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**Enhancing Productivity and Efficiency:
The Requirement to Implement an Alternative
Crewing Strategy**

INTRODUCTION

1. In recent years, the Royal Australian Navy (RAN) has struggled to stem separation rates, particularly in technical categories. When seeking to accelerate training to fill resultant personnel gaps, stovepipes in the training pipeline have made it difficult to deliver competent or timely replacements. The consequence for the RAN's seagoing workforce is significant, preventing ships and submarines proceeding to sea; ultimately impacting defence capability and preparedness.

2. To maintain a competent workforce and deliver its directed level of capability, the RAN initiated workforce reforms to recover the work-life balance of the seagoing sailor. The main changes were imposed limitations on a ship's operating cycle (reduced activity periods) and targeted short-term financial incentives (bonuses). Successful in the short term, limiting a ship's operating cycle constrains the delivery of capability; while selective bonuses can be divisive and costly. Bolder reforms are vital to attracting and retaining a seagoing workforce. Only then will RAN personnel (particularly those who are seagoing) recover a work-life balance without the need for the RAN to artificially restrict its operating capability. This paper argues that the RAN must invest in an alternative crewing strategy if it is to achieve the productivity and efficiencies needed to operate its future force.

3. **Scope:** This paper discusses traditional and alternative crewing strategies. It outlines challenges confronting the RAN when seeking to enhance productivity and retain personnel. This paper proposes an alternative crewing strategy to improve capability efficiency and establish a sustainable and more attractive seagoing work-life balance. It recommends an alternative crewing strategy to deliver the RAN the productivity and efficiencies it needs in future.

AIM

4. This paper highlights deficiencies in traditional crewing arrangements and proposes an alternative crewing strategy for the RAN's future force.

BACKGROUND

5. **Reduced Manning.** In the 1990s, crewing reform focused on reduced personnel (often referred to as ‘minimum manning’), where new capability led to a reduction in overall crew size.¹ This situation was expected to achieve savings in total personnel costs leading to reduced training requirements, life-cycle costs (such as less time away from family), and anticipated improvements in warfighting effectiveness resulting from training smaller close-knit teams. A study by the United States Navy (USN) focused on reduced manning in DDG 51 Class Warships, which promised to accelerate USN transformation in two ways:

- a. smaller and more capable crews, operating newer technology, had the potential to make more effective decisions in a more timely manner; and
- b. reduced manning would free resources for recapitalisation elsewhere.²

6. **Consequences of Reduced Manning.** The effectiveness of crewing arrangements was examined and ships were assessed to be performing to the required standard, resulting in initial savings in personnel. However, a negative consequence was the reduced flexibility to release individual crew members for leave, training and professional development during a ship’s routine operating cycle. Generational advances in warship technology led to increased platform availability. As a result, reduced manning and an increase in platform availability led to crew endurance becoming the constraining factor in the at-sea capability.

7. Between 2003 and 2008, due to the RAN fleet’s increased operational workload, the traditional crew’s work-life balance deteriorated and separation rates soared.³ Signs of stress were evident in the inability of crews to use up

¹ In the RAN, crew sizes reduced from 325 in the Charles F. Adams Class DDG and from 234 in the River Class Destroyers, to 184 in Adelaide Class FFG and 163 in the Anzac Class FFH. Crew figures are from Captain Richard Sharpe RN, *Jane’s Fighting Ships 1994-1995*, 97th ed., Jane’s Information Group Limited, Surrey, 1994, pp. 25–28.

² Rear Admiral James Hinkle USN and Captain Terry Glover USN, ‘Reduced manning in DDG 51 Class warships: Challenges, opportunities and the way ahead for reduced manning on all US Navy ships’, Anteon Corporation, Virginia, 18 March 2004, p. 1.

³ Data on RAN separation rates (since 2004) may be found on the Director Navy Workforce Management Intranet Website at <<<http://intranet.defence.gov.au/navyweb/sites/DNWM/comweb.asp?page=32171&Title=Category%20Separation%20Rates>>>, accessed 1 October 2010.

their leave, increasing personnel deficiency reports and a decline in core competency (training) levels. Also, the sailor's career management agency was unable to preserve the sea-shore roster.⁴ Increasingly, fleet-wide signals demanded commanding officers devote greater attention to improving leave balances and recovering core competencies. But the RAN was slow to address the problem's root causes and design appropriate employment conditions for its personnel. Ultimately, the failure to meet individual crew employment needs contributed to higher separation rates and prevented ships and submarines proceeding to sea.

