, took over responsibility for the first three of these organisations, reinforcing the importance of the importance of joint enablers to the ADF. Based on the relative military or civilian influence in the enablers, this split between military and corporate enablers seems straightforward, except for information.

The degree of military influence in the information arena has varied since the establishment of a full-time Chief Information Officer (CIO) in 2001. One of the four CIO's since that time was a two star military officer, although with the appointment of a Band 3 level officer as CIO in 2007 the position now seems firmly in the civilian camp, noting that a two star officer remains one of CIO's direct reports. However the recent appointment of a Deputy Chief of Information Warfare reporting to the new Chief of Joint Capabilities could have an impact on the balance of influence on Defence information and intelligence matters.

Having enunciated these five principles, it is also clear that the increasingly complex operating environment that the ADF will face in the future 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 organisation. Implementation of the FPR is also enhancing a joint approach by strengthening the roles of CDF and VCDF, establishing Chief of Joint Capabilities and establishing two star officers in the strategic joint staff, one responsible for force design and the other for force generation.

## Summary and recommendations

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 Chief of Joint Operations, 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.

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 Australia's strategic environment, the continuing impact of computing and communications on operations and the need for efficiencies suggest that an ongoing strengthening of Australia's joint approach at the tactical level is likely.

At the strategic level, VCDF's role in operations varied significantly over the period from 1997 to 2017. 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 and accountability 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. 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 joint professional military education, for rationalisation of individual training and for improving links between doctrine and collective training.

In relation to joint preparedness, capability management and integration of the current force, we believe that it is important to distinguish two types of responsibility: enterprise preparedness and integration; and specialist management of joint enabling capabilities. The CDF's recent decisions as a result of the ADF headquarters review recognise this distinction. VCDF retains responsibility for the enterprise task while the new Chief of Joint Capabilities will take over the specialist function. VCDF is now the Joint Force Authority accountable to CDF at the enterprise level for the generation and preparedness of joint forces. Chief of Joint Capabilities, also reporting directly to



CDF as a separate Group Head with responsibility for management of Defence joint enabling capabilities, will become the Joint Capability Manager, with responsibilities complementary to those of the Service chiefs for capability management of sea, land and air capabilities.

A significant aspect of this change is that VCDF is freed of the specific responsibilities for joint enabler management that they had previously. This is a necessity given the increased responsibility VCDF gained for force design and development as a result of the FPR. But given their continuing broad enterprise responsibilities it would be useful if the enterprise force generation and preparedness functions (including enterprise integration) were delegated to a single two-star officer as the Strategic J5, with the current Head Joint Integration position assuming that task.

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; force structure reviews; experimentation; and capability analysis. All of these techniques are part of the capability-based planning 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 Integrated Investment Program 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 Integrated Operational Concept Documents. We suggest measures to enhance these initiatives, including better use of capability analysis, and undertaking significantly more regular joint force design work between force structure reviews, including through the recently developed Defence Capability Assessment Process. Maintaining and developing the recently established permanent joint force design team to undertake this work will ensure that Defence has a much better capability than in the past to conduct future force structure reviews.

But to ensure that improvement is achieved throughout the force design process, it will be necessary that the new joint force design team under VCDF continues to be well-resourced. Its leader, Head Force Development, should be the principal staff officer for this function as the Strategic J8 including the broader oversight of building of the future force, the force modernisation function. Force design improvement must be supported by a better Defence joint force design culture, where 'jointery and integration (are the) primary decision-making lens'.<sup>10</sup>

## Notes

<sup>1</sup> In dividing the space (or the 'battlespace') in which the Australian Defence Force (ADF) operates and in which it seeks to generate effects, Defence uses two terms: environment; and domain. In this paper you will see references to the sea, land and air environments as well as to sea, land and air domains. According to Department of Defence (Defence), Australian Defence Doctrine Publication 3.0—*Campaigns and Operations*, ed. 2, Amendment List 1 (Canberra: Defence Publishing Service, 2013), para 2.13-2.32, there is one operational environment, which consists of six domains (maritime, land, air, space, human and information – including cyberspace). On the other hand, the Australian Defence Glossary (available via the Defence intranet) defines capability as 'the power to achieve a desired operational effect in a nominated environment'. The varied terms used herein reflects this variation in terms used within these and other Defence sources.

