




# The politics of military megaprojects: discursive struggles in Canadian and Australian naval shipbuilding strategies

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## Abstract

Large-scale military platform procurement is an essential but understudied component of the policy studies of megaprojects. Procurement decisions in this area, from ships to aircraft, are examples of a specific type of often very expensive purchases which feature complex multi-actor and multiyear processes characterized by high degrees of conflict between actors over purchases and planning horizons. This study of military procurement efforts of this type demonstrates the importance of maintaining policy ‘alignment’ between governments and service providers for successful megaproject procurement to occur and suggests several strategies for accomplishing this that can be applied to similar large-scale but nondefense-related projects, ranging from hydroelectric dams to high-speed railway development.

**Keywords:** defence procurement, *Type 26* frigate, military doctrine, public administration, procurement policy, policy alignment, Royal Canadian Navy (RCN), Arctic

Government aims and ambitions are translated into action through procurement processes in which specific kinds of items needed to achieve those ambitions are acquired (Greve, 2007; Harland et al., 2019; Lember et al., 2014). Although often viewed as primarily a technical exercise, procurement, and especially procurement of very large budget items, has a necessarily political component and can easily become enmeshed in larger political struggles over government priorities (Keeble, 1997; Flyvbjerg, 2005; 2007).

Many past studies of procurement in the military area, for example, have focused on issues such as how to surmount technical challenges such as changes in key defense technologies, with resulting procurement decisions portrayed as largely “evidence-based”. Compounding this problem in both the defense and procurement literature has been a tendency to treat military platform decisions as essentially *sui generis*, with a corresponding focus on the micro-details of the procurement processes itself rather than broaching the broader political dimension of such activity beyond concerns around such issues as contract featherbedding and supplier favoritism (Collins, 2021).

Studies of large-scale military procurement, however, share many similar characteristics with non-military expenditures of a similar size and type—from highways and bridges to hydroelectric dams and nuclear power stations—which have been found to be very frequently highly politicized—as do the megaproject studies found in this special issue (Flyvbjerg, 2007; 2005) Large-scale military procurement

decisions, from ships to aircraft, are very similar to these large-scale nonmilitary megaprojects in that they are often very expensive and feature complex multi-actor and multiyear processes characterized by high degrees of uncertainty and conflicts between goals and objectives, and it should not be surprising to find a significant nontechnical component to these kinds of decisions (Flyvbjerg, et al., 2022).

In this article, recent Canadian and Australian efforts to purchase a large number of new and expensive warships to replace aging fleet assets are compared. The case studies provide an excellent set of comparable examples of large and complex military procurement processes in which two nations purchasing a similar system at roughly the same time and from the same supplier produced very different outcomes. While Australia's effort to build nine new ships has succeeded to date in getting construction and delivery well underway, Canada's effort to purchase 15 new frigates—the largest single procurement effort in Canadian history—has failed to produce a single ship after well over 25 years of planning and negotiation. The *Type 26* frigate procurement in Australia and Canada, as well as its variable outcome, thus offers fertile grounds for a multinational, large-scale, military megaproject procurement comparison with implications for other non-military cases.

In what follows we examine these two empirical cases to build insights not only about military purchasing in general—and the strategies that governments apply to manage the procurement process—but also about the public procurement dynamics of large-scale, high-cost megaprojects more generally.

## Types of procurement and the study of large-scale, high-cost military platforms

Procurement is more than a purely formal intra-agency bureaucratic contracting process (World Bank Group, 2016). Although that kind of small-scale, low-cost purchasing is a staple of government contracting, besides the need to procure specific kinds of goods and services that ensure the continued functioning of government administration and stimulate domestic economic development (Rogerson, 2004), large-scale “strategic” procurement efforts by government are also plentiful. In these latter efforts, governments attempt to meet goals such as supporting key industries and economic sectors or regions (Dewes et al., 2015), cultivating enhanced employment and innovation (Edquist & Zabala-Iturriagoitia, 2012), and promoting industrial clusters or R&D activities (Demircioglu & Vivona, 2021) to name only a few.

As Table 1 shows there are in fact several classes of procurement with distinct characteristics. Some purchases, for example, have much longer time frames than others and in some cases purchases can be made *seriatim*, whereas severing decisions one from another may be very difficult in others. In many instances of the longer-term procurement processes which characterize both military and nonmilitary megaprojects, it is also the case that path dependencies and sunk costs can make reversals much costlier, if not impossible, again unlike in other cases. Furthermore, uncertainties and risks, including conflicts between actors over their likelihood and definition, increase over longer time periods (Manski, 2011). Ultimately, due to these factors, the kinds of long-term processes common to megaprojects are inherently more complex and conflict prone than simpler, one-off, or low-cost ones.

In many cases of nonmilitary procurement, as the authors of the introduction to this issue have observed, the focus has often been on relatively simple (Type 1) purchases, where decisions are discrete

**Table 1.** Types of procurement.

		Duration	
		Short term	Long term
Expense	Low cost	Type 1 e.g., new office chairs (can be repeated)	Type 3 e.g., reforestation or pensions
	High cost	Type 2 e.g., building or bridge construction	Type 4 e.g., hydro dams, subway system, weapons systems, and platforms

Source: Migone et al. (2022).

and often reversible or in which they are decomposable and where, generally, small sums of money are involved (Erridge & Murray, 1998; Potoski, 2008). While Type 2 procurement such as government building construction has also gained attention (Flyvbjerg, 2007; Grimsey & Lewis, 2017), very few comparative studies of longer-term Types 3 and 4 exist and these are often incorrectly assumed to involve the same drivers and dynamics as the shorter-term procurement types.

In some cases, one type may morph into another: for example, if large Type 4 projects are subdividable and funds spent incrementally, such as the staged expansion of a subway or high-speed rail system, this may represent a strategy to reduce the decision to a series of simpler, more discrete, Type 2 case in which levels of complexity, uncertainty, and conflict are (ideally) reduced. Such “project slicing” however may not be possible when economies of scale or product technologies prohibit it, such as with a large hydroelectric dam or nuclear power plant project, which must be built all of one piece.

It is this latter situation that is typically the case with military platform purchases that are commonly either Type 3 (for example small arms or logistical purchases) or Type 4 (major army, navy and air force ships or aircraft platforms), the latter especially posing more serious political issues and technical problems than does the other type given the very different level of costs involved (Aguado-Romero et al., 2013; Besselman et al., 2000; Kim et al., 2016; Louth & Boden, 2014; Page, 2007).