8. **Workforce Reform.** The shortages in RAN personnel gained special prominence in the 2009 Defence White Paper, *Defending Australia in the Asia-Pacific century: Force 2030*, addressing the need to fix the RAN's structural hollowness.⁵ Further, the Australian Government emphasised the need for the RAN to become more businesslike, efficient and prudent in its use of resources,⁶ highlighting the need to enhance productivity as a key element of the Strategic Reform Program (SRP).⁷ Recently, two common themes emerged from strategic reform discussions with senior business executives. In business terms, the first theme identified the need for maximum use of clients, for example, by avoiding client productivity wastage. The second theme identified the need to reduce business complexity by optimising the client base, for example, by getting rid of time-consuming clients that produce minimal profit. Both themes led to increased profits and a more effective use of employees.

9. Adapting such reforms to the RAN context, to improve productivity and efficiency, the RAN needs to:

- a. maximise the use of capability (for example, making sure it can employ capability to the full extent of its material availability); and
- b. reduce participation in unique stand-alone activities deemed suitable for civilianisation (for example, by employing RAN personnel where they are critical to delivering combat capability).

⁴ 'Sea-shore roster' refers to the ratio a sailor will spend in a sea posting versus the time they will be posted ashore. The sea-shore roster was established to ensure adequate respite for seagoing personnel.

⁵ Department of Defence, 'Defending Australia in the Asia-Pacific century: Force 2030', *Defence White Paper 2009*, Government of Australia, Canberra, 2009, p. 113.

⁶ Department of Defence, 'Defending Australia in the Asia-Pacific century: Force 2030', p. 110.

⁷ Department of Defence, 'The strategic reform program—Delivering force 2030', Government of Australia, Canberra, 2009, p. 5.

Both these themes are relevant to any alternative crewing strategy.

ALTERNATIVE CREWING STRATEGY

10. **De-coupling Crew Endurance from Platform Availability.** As new capability is introduced, it is unproductive and inefficient to pursue traditional crewing strategies. Alternative crewing strategies seek to change the seagoing experience by creating a more flexible work environment that achieves a balance between sea duty and shore respite, ultimately promoting retention. Importantly, it does so without adversely impacting the delivery of capability. Alternative crewing ensures a platform can be employed to its maximum capability while providing a competitive workplace structure more reflective of the contemporary labour market.

11. **New Generation Navy.** Currently, under the New Generation Navy (NGN) cultural pillar, a number of projects are examining ways to build an attractive and contemporary workforce environment. These include innovative ways to improve respite (such as reducing duty watch numbers), creating predictability in periods away from home port and placing increasing limitations on fleet unit operating cycles (limiting days at sea/away from home port). While such reforms may be essential to deliver a work-life balance under traditional crewing arrangements, it remains inefficient and unproductive to constrain platform availability.

12. **Seachange Workforce Renewal Project.** Between 2005 and 2008, considerable momentum was generated examining crewing reform under the Seachange program. In recognition of growing workforce pressures, a Seachange Workforce Renewal Project (SCWRP) examined Alternative Crewing Strategies.⁸ The SCWRP sought to establish an appropriate balance between sea duty and shore respite, promote the retention of personnel and enhance the delivery of capability. By late 2007, various proposals were made to the Chief of Navy Senior Advisory Committee (CNSAC) about the phased introduction of Alternative Crewing in the RAN's future force. Various crewing models were examined, all of which had been practised or trialled in the RAN or other navies (such as the USN and the Royal Navy (RN)):

- a. *Enhanced crewing*—a form of traditional crewing where enhanced shore support relieves sailors of their duties while alongside (such as dutywatch, force protection and routine maintenance).

⁸ Captain Michael Petch RANR, 'SCWRP project 4 alternative crewing - future options', *Navy Workforce and People Committee*, Royal Australian Navy, 20 September 2007, pp. 1-31.

- b. *Supplementation (flexi-crewing)*—additional personnel are posted to a crew to increase flexibility for sailors to be released for leave, respite and training.
- c. *Multi-crewing*—multiple complete crews rotate between platforms.
- d. *Modular crewing*—a minimum core crew can be supplemented by specialist, mission specific teams (referred to as ‘capability bricks’)
- e. *Civilian crewing*—RAN crews are replaced by civilian personnel from the Merchant marine. Such systems are already successfully employed in the RN (Royal Fleet Auxiliary) and USN (Military Sealift Command).

13. Although CNSAC agreed in principle to many SCWRP concepts, other priorities predominated. Such priorities included the parlous state of submarine crewing and the concern that the current personnel shortages militated against implementation of crewing options that need an increase in personnel. As a result, after the Seachange program was shut down and NGN introduced, the momentum needed to implement an Alternative Crewing Strategy stalled.

