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A Case for Restoring Principal Warfare Commander Generation in the RCN

Lieutenant-Commander Michèle C. Dumaresq

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Service Paper

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**CREDIBILITY AMONG ALLIES:
A CASE FOR RESTORING PWC GENERATION IN THE RCN**

AIM

1. This service paper aims to provide context about the Royal Canadian Navy (RCN)'s Force Generation (FG) and Force Employment (FE) of Principal Warfare Commanders (PWC) to support its core capabilities, as outlined in the Defence Policy, *Strong Secure Engaged* (SSE). It will provide necessary context of the subject to aid the Director General Naval Force Readiness (DGNFR), Commodore David Patchell, and the Force Sustainment and Oversight Committee (FSOC)'s decision-making process¹ to resolve the disparity between North Atlantic Treaty Organization (NATO) grade or equivalent PWC FG and RCN PWC FG, which, in its current state, represents a vulnerability for the institution and Canada. This service paper will also provide recommendations to effect positive and enduring changes towards realizing the desired RCN commitments.

INTRODUCTION

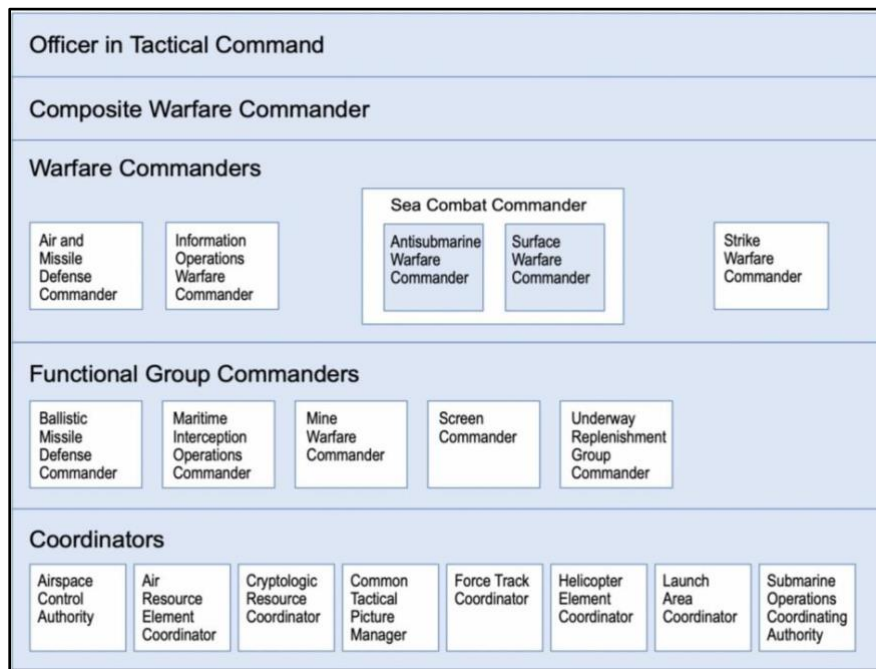


Figure 1—Composite Warfare Commander Organization
Source: *Joint Publication 3-32: Joint Maritime Operations*

¹ At the time of writing this service paper, FSOC had recognized the requirement for a Needs Assessment to be conducted. The Needs Assessment has been initiated and is not yet finished.

2. The Composite Warfare Commander (CWC) doctrine structure, depicted in Figure 1² and Figure 2, was established in the 20th century to manage blue water naval operations within air, surface, and subsurface battlespaces.³ This doctrine “continues to be the basis for [NATO, Coalition, and RCN] naval Command and Control [C2] in the littoral and joint environments” today.⁴ In the NATO and RCN construct, the PWCs who are assigned to each of these domains are the Anti-Submarine Warfare Commander (ASWC); AntiSurface Warfare Commander (ASuWC); and Anti-Air Warfare Commander (AAWC).⁵ As illustrated in Figure 2, PWC duties are assigned to ships’ captains within the Naval Task Group (NTG), who cooperate to execute the battlespace management activities.⁵ Traditionally, in the RCN, PWC duties have been executed by experienced Operations Room Officers (ORO) either towards the end of their ORO posting cycle, or upon its completion, after receiving formal training and assessment in a specific domain. As of today, the RCN no-longer has the resident capability to deliver NATO-grade or equivalent PWC training, nor does it have the ability to regenerate requisite training within its lines.⁶