Large military platform procurement—especially for complex and expensive weapon systems—thus occupies a very specific and difficult niche within the Type 4 category, along with other nonmilitary megaproject purchases of this same basic kind. Generally, these Type 4 procurement decisions are made in high-stakes, and politically charged, environments where expenses are very large, technology life cycles are unclear or contested, contracts are complex and multiyear in nature, and funds and political support, in both the shorter or longer term, are often in limited supply (Jacobs, 2016; Flyvbjerg, 2005, 2007).

The examples here, of two recent multibillion dollar, multiyear processes, involving warship replacement in Australia and Canada through the procurement of Type 26 frigates, illustrate the problematic nature of this kind of procurement process, how it can fail, and what strategies governments can employ to reduce risk and increase chances of success.

The Type 26 case in Australia and Canada in particular demonstrates that without alignment between government policy and service branch doctrine, the likelihood of successful procurement is low—and this conclusion is broadly applicable to megaproject procurement generally, as governments tend to employ the same strategies to mitigate risk in Type 4 cases, regardless of whether Type 26 warships, high-speed rail network, or nuclear power plant is the end procurement goal (Flyvbjerg, 2005). We should note here that the focus of the analysis is less on whether the procured weapons systems will perform according to the contractor’s promise or the purchaser expectations and more on explaining whether or not a procurement process will actually deliver. The ultimate success of a novel, complex platform is always difficult to predict as is—to some extent—assessing whether it will perform as needed in theater.

## **Canadian Type 26 procurement: emergence of the Canadian Surface Combatant program**

Although only the Department of National Defence (DND) is directly concerned with military capability in Canada, every asset purchase over C\$25,000 (until 2014, and over C\$5M after that) necessitates a bargaining process between the DND and other ministries, as well as government and industry stakeholders: Canadian government policy since 1986, upheld and organized by the Department of Industry, mandates that contractors must complete a portion of defense contract work in Canada, in addition to identifying and delivering up to 60% of the contract value as regional benefits to domestic industry and employers as part of an “Industrial Regional Benefits” component of their bids.

Once arranged, contract review is conducted by multi-departmental committees, the Minister of Defence, and the Cabinet and Treasury. The bids are then reviewed by the actual project team, who determine the final contractor based on the project’s technical requirements. The development of a contract is then overseen by a Contract Authority, an Industrial Regional Benefits Authority (Procurement), a Requisitioning Authority and Technical Authority (Defence), and a Financial Authority (Treasury) (Plamondon, 2010, pp. 9–12). This system yields a lengthy preplanning phase restricting potential bidders to those that fit the government’s economic and domestic military and industrial policy agenda.

This is the process that was in place in 2001 when the then Liberal government introduced “A New Policy Framework for the Canadian Shipbuilding and Industrial Marine Industry – Focusing on Opportunities”—with the goal of encouraging domestic shipbuilding, subsequently to be reconfirmed in 2006 (Ring, 2017, p. 10). It was within this framework that the Canadian Type 26 frigate purchasing effort unfolded.

## Background context

Table 2 establishes the more than 20 years long chronology that led to the Liberal government of Justin Trudeau selecting the UK-based BAE Type 26 frigate to fulfill its Canadian Surface Combatant (CSC) requirement.

The CSC program was designed to replace ships built 40 years ago under the previous Canadian Patrol Frigate program. That program delivered 12 of the very successful but now obsolescent *Halifax*-class ships from the late 1980s to the mid-1990s and was the last major capital ship procurement program for the Royal Canadian Navy (RCN). First proposed in 1975 over concerns about existing RCN surface forces’ survivability in the North Atlantic Greenland–Iceland–UK gap (Hansen, 2000, pp. 48–49), the program was formalized in 1977 as the Ship Replacement Programme (Hansen, 2000, p. 49) and tendered in early 1983 by the Pierre Trudeau government with Saint John Shipbuilding contracted to build six ships at C\$3.9B (Milner, 2011, pp. 289–290; Thorsteinson, 2009, p. 25). Over the next 20 years, 12 ships were ultimately delivered to the Canadian Navy between 1988 and 1996 at a cost of C\$10.4B.

At that time the new patrol frigates joined a fleet that included four *Iroquois*- or *Tribal*-class destroyers also operated by the RCN. The RCN’s 2001 *Leadmark* document (its key strategy and doctrine statement), however, noted that the aging *Tribal/Iroquois* class would need to be replaced “soon”. A planned Command and Control Area Air Defence Replacement (CADRE) project had been mooted by at least 1994 which would have seen these replacement vessels designed and built in Canada, but was dropped in 2003 due to uncertainties about their role in a post-9/11 world (Burke, 1998; Leadmark, 2001, p. 68). Instead the 1970s era destroyers underwent the *Tribal* Class Update and Modernization Project to extend their life.

The CADRE project itself can be seen to have suffered from a signal lack of alignment between the Navy and Ottawa’s administration: a lack of clarity surrounding the role of the proposed ships in the post-Cold War period and the overwhelmingly financial focus of the government first hamstrung and then killed the programme (Migone et al., 2023). In this case, the vessel purchase decision was also unable to move to a more incremental or smaller procurement framework but was simply scrapped.

By the early 2000s, however, the *Tribals* were nevertheless approaching 30 years of service life (Pratt et al., 2002, p. 53) and were slated for retirement. At this time the 12 *Halifax*-class frigates were also expected to undergo a Frigate Equipment Life Extension project, before also eventual decommissioning in the 2020s (Leadmark, 2001, p. 68). A May 2002 Parliamentary committee considered replacement of both classes of ships to be a high government priority although questions about their role and fit into government defence policy priorities remained (Pratt et al., 2002, p. 55).

Acquisition of a single replacement vessel for both the *Halifax*-class frigates and *Tribal*-class destroyers was first mentioned as a possibility publicly in a 2005 Defence Policy Statement (Graham, 2005, p. 14), although the government had in fact already come around to this dual-use solution by mid-2003.

The plan was that enough ships would be acquired under this new procurement program to provide for “a naval task group of up to four combatant vessels on each coast” plus additional ships for contingencies (Graham, 2005, p. 19). This ambition was reiterated in May 2005 by the Defence Staff’s Directorate of Maritime Strategy, which stated that the fleet must possess 18–24 “major surface combatants” to meet demands (MacLean, 2005, p. 37). The document also described the “Single Class Surface Combatant” as a “common major surface platform” that would take advantage of “new reduced manning concepts” (MacLean, 2005, pp. 40–41). A Joint Support Ship (JSS) project was also “greenlit” by the Martin government in 2004 to build supply ships for the new fleet (Shadwick, 2010, p. 63).