<sup>2</sup> Donald Lowe & Tim McKay, *Towards a Theory of Joint*, Defence Science and Technology Group Report No. DST-Group-DP-1362, July 2016.

<sup>3</sup> Australian Civil-Military Centre, *Afghanistan: Lessons from Australia's Whole-of-Government Mission* (Canberra: Defence Publishing Service, 2016).

<sup>4</sup> Air Chief Marshall Mark Binskin, *Implementing the Defence Headquarters Review: Update and CDF Intent* (unpublished email to all Defence personnel, 11 January 2017).

<sup>5</sup> Binskin, *Implementing the Defence Headquarters Review*.

<sup>6</sup> Defence, *Australian Defence Force Headquarters Cascade Brief No. 1* (unpublished presentation, dated 16 May 2017).

<sup>7</sup> Leonie Warne, Derek Bopping, Irena Ali, Dennis Hart & Celina Pascoe, 'The Challenge of the Seamless Force: The Role of Informal Networks in the Battlespace', paper presented at the 10th International Command and Control Research and Technology Symposium, June 2005.

<sup>8</sup> Defence, *2016 Defence White Paper* (Canberra: Defence Publishing Service, 2016), paras 4.6 & 4.61.

<sup>9</sup> Defence, *First Principles Review: Creating One Defence* (Canberra: Defence Publishing Service, 2015), p. 51.

<sup>10</sup> Defence, *Pathway to Change: Evolving Defence Culture* (Canberra: Defence Publishing Service, 2012), p. 13.

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# JOINT STUDIES PAPER SERIES

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## About the series

Over the last three decades, each of the three Australian Services has established a centre of excellence to conduct academic research and development in relation to their core functions. These centres have made excellent contributions to the literature on military activities in the maritime, land, air and space domains, primarily through the establishment and promulgation of studies paper series. To date, however, the Australian Defence Force (ADF) has had no equivalent outlet for academic research and development relating to the conduct of joint military activities.

The Joint Studies Paper Series will help to fill this gap. A collaborative venture between Australian Defence Force Headquarters, Defence Science and Technology Group and the Australian Defence College, the series will help to shape future joint best practice within the ADF through the promulgation of research about the past, present and future of joint military activities.

Papers in the series are available in hard copy and online. They can be downloaded free of charge from: [http://www.defence.gov.au/ADC/publications/Joint\\_Studies.asp](http://www.defence.gov.au/ADC/publications/Joint_Studies.asp).

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The Joint Studies Paper Series welcomes unsolicited submissions on a range of topics related to joint military activities. Ideally, papers should be linked to the Australian experience of joint or should contain information that will be of interest to the ADF, however papers examining other joint topics may be considered depending on their focus and content. For example, papers exploring topics in the following areas will be of particular interest to the series:

- joint force design and experimentation
- joint capability development, management and integration
- fundamental inputs to capability
- joint professional military education and training
- joint doctrine, theory and concepts (including future concepts)
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- historical aspects of joint.

Papers submitted for consideration should be longer than a journal article but shorter than a book; between 10,000 and 70,000 words (inclusive of notes) is ideal. References should be included in endnote form and individual citations should be formatted in accordance with the Chicago Manual of Style. If the series editor decides to proceed with considering an unsolicited submission, it will be subjected to blind peer review prior to publication.

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Since the 1970s, the Australian Defence Force has taken an increasingly joint approach to the planning and conduct of operations, the management of the current force and the design of the future force. This paper reviews that joint approach, identifying underlying key joint principles. It recommends that strategic joint (J) staff arrangements be formally defined to provide clarity for operations and greater effectiveness for joint management of the current force. It supports the recent establishment of a permanent joint force design team but emphasises that the team will need to be well-resourced, with its leader as the Strategic J8, and supported by a Defence joint force design culture.

*Dr Tim McKenna is an Honorary Visiting Fellow with Defence Science and Technology Group, and a management consultant.*

*Dr Tim McKay is Research Leader, Land Capability Analysis in the Joint and Operations Analysis Division of Defence Science and Technology Group.*