3. This service paper will examine the following question: should the RCN pursue NATO grade or equivalent PWC training? The answers to this question will demonstrate that the RCN must reinvigorate and maintain PWC competency in order to support current operational commitments with Canada’s allies and partners. To emphasize the urgency and importance of such a requirement, this service paper will begin by describing the range of expectations of RCN ships when conducting FE and FG. This will be followed with an analysis of the challenges to the reinvigoration of formal PWC training in the RCN as well as an assessment of what the consequences of not pursuing PWC Training could be. This service paper will conclude with recommendations to further enable PWC training for immediate as well as long-term staged implementation.

² United States Navy (USN) Joint CWC construct. This depiction, while offering some subtle difference in the nomenclature, complies to NATO doctrine. AAWC is referred to as the Air and Missile Defence Commander (AMDC), and the Sea Combat Commander fulfills both the ASuWC and ASWC duties if the operational tempo allows it.

³ Richard Brown. “Composite Warfare Commander Doctrine in the age of the Joint Task Force: A New Approach” Open Canada. Last accessed 2 February 2022. <https://apps-dticmil.cfc.idm.oclc.org/sti/pdfs/ADA348468.pdf>, p. ii

⁴ IBID ⁵ North Atlantic Treaty Organization. Allied Maritime Tactical Instructions and Procedures. ATP- 01. Newport: NATO Standardization Agency, 2002.

⁵ Irandoust, H. and Benaskeur, A., A Conceptual Framework for System-Mediated Collaboration in the Context of Naval Force Battle Management, Technical Report, DRDC Valcartier TR 2009-199, p. 4

⁶ RCN. PWC Needs Assessment and Needs Training Assessment Draft. Ottawa: DGNSR, 2022.

DISCUSSION

Continental and Global Commitments and Expectations

4. The most recent Canadian Defence Policy (2017), SSE, presents a vision where Canada is strong at home, secure in North America, and engaged in the world. The RCN Strategic Plan 2017-2022, which is aligned with the defence policy, further describes its vision where the RCN is “[...] structured around the ability to deploy and sustain a Naval NTG, highly interoperable with allies, contributing meaningfully to joint action ashore, and the sustainment of joint operations from sea as depicted in Figure 3.”⁷