In July 2007, however, the newly elected minority Conservative government of Stephen Harper, citing a new concern for Arctic sovereignty, instead prioritized the development of a specialized class of Arctic Offshore Patrol Vessels (AOPVs; later the Arctic Offshore Patrol Ships [AOPSS]) rather than the frigate replacement program (Mack, 2020b, p. 8). Arctic sovereignty and the tentative status of Canada’s legal claim to the Arctic, partly the result of Canada ratifying the UN Convention on the Law

**Table 2.** The Canadian Surface Combatant chronology.

Year	CSC key events	DND budget
2001	CADRE project underway.	C\$12.971B (1.2% of GDP)
2002–2003	Parliamentary Standing Committee Report on National Defence endorses <i>Tribal</i> -class replacement. CADRE project canceled by the Paul Martin Liberal government.	C\$13.332B (1.2%)
2005	Canada's International Policy Statement mentions replacement for both frigates and destroyers. Securing Canada's Ocean Frontiers mentions Single Class Surface Combatant.	C\$15.738B (1.05%)
2007	Rear Admiral Ian Mack appointed DND's Director-General for implementation of NSPS.	C\$19.2B (1.16%) C\$3.1B allocated for AOPVs + C\$4B over 25 years
2008	Canada First Defence Policy states that 15 ships would be acquired, beginning in 2015, to replace existing frigates and destroyers. NSPS Office formed.	C\$19.9B (1.26%)
2010	NSPS Office transferred from DND to PSP. NSPS Secretariat formed. Solicitation of interest and qualification issued, shortlists shipyards for NSPS packages.	C\$20.2B (1.14%) October: <i>Halifax</i> -class modernization project begins, C\$2B; completed November 2016
2011	Irving and Seaspan announced as winners of the NSPS packages.	C\$20.0B (1.10%)
2012	Umbrella agreements signed with shipyards—"definition" work begins on CSC.	C\$18.8B (0.99%)
2014	DPS announced. Decision to decommission two destroyers and two supply ships announced, reducing RCN hull capacity by 25%.	C\$18.7B (0.94%) PBO reports that the AOPV project is over budget
2015	DPS Secretariat formed. Most Competitive Procurement Strategy, prelude to selection of Combat Systems Integrator and Warship Design team for CSC begins.	C\$18.6B (0.92%) C\$26B estimate for frigate replacements C\$700M supply ship conversion project
2016	RN Rear Admiral Steve Brunton hired as government consultant (until March 2020). NSPS renamed NSS and streamlined procurement process announced. October: Irving Shipbuilding begins accepting bids for CSC design. Other bidders complain that the acquisition process unfairly favored <i>Type 26</i> . RCN's 2017–2022 plan references task group operations with up to four surface combatants each.	C\$20.6B (1.2%)
2020	CSC program costs continue to increase due to platform complexity and inflation.	C\$30B (1.45%) August: PBO reviewing CSC project November: PBO review indicated cost of JSS program now at C\$4.1B
2021	PBO and OAG reports indicate the NSS has not succeeded, and the CSC program is years behind schedule. DND states they have no intention to change hull type; construction is expected to start in 2024, with the first delivery expected in 2029.	February: PBO and OAG reports released; CSC project now expected to cost at least C\$77.3B for 15 ships. The PBO revises this estimate to C\$80.2B in 2022

Note. AOPV = Arctic offshore patrol vessels; CADRE = Command and Control Area Air Defence Replacement; CSC = Canadian Surface Combatant; DND = Department of National Defence; DPS = Defence Procurement Strategy; NSPS = National Shipbuilding Procurement Strategy; OAG = Office of the Auditor General; PBO = Parliamentary Budget Office; PSP = Public Service and Procurement.

of the Sea in November 2003, had become a high-profile Conservative defense policy subject after 2005 (Huebert & Killaby, 2005) although it remained a low priority for the navy which remained committed to its NATO and other collective security interests.

The RCN nevertheless agreed to the development of AOPVs, however, and the JSS project was also relaunched in June 2006 as a C\$2.9B project, at which time three supply ships were ordered

(Shadwick, 2010, p. 63). And in 2008, a new program to replace both major naval ship types was also articulated in the form of the CSC process, ultimately leading to the Type 26 decision of interest here.

## The CSC process

In 2008, a National Shipbuilding Procurement Strategy (NSPS) Office was formed to rationalize these various initiatives. The NSPS was a multi-ministry organization led by Defence Minister Peter MacKay. It started off poorly, as in August/September 2008 the JSS program was canceled (Shadwick, 2010, p. 63), with C\$50M already spent (Milner, 2011, p. 330; Ring, 2017, p. 10). The project was considered a “failure” (Collins, 2019; Ring, 2017, p. 10), with bids significantly above the expected budget (Sloan, 2020, p. 14).

New shipyard bids for the NSPS were solicited soon afterward, the winners to receive either the combat package (AOPV plus CSC) or the support package (JSS plus icebreakers and science vessels).<sup>1</sup> In January 2010, the remaining NSPS elements were transferred to the Department of Public Works and Government Services, under an incoming Minister for Procurement, and a new NSPS Secretariat was created (Bowering, 2012, p. 19; Mack, 2020a, p. 9). The new NSPS was formally announced on 3 June, 2010 (Shadwick, 2012a, p. 77).

On 20 September, 2010, a solicitation of interest and qualification for bidders was issued, and, while five shipyards initially responded, only three finalized their tenders. In October 2011, it was announced that Irving shipyards in Halifax, Nova Scotia, had won the combat ship package (AOPV/S and CSC), while Seaspan Vancouver had won the support ships, science and fisheries vessels, and icebreaker contracts. After a three-month-long negotiation, on 12 January, 2012, umbrella agreements were signed with both shipyards (Shadwick, 2012b, p. 77), including “backstop” insurance clauses in case no work was ever actually awarded (Mack, 2020a, pp. 11–12).

The CSC itself, the key frigate and destroyer replacement megaproject, was planned for a 15-hull buy. Definition work began in June 2012, and 15 “industry engagement sessions” took place between 2012 and 2015 (Perry, 2015). However, in a sign of things to come, between fall 2014 and the middle of 2015, 20 of the 28 people charged with the decision-making and selection process for the NSPS were replaced (Ring, 2017, p. 13). Furthermore, the RCN experienced a budget crunch toward the end of 2014, and a decision to cut two destroyers and two supply ships from the fleet was announced on 19 September, 2014 (Shadwick, 2014, p. 64).

Meanwhile, with no new ships on the horizon, the Tribal/Iroquois-class decommissioning had already begun, and the last ship was decommissioned in March 2017 - Her/His Majesty's Canadian Ship (HMCS) *Athabaskan*—although this warship had been inoperable for some time prior (Fuhr, 2017, p. 24). Furthermore, both of the navy's existing supply ships, HMCS *Protecteur* and HMCS *Preserver*, were also decommissioned in May 2015 and May 2016 (Fuhr, 2017, p. 25; Gilmore & Fuhr, 2015).