14. Two years have passed since this decision was made. The RAN has made significant progress in its response to the submarine workforce review and separation rates have improved; so it is now timely to revisit crewing initiatives. Governments should expect to be able to task fleet units to the full extent of their availability. To deliver a viable future force, it is vital to reinvigorate an alternative crewing strategy. As a first step, the RAN must establish a project under the NGN cultural pillar (such as within the People Focussed Work Practices group) to implement alternative crewing in the Air Warfare Destroyer (AWD) and the Landing Helicopter Dock (LHD).

REINVIGORATING ALTERNATIVE CREWING STRATEGIES

15. **LHD Multi-Crewing.** The first LHD is expected to be delivered in 2013. The ideal arrangement for alternative crewing is a 2:1 multi-crewing ratio (two crews per platform). The Merchant marine has used this form of crewing for at least 30 years and it is also used to crew submarines in the United States and France. However, such a crewing model is labour intensive and not considered cost effective. In its SCWRP report to CNSAC in 2007, a 3:2 ratio was

considered optimum for the RAN, giving adequate crew respite while allowing platforms to be used to the full extent of their material availability. This model has been successfully implemented in the Patrol Boat force.

16. In the SRP, a number of reforms under Workforce Productivity and Shared Services propose civilianisation of some military support positions. However, wherever possible, permanent military personnel are to be employed in areas critical to delivering and sustaining combat capability. The RAN could implement such reform by civilianising unique and under-used capabilities. One reform is to civilianise the RAN's sealift capability. In times of crisis, its sealift resources have generally needed civilian supplementation. This occurred during the 1999 East Timor crisis,⁹ and is evident now in the use of the chartered Merchant Vessel OCEANIC VIKING, which transports irregular immigrants from the sea-point of interception to Christmas Island. In recent years, the RAN has found it difficult to use its primary sealift ship HMAS TOBRUK efficiently. Given the ship's sporadic use, the sealift capability should be civilianised as part of the TOBRUK replacement project, enabling a 3:2 multi-crewed arrangement in the two LHDs.

17. **AWD Multi-Crewing.** Maintaining traditional crewing in the AWD is inefficient and under-utilises the capability. The RAN could start phasing in alternative crewing in the AWD. For example, the three AWD (replacing the four frigates) will enable a 4:3 multi-crew ratio by 2017 (and coincide with delivery of the third AWD). However, to be sustainable, RAN workforce productivity reforms must identify additional personnel from within its ranks to establish at least five crews by 2020, enabling a 5:3 crewing ratio.¹⁰

18. **Civilianising Afloat Support Ships.** The unique skills and qualification requirements in Afloat Support operations are a distraction from the RAN's core business, and civilianising Navy's replenishment ships may garner considerable efficiencies. The RAN may also learn important lessons by examining equivalent practices in the RN (Royal Fleet Auxiliary) and USN (Military Sealift Command).

⁹ The fast jetcat HMAS JERVIS BAY was chartered to transport troops between Darwin and Dili.

¹⁰ An AWD ratio of 6:3 is manning intensive and not considered cost effective. In the next 10 years, at least 110 additional personnel will need to be identified from within Navy to make up the fifth AWD crew.

CONCLUSION

19. Personnel shortages in the RAN gained special prominence in the 2009 Defence White Paper. Smaller crew size and increased platform availability have made traditional crewing arrangements unattractive to the contemporary workforce. RAN separation rates have been unsustainable, and prevented ships and submarines proceeding to sea. Crew endurance has become the constraining factor in the provision of at-sea capability. There have been workforce reforms under NGN, but progress in alternative crewing has stalled. To keep an attractive and sustainable workforce, the RAN must reinvigorate alternative crewing strategies. Such reforms will ensure the maximum and best use of capability, while reducing participation in unique stand-alone activities deemed suitable for civilianisation. This will achieve the productivity and efficiencies the RAN needs to operate its future force.

RECOMMENDATIONS

20. This paper makes the following recommendations.
- a. The RAN must recognise that, as new capability is introduced, it is unproductive and inefficient to let a single crewing regime limit platform availability (or capability preparedness).
 - b. CNSAC should direct a reinvigoration of alternative crewing strategies formalised under the NGN cultural pillar. It should start by creating a project in the People Focussed Work Practices group to examine alternative crewing in the AWD and the LHD.
 - c. Personnel working on the project must consider three strategies:
 - i. the phased implementation of alternative crewing in the AWD (for example, introducing four crews by 2017, coincident with delivery of the third AWD, and the feasibility of building a fifth crew by 2020);
 - ii. the phased implementation of alternative crewing in the LHD (for example, the unique and infrequently used sealift (TOBRUK) capability should be civilianised as part of the TOBRUK replacement project, enabling a multi-crewed arrangement in the LHDs); and
 - iii. due to the unique skills and qualification requirements needed for Afloat Support operations, civilianising the RAN's replenishment ships may lead to considerable efficiencies. A feasibility study should be done to determine the viability of such an option.

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