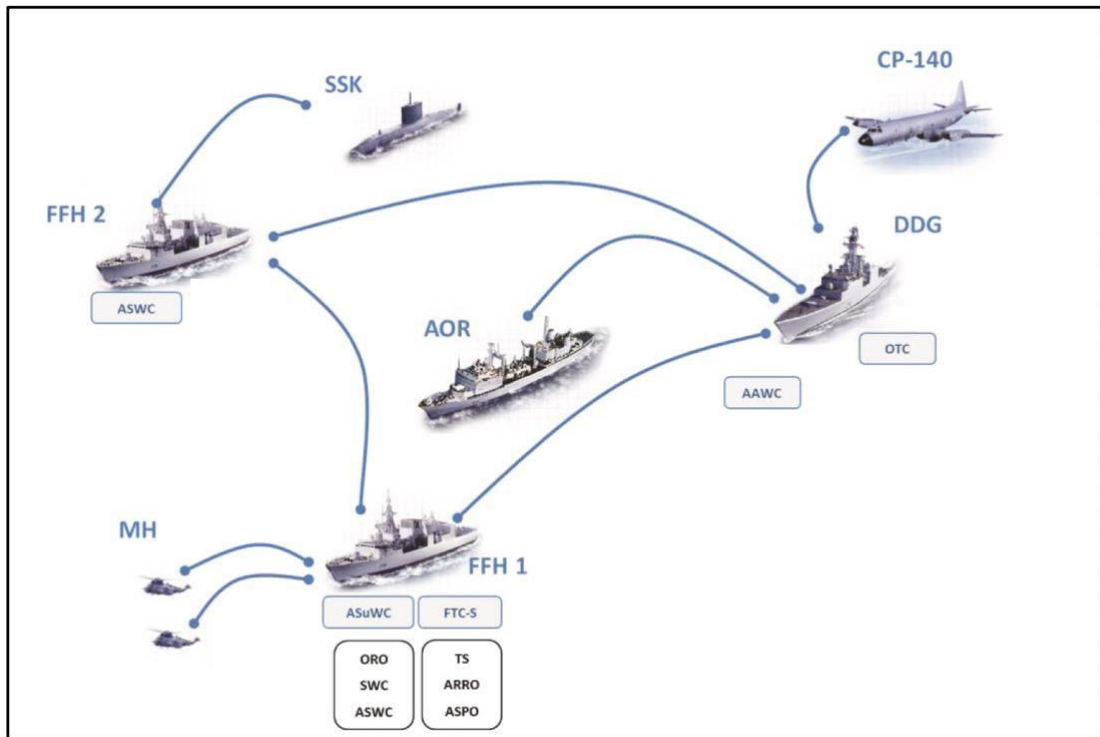


Figure 2—Composite Warfare Commander Organization withing and RCN NTG
Source: Defence Research and Development Canada

5. Being secure in North America, contributing to Canada’s enduring commitment to North American Aerospace Defence (NORAD), and being engaged in the world through existing agreed-upon commitments from allies and partners demand the employment of trained and competent PWCs. This part of the paper will frame the expectations of RCN ships when conducting FE and FG. The following factors will be

⁷ IBID. p. 9

analysed to support this argument: RCN Commitments, interoperability, and upholding the RCN's credibility.

RCN Commitments (FE/FG)

6. In the calendar years of 2020 and 2021 alone, 17 RCN surface combatants⁸ participated and commanded in major international and Canadian-led FG events and were force employed in support of operations with NATO and coalition partners.⁹ During these exercises and operations, RCN ships fulfilled PWC roles without formal or adequate training since 2008.¹⁰

7. The RCN is referred to as a blue water navy in SSE, a term which is described in *Leadmark 2050* as balanced, cost-effective, multi-purpose, arctic capable, globally deployable, forward-postured, survivable, and adaptable and agile.¹¹ The blue water navy elements that are most relevant to the case for restoring the PWC qualification are a combat effective navy defined in *Leadmark 2050* as “capable of combat at sea across all naval warfare disciplines [...] and highly interoperable with Canada’s allies and defence partners” and an adaptative and agile navy whose personnel “are well-prepared for the complexities and ambiguities of future operations in the skills and knowledge they possess.”¹²

⁸ Some ships were counted twice as they would have deployed on more than one operation.

⁹ Canada commanded Standing NATO Marine Group 1 (SNMG1) in support of Op REASSURANCE for one year in 2021, and the Canadian Atlantic Fleet took Command of a three-ship Task Group during Op NANOOK in 2020, a ten-ship Task Group during Ex JOINT WARRIOR in 2020, and a seven-ship Task Group during Ex CUTLASS FURY, a major RCN-led biannual international exercise in 2021.

¹⁰ RCN. PWC Needs Assessment and Needs Training Assessment Draft. Ottawa: DGNSR, 2022.

¹¹ Royal Canadian Navy. *Canada in a New Maritime World: Leadmark 2050*. Ottawa: Department of National Defence, 2016. p. 57