The RCN at this point thus faced a significant “gap in command and control, air defense, and at-sea replenishment capabilities,” representing a 25% reduction in total RCN hull capacity (Fuhr, 2017, p. 25) as the programs to replace all of these lost capabilities (CADRE, JSS, and CSC) had been either delayed, downgraded or canceled.

Despite these setbacks with the majority of the NSPS elements, the Conservatives nevertheless signaled their intent to continue to build and design the future CSC entirely in Canada through a very lengthy procurement process that was to begin with “selecting a warship designer and a combat systems integrator to work together to custom design the CSC” (Canada, 2016d). Between 2013 and 2020, C\$1.01B was spent on CSC “design and preparatory contracts” (Brewster, 2020). Irving Shipbuilding, Halifax, was formally selected for the combat package in January 2015 (Perry, 2015), and on 1 May, a Most Competitive Procurement Strategy was announced, after which the selection process for the combat systems integrator and warship designer was to begin.

The Justin Trudeau Liberals, however, upon winning the October 2015 federal election, quickly moved to short-circuit the already very delayed procurement process for a designed-in-Canada fleet and instead adopted an existing design for the CSC in an effort to speed up vessel acquisition (Rudd, 2015, p. 5). On 22 February, 2016, it was reported that Liberal Procurement Minister Judy Foote had hired retired Royal Navy Rear Admiral Steve Brunton as an expert advisor on what ship to buy (CBC News, 2016). At the time, Brunton was actively “providing strategic programs and risk advices to the UK Ministry of

<sup>1</sup> See the attendant request for proposal at <https://buyandsell.gc.ca/procurement-data/contract-history/W8472-075091-001-FX-1>.

Defence” (Canada, 2016a) and he proceeded to advise the National Shipbuilding Strategy (NSS) process for four years, until March 2020. The NSPS was renamed the NSS in March 2016 (Canada, 2016b) and slightly revised between March and May 2016 (Canada, 2016b, 2016c, 2016d). On 13 June, a “streamlined procurement approach” was announced based on input from Rear Admiral Brunton (Canada, 2016d).

On 24 October, 2016, the Italian shipbuilding firm Fincantieri complained to Procurement Minister Foote that the new acquisition process unfairly favored the UK’s BAE Systems’ Type 26 Global Combat Ship design. Foote in particular was criticized for having stated that “only proven warship designs would be considered”—an apparently indefensible position considering that no Type 26s then actually existed off the drawing board (Pugliese, 2017a).

The government, nevertheless, rejected this complaint, and in October 2016, Irving Shipbuilding began accepting bids for the CSC design (Pugliese, 2017c). Twelve companies were to prepare bids, but four requested delays (Pugliese, 2017b). Hence, the CSC Request for Proposals was delayed until 22 June, with bid selection to take place in the fall of 2017 (Thomas, 2017, p. 39). In addition to BAE Systems’ Type 26, Alion Canada proposed the Dutch *De Zeven Provinciën* class (Pugliese, 2017c), and Spain proposed their F-100 *Álvaro de Bazán* class (Dunlop, 2018). In December 2017, the Franco–Italian consortium proposed building 15 *Frégate Européenne Multi-Mission* (FREMM)-class hulls for Canada at the fixed price of C\$30B, but this bid was rejected on legalistic grounds because it was presented after the bidding window had closed (Pugliese, 2017c, 2020). Moreover, Fincantieri’s bid also would have involved most of the construction taking place in European yards, which was contrary to the intent of the Canadian industrial benefits program (Shimooka, 2021, pp. 26–27).

While this was happening in June 2017, the Liberal DND released its capstone defense policy, *Strong, Secure, Engaged*, reiterating naval concepts articulated in an earlier Paul Martin Liberal government’s May 2005 Defence Policy White Paper, including the desire to develop, “A fleet built around an ability to deploy and sustain two naval task groups, each composed of up to four combatants and a joint support ship...” (Department of National Defence, 2017, p. 34). It also repeated the intention to invest in 15 CSCs plus two JSSs, in addition to the continued employment of the RCN’s four *Victoria*-class submarines (Department of National Defence, 2017, p. 35).

By June 2017, the NSS had mandated the construction of 40 various ships over a 30-year period, including 38 ships over 1,000 tons in the next decade (Fuhr, 2017, pp. 34–35), and to meet these obligations, the Liberals committed to increasing defense budgets from C\$18.9B in 2017 to C\$32.7B in 2027 (Fergusson, 2002). C\$17.5B over 20 years was earmarked for the RCN, of which C\$14.6B was expected to fund the CSC, with first delivery now expected in 2026 (Department of National Defence, 2017, p. 102).

This was essential funding as the Parliamentary Budget Officer had reported early in 2017 that the CSC project, as inherited from the Conservatives, was so underfunded that the government would be able to pay for only six ships rather than the expected 15 (Thomas, 2017, p. 39).

In October 2018, the Liberals duly selected a Lockheed Martin-led consortium to build the Type 26-based design (Collins, 2019). The award of this contract was delayed at least a year (bids were supposed to close on 27 April) due to continued concerns that the competition was rigged in favor of the Type 26 (Pugliese, 2018). Both Alion and Navantia protested the bidding process (Shimooka, 2021, p. 34), as Fincantieri had done earlier. On 7 August, 2020, it was reported that the Parliamentary Budget Officer was again reviewing the design bid process with regard to cost overruns and looking at cheaper alternatives such as the previously rejected FREMM and another unproven but smaller and cheaper BAE Type 31 vessel (Pugliese, 2020).

In February 2021, the Parliamentary Budget Officer (2021) reported that costs had ballooned and the CSC project was now expected to cost no less than C\$77.3B; with construction only to begin in 2024, the first delivery schedule pushed back to 2029 and continuing until 2045 (Shimooka, 2021, pp. 35–36).

Hence, after close to 30 years and multiple statements and starts going back to the CADRE program, no new CSC hulls have actually been built and none are expected to be built for at least another decade if not longer. This demonstrates a clear procurement failure and a much lengthier pattern of platform procurement than had been the case with the already lengthy two-decade-long destroyer and frigate purchases in the 1970s and 1980s. Although the RCN’s military effectiveness would no doubt be dramatically enhanced by the acquisition of 15 Type 26 surface combatants, the government of both Liberal and Conservative administrations have preferred program cancelation (Martin with CADRE), program

deferral (Harper with AOPV), and finally extended bidding and projectivization (Trudeau and the *Type 26* process) rather than focus on getting any new hulls into the water.