¹² IBID

CAF Values	Integrity – Loyalty – Courage – Stewardship – Excellence OPERATION HONOUR					
CAF Vision	STRONG, SECURE , ENGAGED CANADA'S DEFENCE POLICY					
Core Missions	Detect, Deter, Defend against threats to Canada	Detect, Deter, Defend against threats to North America	Lead and/or contribute to missions ISO of global security	Lead and/or contribute to international peace operations		
	Engage in capacity building with allied partners	Provide assistance to OGDs ISO national security and security of Canadians abroad	Provide assistance to civil authorities and NGOs in responding to disasters and emergencies	Conduct SAR operations		
Strategic Outcomes	Canadian Security and Prosperity	Global Stability	Rules based International order			
Defence Priorities	Well supported, diverse, resilient people and families	Inclusion and Diversity	Fixing Defence Funding	Defence Diplomacy		
RCN Code of Conduct	Duty – Integrity – Loyalty – Courage					
RCN Vision	READY TO HELP – READY TO LEAD – READY TO FIGHT					
RCN Mission	To prepare combat-effective Naval Forces that support Canadian interests at home and abroad					
RCN Goals	MAINTAIN EXCELLENCE AT SEA EVOLVE THE BUSINESS OF OUR BUSINESS		TRANSITION TO THE FUTURE FLEET INSPIRE AND SUPPORT THE RCN TEAM			
	PEOPLE FIRST, MISSION ALWAYS					
RCN Strategic Objectives	Deliver the RCN's Future Fleet Business Owner: DGNFD	Recover and Rebalance the RCN Workforce and Enable Support to the RCN Team Business Owner: DGNSR	Improve the Delivery of Materiel Sustainability for the RCN Fleet Business Owners: DGNSR & DGMEPM			
	Optimize Individual Training and Military Personnel Readiness Business Owner: A/CNS (P&T)	Optimize the Delivery of Readiness and Combat Effectiveness Business Owner: A/CNS (AT&R)	Maintain Modernized Business Management and Communication Practices Business Owner: VCNS			
DND's Departmental Results Framework	Operations	Ready Forces	Defence Team	Future Force Design	Procurement of Capabilities	Sustainable Bases and IT Systems and Platforms
RCN's Results Framework	Ready Naval Forces		Naval Force Development		Naval Bases	

Figure 3 – RCN Strategy Map
Source: Defence Research and Development Canada

8. Identified as the core of the RCN's operations doctrine, SSE describes the NTG as capable of delivering “the full breadth of combat capability, [...] configured and crewed to provide its own command and control, [...] and capable to] lead allied or coalition forces for sustained periods, anywhere in the world.”¹³ Without concerted efforts to reinvigorate the formal PWC training, this statement remains an unfulfillable vision without a plan. In order to be in a position to fulfil its core capabilities, the RCN needs more than simply the ships the National Shipbuilding Strategy will offer. It requires investment in our most important asset: our people. Without generating the right internationally recognized PWC qualification, the RCN cannot effectively meet the SSE and RCN Strategic Plan visions.

¹³ Government of Canada. Strong, Secure, Engaged: Canada's Defence Policy. Ottawa: DND Canada. 2017, p. 35.

Interoperability

9. Interoperability is at the core of the RCN's contribution to global and regional alliances, such as NATO, a formal, treaty-binding alliance, and the Global Network of Navies (GNoN), a Pentagon-led project that seeks to produce naval interoperability around the world, enabling ad-hoc coalitions to be formed. As such, "between 2001 and 2017, the RCN made well over 110 warship deployments on various international operations."¹⁴ However, interoperability is not simply an RCN model to get away with contributing a credible minimum number of resources to global engagements, it is first and foremost a mutually beneficial means of projecting sea power expected from our allies and partners.

10. By way of an example to describe interoperability as a cornerstone of contribution warfare, Royal Navy (RN) Commodore Guy¹⁵ stated that: "the return to a focus on peer adversary warfare demands the highest practicable levels of capability, [... where] optimizing the Alliance's combined and joint interoperability is both vital and urgent."¹⁶ NATO policy defines interoperability as "the ability for Allies to act together coherently, effectively and efficiently to achieve tactical, operational and strategic objectives."¹⁷ The same policy further describes interoperability as the sharing of "common doctrine and procedures, each other's infrastructure and bases, and to be able to communicate."¹⁹

11. In other words, interoperability goes beyond technical compatibility, as personnel qualifications and their ability to execute duties in accordance with NATO doctrine is equally important. As noted by Dr. Olivier Schmitt, a Professor in South-East History at the Vienna University, integration is a key component of interoperability in coalition warfare as coalitions are often formed in an ad-hoc manner for relatively short periods of time ranging from weeks to months.¹⁸ It is therefore of the utmost importance for the RCN

¹⁴ House of Commons, Canada. The State of Readiness of the Canadian Forces: Report of the Standing Committee on National Defence. December 2012. p. 3-4

¹⁵ Commodore Guy is Acting Director of the NATO Combined Joint Operations from the Sea Centre of Excellence in 2020

¹⁶ NATO. "Allied Interoperability & Integration Guide" Government of Canada. Last accessed 1 February 2022, http://www.cjoscoe.org/infosite/wp-content/uploads/2020/03/2020-Allied-Interoperability-andIntegration-Guide_Version-2.0.pdf p. 8

¹⁷ NATO. "Interoperability: Connecting NATO Forces". Last accessed 1 February 2022, https://www.nato.int/cps/en/natolive/topics_84112.htm p. 8 ¹⁹ IBID

¹⁸ Olivier Schmitt, "More Allies, Weaker Missions? How Junior Partners Contribute to Multinational Military Operations", *Contemporary Security Policy*, (2018), p. 4 <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/14751798.2020.1712025> ²¹ Cambridge Dictionary. Last Accessed 5 February 2022. <https://dictionary.cambridge.org/dictionary/english/credibility> ²² House of Commons, Canada. Standing Senate Committee on National Security and Defence Evidence. September 2016.

to create the conditions to foster interoperability in line with SSE, the RCN Strategic Plan, and NATO priorities. It is for this reason that restoring formal NATO grade or equivalent PWC training is of critical importance.

Upholding RCN Credibility

12. The Cambridge Dictionary defines credibility as applicable to “someone that can be believed or trusted.”²¹ Since trust is a pillar of interoperability and reciprocal reliance among allies, the RCN’s credibility should be regarded as its centre of gravity within the construct of coalition warfare. During a Standing Senate Committee on National Security and Defence session in 2016, Vice-Admiral Drew Robertson (Ret’d) offered the following observation:

“Notwithstanding this unbroken record of success, the navy's capabilities and capacities have eroded steadily over the last 20 years incrementally, increasingly compromising its ability to defend Canada while also acting as a force for good abroad. I would like to describe where this could lead and the strategic risks governments and the country will face.”²²

13. Since the last *Iroquois*-class destroyer was decommissioned in 2017, the RCN has not retained the ability to conduct force-level air defence but has often been entrusted to do so while employed in international operations. Dr. Rob Huebert, a research fellow with the Canadian Global Affairs Institute, observed that “the RCN’s performance since the 1990s may have created expectations it can no longer meet.”¹⁹ The ability to perform Area Air Defence (AAD) and the PWC duty of AAWC²⁰ is expected of the Canadian Surface Combatant (CSC), which [is not] anticipated to be delivered until the early 2030s.”²¹

14. The materiel and technical readiness states of the RCN are already sources of national and international embarrassment.²² Let’s not add the RCN’s reputation as professional warriors and mariners to that list. Without PWC training, there is an imminent

¹⁹ Rob Huebert. “Facing Rough Seas” (January 2016), CGAI, Last accessed 1 February 2022, https://www.cgai.ca/facing_rough_seas

²⁰ The AAWC PWC was used as an example over the other two PWC, ASUWC and ASWC, as it is recognized as the most complex and dynamic duty to execute and the one necessitating the most training, which will be discussed further in the second part of this service paper.

²¹ Lee Berthiaume. “Canadian warships starting to show age, replacements years away, Navy Commander says” CTV News. Last accessed 2 February 2022. <https://www.ctvnews.ca/canada/canadian-warshipsstarting-to-show-age-replacements-years-away-navy-commander-says-1.5722351>

²² Natasha Simpson. “The slow death of the duct tape military” Martlet, University of Victoria Newspaper. Last accessed 2 February 2022. <https://www.martlet.ca/the-slow-death-of-the-duct-tape-military/>

risk to further the degradation of the RCN reputation. The confluence of the continental and global commitments and expectations as outlined in SSE and the RCN Strategic Plan, the increasing demand for interoperability, and a need for upholding the RCN's credibility at home and among allies and partners substantiate the argument that the RCN must reinvigorate and maintain PWC competency.