## Australian *Type 26* procurement case: background, Anzac frigate replacement

The Australian experience with the same *Type 26* platform, by contrast, although similarly debated due to its high cost and uncertain technical capabilities, has been relatively straightforward. Planned at the same time as Canada's new nonexistent frigate fleet, Australia's first *Type 26* ship is already under construction.

### Background

The Australian frigate replacement process began at about the same time as the Canadian, commencing with a 2000 Australian Defence white paper that identified the future surface warship force structure of the Royal Australian Navy (RAN). It argued that a new class of air defense frigates would be acquired, and it was expected that "a major surface combatant program" would follow on the heels of the retirement of the country's *Anzac*-class frigates (Moore, 2000), themselves a replacement for the *River*-class destroyer escorts that had been decommissioned between 1985 and 1994 - Her/His Majesty's Australian Ship (HMAS) *Anzac* entered service in 1996.

The document stated that the existing air-defense *Adelaide*-class frigates would begin to be decommissioned circa 2013 (although this timeline was in fact brought forward to 2005 and 2008 in the case of *Canberra* and *Adelaide*, respectively), with the intention to introduce "at least three air-defense-capable ships" that would be "significantly larger and more capable than the guided missile frigates (FFGs)". With planning beginning in 2005/2006 (Watt, 2014), these air warfare destroyers eventually became the *Hobart*-class destroyers (Moore, 2000, p. 90). The three warships cumulatively cost A\$9.1B and when introduced filled a 20-year guided missile destroyer capability gap that had resulted from the retirement of the three 35-year-old, *Perth*-class warships between 1999 and 2001—plus the first two *Adelaide*-class FFGs, as mentioned previously.

The complexity of the air warfare destroyer platform and a decision to build the warships domestically, however, still meant delays. In the case of the *Hobart*-class vessels, these were on order in 2009 (Fitzgibbon, 2009, p. 71), and Navantia's F-100 destroyer model won the bid in 2014 (Watt, 2014) with the lead ship commissioned late in 2017 (Corby, 2017). The destroyers were ultimately delivered behind schedule and over budget, with Australia's Australian Submarine Corporation shipyard blamed for these delays and cost overruns (Gardner, 2018). Of course these delays appear mild when compared to the situation in Canada.

The next project to upgrade the *Adelaide*-class FFGs took almost two decades, from initial policy statement in 1991 to contract signing with ADI Ltd (Thales Australia Ltd) in 1999, to actual deliveries between 2006 and 2009 (Cordner, 2008, p. 13). After the decommissioning of four more *Adelaide*-class ships between 2015 and 2019, the last two *Adelaide* FFGs ended their RAN service life in 2019, before being sold to the Chilean Navy in April 2020 (Kelly, 2020).

The commitment to defense self-reliance that delayed the construction of these new Australian ships dates as far back as a 1976 white paper, which put considerable onus on Australian governments to maintain a long-term ship building capacity (see Table 3) (Killen, 1976, p. 39). This involved a difficult balancing act between maintaining a competitive defense procurement process and ensuring domestic industrial growth (Markowski & Hall, 1998, p. 138). This was made worse by Australian governments since the end of the Cold War following a policy of divestment with regard to their domestic defense industry, hoping to encourage private sector efficiency and job creation—but at the expense of rapid recapitalization cycles (Markowski & Hall, 1998, pp. 138–139).

### The *Anzac* Replacement Programme

In its 2009 Defense White Paper - around the same time at which the Canadian government commenced its own *Type 26* process - the Australian Labor government reiterated its commitment to replacing its *Anzac*-class ships with eight future frigates (Davies, 2016, p. 43; Fitzgibbon, 2009, p. 43). This program was designated SEA 5000.



**Table 3.** Australian Type 26 chronology.

Year	SEA 5000 key events	DOD Budget
2000	Anzac-class frigate replacement mentioned in the 2000 white paper.	A\$12.2B in 2000
2005	Air warfare destroyers, Hobart-class destroyers, to be built to replace Adelaide-class frigates. Eventually determined to be built as modified Navantia F-100 destroyers.	1.8% of GDP
2009	Anzac replacement scheduled for the 2025–2030 time frame, designated SEA 5000 project. 20 offshore combat vessels first proposed. Collins submarine replacement first proposed, with 12 vessels to be built.	1.8% of GDP
2012	Hobart-class destroyers begin construction.	1.67% of GDP
2013	Gillard government defense white paper reiterates intention to develop Anzac replacement, but with the Collins-class future submarine replacement given a higher priority.	1.56% of GDP
2015	Abbott government accelerates SEA 5000 project, now to begin construction in 2019–2020 instead of 2024.	1.95% of GDP
2016	Turnbull government states that the Anzac replacement short list included RN's BAE Systems' Type 26, the Franco-Italian Fin-cantieri FREMM, and the Spanish Navantia F-100. Defense white paper upgrades the order from eight to nine ships.	A\$32.3B in 2015/2016, 2.08% of GDP
2017	May: Naval Shipbuilding Plan released; National Naval Shipbuilding Enterprise announced.	
2018	Type 26 was announced as the winner in June, with the first ship scheduled for service in 2027–2031. The by-now designated Hunter-class frigates were expected to begin construction in 2022. Advanced work arrangement between BAE Systems Australia and the Australian government was settled in October 2018, and the contract signed in December. Hobart-class destroyers finish construction.	1.89% of GDP Nine ships estimated to cost A\$35B
2019	Offshore Combat Vessels begin construction.	1.88% of GDP
2020	Morrison government issues defense forces structure update. The defense industrial base would be strengthened through the Australian Industry Capability (or Content) program, mandating that 65%–70% of the new Hunter-class frigates would be developed domestically. Lockheed Martin Australia and Saab Australia would integrate the Aegis Combat System for the Hunter-class. Prototyping begins on Hunter-class, with construction to begin in 2022.	The Hunter class now expected to cost A\$45.6B dollars and the Attack class A\$89.7B over the next 20 years
2021	Australia-United Kingdom-United States agreement to build nuclear attack submarines supersedes conventional French submarine deal for Collins-class replacement. Systems Definition Review for the Hunter-class underway.	A\$44.62B in 2021, 2.09% of GDP

Since the planned first delivery date was 15 years away, there appeared to be no immediate need for celerity. Indeed, while there was significant interest in the *Australian Naval Institute Journal* in the procurement of new submarines, in particular the possibility of equipping them with nuclear reactors (Girgis, 2010; Kilham, 2010), there was much less interest in the specifics of a new future frigate program.