Way Ahead: Challenges to the Reinvigoration and the Cost of Status Quo

15. While PWC training has understandably not been prioritized in the RCN since the decommissioning of the destroyers, the last AAD capable platform, it is also true that such training was not maintained, even at a reduced level of corporate knowledge and experience. Personnel, materiel, and financial resources are considered when discussing the obstacles standing in the way of PWC training. If RCN initiatives were to receive resources based on their priority, in line with Force Posture and Readiness (FP&R)²³ and SSE, it is evident that PWC is not prioritized as highly as it should be. Using a corporate profitability model, the RCN's "product" is measured in terms of operational output, and the RCN's priorities are measured following the allocation of resources. Dr. David Perry, a Senior Analyst at the Canadian Global Affairs Institute, made the following observation: "there are insufficient funds available to acquire the capabilities needed to deliver on existing defence policy and maintain the same basic type of navy that we have today".²⁴ This part of the paper will identify the obstacles to restoring formal PWC training in the RCN by comparing RCN and Royal Navy (RN) PWC training and framing the impacts of status-quo for the RCN. The Naval Warfare Officer (NWO) career progression, while central to the obstacles to and solutions for restoring formal PWC training in the RCN, is beyond the scope of this paper. It will be briefly discussed in the recommendations section.

RCN's Version of PWC Training

16. Firstly, an analysis of the quality of the RCN's PWCs will be demonstrated with a thorough comparison between the RN and RCN training programmes. The following metrics will be analyzed: ORO and PWC course duration and frequency (1); course student

²³ "The Chief of the Defence Staff (CDS) [...] is responsible to provide direction on the Force Posture and Readiness (FP&R) expected of the Canadian Armed Forces (CAF). Force posture characterizes elements of the CAF in relation to the roles and missions outlined in Canada's defence policy, whereas readiness represents the preparedness of these elements to respond to government direction in a timely fashion. [...] For instance, in the FP&R Collection Tool, the Navy described [their capabilities] in terms of force packages it may have to deploy (e.g., a naval task group, a ready-duty ship)." Dan Kennedy. Strategic Joint Staff Force Posture and Readiness Process Analysis, Contract Report, Alcea Technologies Inc for DRDC. Last accessed 2 February 2022, <https://apps.dtic.mil/sti/pdfs/AD1017586.pdf>

²⁴ House of Commons, Canada. Standing Senate Committee on National Security and Defence Evidence. February 2017.

load (2); simulator time per student (3); and personnel resources (4). In order to truly appreciate the disparity between RCN PWCs and Allies' PWCs, it is important to note that upon graduation, RN Principal Warfare Officer (PWO) students are qualified to fulfil PWC duties as AAWC, ASWC, and ASUWC at a basic level and formal PWC training is available once the PWO has gained relevant experience at sea.²⁵ In contrast, upon graduation, ORO students are not qualified to fulfil PWC duties, but are expected to do so with no opportunity to specialize after gaining experience at sea.

17. As depicted in Table 1, the disparity between the RCN ORO course and RN PWO course metrics is astonishing on all levels. Before PWC employment, historical data shows that RCN ORO students receive a mere 9% of the simulator time that the RN PWO students receive. As a result, it is reasonable to deduct that the training quality of the RCN ORO students is inferior to the RN PWO students as the RCN devotes only 7% of the supporting staff to the ORO course that the RN allocates to the PWO course. In other words, Table 1 paints a picture describing a shorter ORO course with a higher student load, significantly less simulator training time, and less supporting and instructing staff.