Furthermore, the Global Financial Crisis of 2008–2009 necessitated some defense budget crunching and the new Labor government was unwilling to raise defense spending significantly to fund its naval recapitalization plan. While defense spending under the Coalition Howard government (1996–2007) went from A\$9.9B (1.87% of gross domestic product [GDP]) to A\$19.9B, it fell to 1.60% of GDP because the economy grew much faster than the military budget (Carr & Dean, 2013, p. 81), so in fact only in 2008/2009 was defense spending increased in real terms to 1.94% of GDP and kept decreasing afterward.<sup>2</sup> This low funding rate resulted in a significant deferral of the expansive shipbuilding program

<sup>2</sup> See <https://www.macrotrends.net/countries/AUS/australia/military-spending-defense-budget>.

that had been outlined in multiple white papers and defense updates (Davies, 2016, p. 44; Watt & Payne, 2013).

A series of defense reviews was conducted in 2011–2012 under the Gillard government, notably the Defence Planning Guidance, Australian Defence Forces (ADF) Force Structure Review (2012) (Smith, 2013, p. 75), and the Defence Force Posture Review (Smith, 2013, p. 4). All dealt with future naval purchases, ultimately leading to the decision to adopt the BAE Type 26 model. The chronology of events in this procurement process is set out in Table 3 above.

A key 2013 white paper specified that the ADF would refocus on Indo–Pacific security and reiterated that it would move ahead with the development of the future RAN force structure, including prioritizing Collins submarine and Anzac frigate replacements (Davies, 2016, p. 44; Smith, 2013, p. 83). The future submarine program retained the highest priority, however, with the Anzac replacements being scheduled for a later date (Smith, 2013, pp. 123–124) despite being vital for the future of the RAN's maritime and amphibious force structure concept (Griggs, 2012, p. 20; Raymond, 2018, p. 355). It was also clarified that these warships were expected to undergo “continuous production” rather than appear all at once (Davies, 2016, p. 44).

A 2014 RAND study examined three models for the SEA 5000 program: an entirely built in Australia design, a modified off-the-shelf (MOTS) design, or an “evolved MOTS” in which major changes would be made to an existing design (Schank et al., 2014). There were plenty of potential frigate options, including the Blohm and Voss F125, *Meko 600* escort frigate, the Norwegian F310 *Fridtjof Nansen* class (built by Navantia), and even Australia's *Austal*, designer of the United States Navy's Littoral Combat Ship, were a potential vendor (Defense Studies, 2014). An April 2015 RAND report recommended beginning with domestic construction of four patrol Offshore Combatant Vessels as part of a transition to the future frigates (Birkler et al., 2015), a similar model to what Canada was attempting with its AOPV to CSC construction transition.

Significantly, however, in Australia this plan was criticized as it would necessitate slowing the build cycle of each frigate from 12 to 24 months (Thomson, 2015) and in 2015 the Coalition government of Tony Abbott decided to accelerate the SEA 5000 project, which was now to begin in 2019–2020 instead of 2024 (Davies, 2016, p. 46; Gardner, 2018). The Coalition raised defense spending from 1.77% of GDP in 2014 to 2.08% in 2016 to help push this through.<sup>3</sup>

On 18 April, 2016, Prime Minister Malcolm Turnbull, who had succeeded Abbott, stated that the short list for the Anzac replacement had been narrowed to either the Royal Navy's BAE Systems Type 26 or the Franco–Italian Fincantieri FREMM or the Spanish Navantia F-100. The planned eight ship purchase was increased to nine (Davies, 2016, p. 45; Department of Defence, 2016, pp. 21, 93, 113), and estimated to cost A\$35B (Defence Connect, 2018).

The same year another defense white paper was based on an August 2014 “First Principles Review” of defense priorities (Department of Defence, 2016, pp. 165–166). Significantly, the white paper continued the theme of maritime modernization and regional security outlined by previous Labor and Coalition governments. A 10-year capitalization plan, the “2016 Integrated Investment Program”, pegged at A\$195B over the decade 2016–2026, was announced (Department of Defence, 2016, pp. 31, 86), with overall defense spending to be maintained at 2% of GDP by 2023/2024 (Department of Defence, 2016, pp. 24, 30). This entailed a significant RAN capital reinvestment to include 12 submarines, 12 offshore patrol vessels, 21 Pacific patrol boats, three to four Hobart-class vessels, the nine future frigates, two Landing Helicopter Docks (LHDs), and new sealift replenishment ships (Anderson, 2016).

In May 2017, as in Canada, these purchases were rolled into a Naval Shipbuilding Plan, as part of the A\$168–183B National Naval Shipbuilding Enterprise (Department of Defence, 2021). The plan envisioned Department of Defence (DOD) could be spending as much as 25%–30% of its acquisition budget (10% of total DOD budget) for warship procurement in the near future (Hellyer, 2020, pp. 32–33).

The Type 26 design won the future frigate competition in June 2018, with the first ship scheduled to enter service in 2027 (later pushed to 2031). This remained unchanged when Scott Morrison succeeded Malcolm Turnbull in 2018 and proceeded to conduct another defense review, the 2019 Strategic Policy Review. This led to the 2020 Defence Policy and Force Structure updates, which together stated that Australia's strategic posture would be much more forward, focusing on projecting power in the region, rather than specifically defending the maritime approaches to the continent, a process that only upgraded the priority for Type 26 construction (Department of Defence, 2020a, pp. 26–27).

<sup>3</sup> See <https://www.macrotrends.net/countries/AUS/australia/military-spending-defense-budget>.

The *Hunter*-class Type 26 ships were now expected to cost A\$45.6B, with construction running from 2020 to 2040 (Department of Defence, 2020b, p. 45), a financial commitment exceeding the entire 2021 defense budget (A\$44.62B) (Hellyer, 2021).

An advanced work arrangement between BAE Systems Australia and the Australian government was settled in October 2018 (Kuper, 2018a), and an A\$35B contract signed by Defence Minister Christopher Pyne with BAE Systems Australia on 14 December, 2018 (Kuper, 2018b). The initial 2018 funding for the preliminary design and engineering work was A\$52M (Defence Connect, 2018). Construction of the first Type 26 ship duly began in December 2020 for prototype hulls at the Adelaide shipyard where they will be built (Allison, 2020). The class lead ship (HMAS *Hunter*) had steel delivered for construction in 2021 (Naval News, 2021), and construction of the first frigate is now well under way.

Although there remain reasonable concerns about whether the Type 26 actually represents the optimum frigate for the RAN,<sup>4</sup> the commitment of multiple Australian governments to the project as a whole demonstrates that there is an accepted defence imperative not to allow capability gaps to emerge—as has already happened in Canada—or allow systems to degrade to the point of obsolescence—again, as has happened in Canada in the wait for the CSC program to deliver.

The key point to recognize is that unlike in the Canadian Type 26 case, the Australian government has proceeded with their Type 26 procurement project in a relatively straightforward fashion, demonstrating clear alignment between service needs and the willingness of multiple Australian government administrations to follow through and fulfill those needs with new platform purchases.

## **Analysis: megaproject procurement strategies and the need for political and doctrinal alignment in Type 4 purchases**

The two cases set out above demonstrate that in the case dynamic Type 4 military platform procurement environments, it is essential that political-economic and strategic considerations meet, and that this alignment be perpetuated throughout the procurement process. Both Canadian and Australian governments had to deal with constraints and issues that arose during the planning and commissioning stages, including changing budgeting constraints, shifting electoral calculations, the partisan composition of government, and emerging complex performance demands (Caldwell & Howard, 2014). While these factors delayed and derailed the Canadian program, however, in Australia bipartisan agreement on defence strategies and priorities aligned with military doctrine over a multiyear period overcame concerns and led to a successful megaproject outcome.

The problematic features and needs of the procurement context are common in large-scale and long-term military platform purchases. They are linked to requirements for integration with multinational Allied forces and the self-interest of multiple actors ranging from regional suppliers to politicians and armed service practitioners. They also involve political-economic considerations impacting issues such as national sovereignty and industrial or regional “offsets” (King & Sekerka, 2017), none of which figure as prominently in shorter-term, lower-cost Type 1 procurement, for example, but which are also characteristic of other nonmilitary Type 4 procurement purchases (Flyvbjerg, 2007).

## **The need for alignment between government and user/operator**

The two cases in particular demonstrate that whether or not government policy is “aligned” or congruent with user preferences or, in the military case, whether or not government defence policy is aligned with military doctrine, is a key factor affecting the length and character of debates around procurement options and modes of delivery in such instances (Glas et al., 2017; Migone et al., 2022; Plantinga et al., 2020).

Alignment implies that both the service leadership and government administration agree regarding the virtues of the project and heavily influences whether or not they can be expected to support and advance it through adequate or accelerated funding, selection of the best personnel for the task, and streamlining of bureaucratic and labor processes.

The two cases outlined here, and their different outcomes, stress the importance of this continuing alignment factor. For successful procurement/implementation of this type to occur, what is needed is a clear set of objectives and targets established by the government, which can then be matched to

<sup>4</sup> See <https://www.aspi.org.au/report/hunter-frigate-assessment>.

specific tools and tool calibrations by delivery departments or agencies, and for this congruence to be maintained over time and across changes in the government (Almarri & Blackwell, 2014; Vaidya et al., 2006). The frigate procurement cases show that while a navy or user may have a clear vision of its intended roles (or not), and the equipment necessary to fulfill these roles, if government policy does not align with these roles (and vice versa), then procurement is unlikely to unfold in a coherent, or timely, manner.

That such alignment did not exist in Canadian *Type 26* case is demonstrated by comparing the RCN's service doctrine—which defines its expected force structure—and the government defence white papers stating the administration's defence policy. Throughout the study period, the RCN considered itself as an instrument of Canadian collective defence and a key contributor to NATO's antisubmarine warfare capability—the RCN's traditional roles from the First World War until the end of the Cold War—but its relative importance for Canadian national security declined in the eyes of the government in the post-Cold War period (Collins, 2021).

In the post-Cold War environment, Canadian governments from the Chretien administration until today have rather tended to perceive of the RCN as mainly a coastal defense (including the Arctic) organization, with some occasional expeditionary or humanitarian roles. Canada perceived the end of the Cold War as ushering in a “peace dividend” with defence spending falling to hardly more than 1% of GDP—indeed, between 1987 and 1993 overall NATO defense spending fell by approximately a third (Markowski & Hall, 1998, p. 8). And in this process, the RCN was usually given third priority for funding against the Army and Royal Canadian Air Force.

The Conservative defence policy, furthermore, focused on Arctic sovereignty, and the AOPVs/AOPSS became a central Harper government procurement priority. This Arctic prioritization directly affected the proposed delivery of the CSC by inserting the AOPVs in advance of planned CSC construction (in effect failing to restart the CADRE project that had been canceled by the Martin administration in 2003). As another example, the replacement for the *Victoria*-class submarines is still under consideration, and the clear lack of alignment between the Navy and the government over the possibility of nuclear or non-nuclear vessels suggests they will indeed not be replaced any time soon.

In the Australian *Type 26* case, on the other hand, bipartisan government administrations perceived the end of the Cold War as ushering in a period of new uncertainty, with increasing risks to the country and region, and indeed Association of Southeast Asian Nations defence spending increased between 1989 and 1994 by a third as a result (Markowski & Hall, 1998, p. 8).

The RAN saw itself as the essential guarantor of Australia's defence, and in terms of defence policy, Australian governments repeatedly affirmed RAN's critical role, providing the service with high priority for new construction and funding. Warship procurement continued apace as the *Anzac* frigates begin to reach their operational lifespan limits, with both the *Hobart*-class destroyers and the *Canberra*-class LHDs being delivered through foreign and domestic procurement, allowing for the *Hunter*-class to go ahead simultaneously with the acquisition of the *Collins*-class submarine replacement project (the admittedly ambitious Australia-United Kingdom-United States agreement for Australian nuclear attack submarines being another example of this).

Hence, alignment between government defense policy objectives in the Australian case has been maintained over both Labor and Coalition administrations, demonstrating that, unlike in Canada, warship replacement is a relatively nonpartisan, non-controversial and hence successful issue.

## Procurement political risk scenarios

That politics is important in such *Type 4* procurement issues is clear. But the case studies also show that governments have different options when it comes to accepting or offsetting the political risks associated with large platform adoption (Calcara, 2018, 2020). That is, there are different procurement risk scenarios for governments in terms of how they manage possible blame from cost overruns or a failure to secure credit for their efforts, and these color their response to demands from users for new equipment or facilities in particular ways.

These scenarios vary depending on how many units are being purchased and whether the duration of the funding and contracting situation extends over multiple government administrations or multiple terms. Each of these different procurement situations has different payoffs and costs for governments, both administratively and politically, with very low procurement risks when only a few units

**Table 4.** Type 4 procurement risks revisited.

		Duration	
		Single government term	Multiple government term
Number of units	Few	Low costs/all benefits	Low costs/uncertain benefits
	Many	High costs/all blame	High cost/uncertain blame

are purchased over a short time period compared to a more typical Type 4 case where many (expensive) units are being purchased over a multi-government time period (see [Table 4](#)).