18. As depicted in Table 2, the RN offers two formal PWC courses, the AAWC and ASWC courses.²⁶ The offering of formal PWC courses after PWOs have already received significantly more PWC training than their RCN brethren during the PWO course underscores the RN's grasp of the complexity of PWC employment. This marks a stark difference with the RCN, who offers limited PWC exposure during the ORO course and expects OROs to execute PWC duties without the opportunity to receive formal PWC training after the ORO course

RCN and RN ORO and PWO Training Metrics Comparison

		ORO/PWO	Delta RCN vs RN
		8 months	34% less than RN
RCN (ORO)	Frequency	2 x courses per year	
	Student load	18 x students (max)	12% more than RN (max)
		18 x students (historical)	45% more than RN (historical)
	Simulator Time Student	14 x 50-70 mins runs (includes assessment)	91% less than RN (max) per 95% less than RN (historical)
	Personnel	2 x LCdrs ²⁷	93% less than RN resources
	Course duration	12 months	
	²⁵ PWO Handbook and Warfare School.		
	²⁶ At the time of the submission of the paper, the first Information scheduled and the development of an ASUWC course was being d		
	²⁷ Includes personnel conducting training, teaching, and scheduling		

	/frequency	3 x courses per year
	Student load	16 x students (max)
RN		8-10 x students (historical)
(PWO)	Simulator Time	160 hours (max load)
	per Student	280-300 hours (historical load) (includes assessment)

	Personnel resources	15 x LCdrs 5 x CPO2s	
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Table 1— RCN and RN ORO and PWO Training Metrics Comparison *Sources: Extrapolated from RCN ORO QSP and RN PWO Handbook*

RN Post-PWO PWC Training			
		AAWC	ASWC
RN	Course duration /frequency	16 weeks 3 x courses per year	4 weeks 2 x courses per year
	Student load	4 x students (max) 2-3 x students (historical)	12 x students (max) 8 x students (historical)
	Simulator Time per Student	25 hours ²⁸ (includes assessment)	No simulator time, as the course is focussed on theatre antisubmarine warfare planning and execution from a doctrinal and planning perspective.
	Personnel resources	2 x LCdrs	4 x LCdrs

Table 2— RN Post-PWO PWC Training
Source: RN Warfare School

19. While it is clear that the RCN’s allocation of resources to the ORO and PWC training diverges from its priorities as outlined in SSE and the RCN Strategic Plan, the PWC training is not an isolated case of finite resources. Figure 4 depicts: “yearly anticipated peak daily number of demand over time reaching as many as 3644 personnel in 2040, or a 17% increase over current (2020) figures.”²⁹ One of the main reasons was identified as an RCN governance system capability deficiency as a report on future of NTS

²⁸ RN Warfare School.

²⁹ IBID p. 29

indicates the “NTS has not been regarded as an RCN Capability.”³⁰ The same report also identified the lack of resources as a contributor to a reduced performance:

“The NTS is routinely funded to one third of its requirement. [...]. The current budget does not address current needs, let alone the needs of the impending [... future Fleet]. This historic and continuing lack of funding has precluded renewal of infrastructure, tools and systems resulting in significant cost and performance inefficiencies. Performance oriented training that produces job-ready operational and support personnel is a RCN that requires sustained financial commitment.”³¹

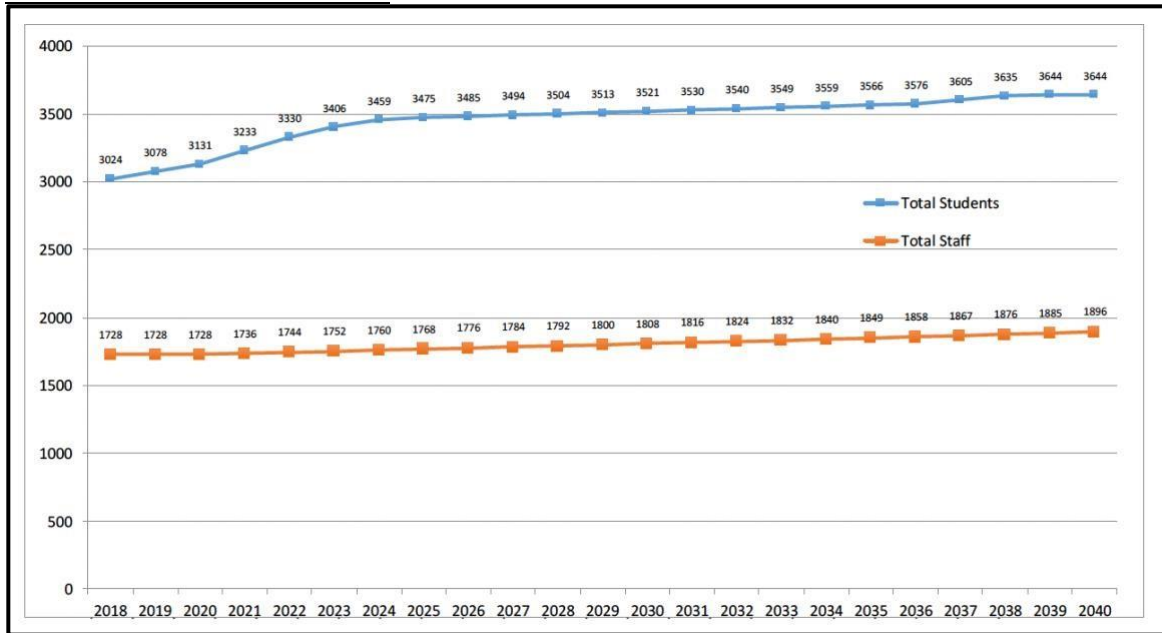


Figure 4—RCN Projected Maximum Daily Production and Supporting Staff Estimates³²
Source: RCN Naval Personnel Training Group (NPTG)

Cost of not pursuing PWC Training

³⁰ RCN. Future Naval Training System (FTNS) Concept of Operations (CONOPS). Esquimalt: Naval Personnel and Training Group, 2020. p. 20

³¹ IBID

³² Includes instructors, developers, and support staff.

20. As a result of severe RCN and RN PWC training dissonance, NWO career progression favouring the development of staff officers and mariners over warfare professionals. Failure to recognize the existing and urgent need for formal PWC training could significantly affect the RCN's ability to integrate with allies and it could even lead to reduced global engagement opportunities, affecting Canada's credibility on the world stage. The argument supporting the reinvigoration of PWC competency in order to support current operational commitments with Canada's allies and partners has been clearly substantiated.

CONCLUSION

21. Despite some efforts to maintain limited PWC capability in the RCN, NWOs assigned PWC duties during operations are left to 'wing-it'. Being committed to "People First, Mission Always" infers the careful consideration to provide the RCN personnel with the tools, equipment, and training necessary to excel during dynamic and challenging missions. Unless the RCN reconsiders its approach to restoring formal PWC training, the aforementioned moto will be perceived as an oblique, weightless, corporate statement.

22. This persistent problem continues to represent a significant strategic risk for the RCN and Canada. PWC competency is pivotal to support current operational commitments and interoperability with Canada's allies and partners as well as retaining and maybe regaining the RCN's professional reputation for excellence. This service paper has

demonstrated that the RCN must reinvigorate and maintain PWC competency in order to fulfill priorities as mandated in SSE, the RCN Strategic Plan, and NATO doctrine.

RECOMMENDATIONS

23. This section will offer short, medium, and long-term solutions to the restoration of PWC training in the RCN:

- a. Short term (1-3 years):
 - i. Sending one NWO per coast, per year to challenge the PWO course. This could be done by identifying one of the 18 ORO students as opposed to creating a requirement for a 19th NWO. RCN NWOs employed; and
 - ii. Needs Assessment (NA) and Training Needs Assessment (NTA) should be reviewed by organizations and individuals who are objective and possess the relevant expertise and experience.

- b. Medium term (3-5 years):
 - i. NWOs returning from multi-year exchanges with NATO partners should be better managed for their experienced to be leveraged in the production of doctrine and, the development of training programmes, and the training of students; and
 - ii. Resume the employment of NATO partners experienced PWCs to train students in Canada.
- c. Long term (5-10 years)
 - i. Conduct an NWO Occupation and Career progression analysis with a focus on warfare. Much like the Staff stream, there would be benefits to a warfare stream as the NWO career progression in its current state occurs too fast for the NWO's operational experience to be leveraged by training establishments and staff employment. The need to generate executive leaders through the Command stream will continue to exist, but there could be tangible benefits to a warfare stream where NWOs would be employed within training establishments and among Fleet staffs.

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