Type 4 situations often have *minimal payoffs* for governments if they must fund them during their term in office and bear the opportunity and other costs of such major budget outlays, when they are delivered beyond their term so that many of the benefits of successful procurement fall to successor administrations. This is why bipartisan or extended alignment of policy and service plans are necessary if Type 4 procurement is to successfully conclude, that is, relatively on time and on budget, as occurred in the Australia Type 26 case.

Governments that disagree with the user on the nature and purpose of a purchase have many options open to them to delay or otherwise alter agreed upon procurement plans. As the Canadian Type 26 case demonstrates, they can do so using several common strategies. One such strategy involves postponing choices, often somewhat paradoxically accompanied by prominent announcements and re-announcement of intended purchases. This “musical chairs” strategy occurred in the Canadian case, when the Harper government shifted to the AOPV prioritization and again when the Trudeau Liberals took office and reassessed the CSC program, transitioning from a designed-in-Canada ship to the Type 26. It has also occurred in the Canadian Joint Strike Fighter procurement process ([Howlett et al., 2023](#); [Migone et al., 2023](#); [Howlett et al., 2022](#)) and several others. Governments can also try to reverse the logic and calculation of costs and benefits of Type 4 decisions by moving as many benefits up front as possible, while costs are pushed down the road, hopefully onto a successor government when the bill comes due. This is not restricted to the military case, for example, but applies to all Type 4 decisions, such as hydroelectric dam construction ([Flyvbjerg, 2005](#)).

Another strategy, as mentioned at the outset of the article, is to try to convert a Type 4 process into a series of smaller scale, potentially reversible, decisions. This was not possible in the frigate case as the platform was not downsizable or able to proceed incrementally since navies require fleets of ships, not single units. Yet another similar strategy visible in the Canadian and Australian cases, however, is to reduce overall expenses by bringing in revenues in the form of industrial offsets, thereby reducing costs.

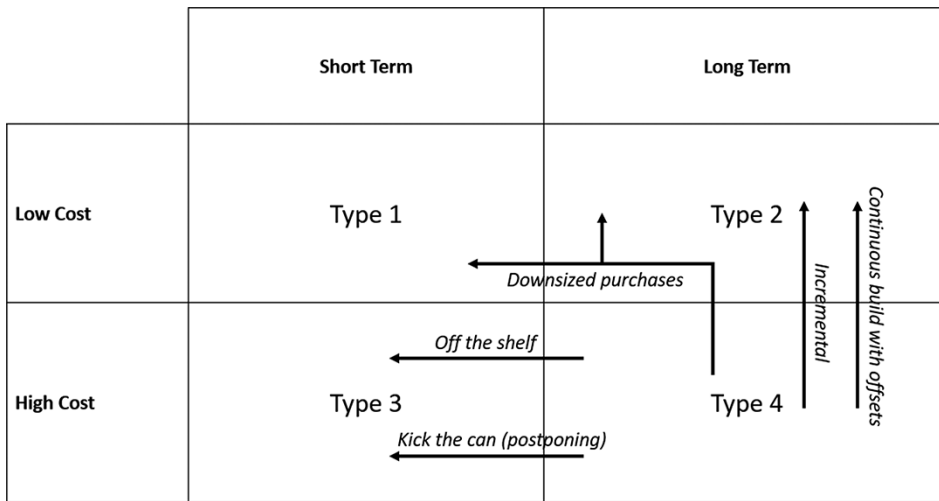
The fifth strategy is simply to buy less of the platform (e.g., fewer ships in this case while still retaining a “fleet” or substitute another lower cost vessel), while a sixth is to buy a platform “off the shelf” at a known price. Although this latter strategy was specifically rejected in the Canadian Type 26 case, it is currently being given serious consideration in Canada as discussion of the merits of the smaller Type 31 or Type 32 BAE vessels mounts as the Type 26 procurement imbroglio continues and costs spiral out of control.

These pathways are set out in [Figure 1](#).

## **Conclusion: lessons from military procurement for procurement studies**

Procurement is a critical aspect of public policy-making, bordering on cognate fields such as public administration, public management and political economy and, in the specific case of defence procurement, between the broad public policy studies field and specialist areas, which include defence policy studies, war studies, international relations, and geostrategy.

Studies in both fields to date, however, have failed to integrate the findings of general megaproject purchasing dynamics and those in the military, despite their similarity. This article undertook this task, looking at Canadian and Australian military procurement through a general megaproject procurement lens.



**Figure 1.** Potential pathways away from Type 4 procurement problems.

As the two case studies show, the Canadian frigate procurement experience has been a disaster for the RCN, resulting in capability gaps as the *Tribal*-class destroyers were retired. The existing *Halifax*-class frigates will not be replaced until they reach 40 years of service, and the country's national security has suffered from an inability to mount a serious deterrent or offensive capability along any of the country's three major coastlines. Delays in starting the program, political interest in maintaining continuous domestic building queues, and subsequent cost inflation have significantly increased the envisioned overall program costs and led to a variety of the risk avoidance strategies cited above on the part of successive Canadian government administrations (Sutekh, 2001, p. 24), strategies that continue to unfold as delays in the *Type 26* acquisition continue to mount.

A major reason that governments have been able to override the service interest, however, has been that the RCN's current maritime doctrine is not shared by any recent Canadian governments. Against the opposition of the RCN, the service has been effectively relegated to a coastal and Arctic defense role by default as the government has delayed purchasing for a bluewater fleet. Whereas, despite similar high costs and political risks, Australian governments of different partisan stripes all recognized the need articulated by the navy to maintain and cultivate the country's naval capabilities and honor previous procurement commitments and have successfully begun to build and acquire a new *Type 26* fleet.

The two case studies thus illustrate how difficult it is to align governmental preferences with agency preferences in large, long-term procurement situations and to maintain that alignment, and how disagreements and misalignments can cripple project plans (Fetterly, 2009; Stone, 2012). They also, against that record, show how the history of successful major surface warships project procurement in Canada (such as the 1970s era *Halifax*-class Canadian Patrol Frigate program) in the past, and in the current Australian case, demonstrate the need for multiyear championship of service organization doctrine by government policy—and for leadership aware of these linkages and their importance to successful procurement outcomes (Caldwell & Howard, 2014). Key *Type 4* military procurement projects need continual Cabinet and government support, or they will stall and allow governments to engage in various strategies to offset or minimize the damage caused by them; none of which results in successful megaproject completion (Collins, 2018, p. 44; Richardson et al., 2020).

## Conflict of interest

None declared.

## Notes on contributors

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