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and the Civil-Military Relationship:
Past and Present

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Equipment Procurement in Canada and the Civil-Military Relationship: Past and Present

Aaron Plamondon

ABSTRACT

The procurement of military weapons and equipment in Canada has historically been controlled by partisan political considerations rather than by a clear desire to increase the capability of the military. Civilian leaders have typically given actual combat strength a low priority, thus Canada has often failed to effectively design, produce, or even to purchase the weapons and equipment its military needs to carry out the priorities of the civil power. Distributing regional economical benefits equally among the provinces instead of acquiring equipment in the most efficient manner possible resulted in numerous contract scandals and exceedingly long procurement timelines.

To secure even the most modest materiel, officials within the Department of National Defence (DND) have had to comply with a succession of rules that can only be described as illogical from a standpoint of military performance. Rather than designing a more efficient method, the DND's internal process has continually evolved into an amorphous mass of bureaucracy involving myriad committees requiring endless analysis, re-evaluations, and approvals, thus compounding the problem. This research demonstrates the ahistorical nature of military acquisitions in Canada and how few lessons have been learned from a long list of project failures. This results largely from the political misdirection of the procurement process and the weakness of the civil-military relationship in Canada.

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Canadian equipment purchases had always involved politics, right back to the 1880s decision to dress the militia in high cost, low quality Canadian made uniforms in deference to Sir John A. Macdonald's National Policy.

Desmond Morton, *Understanding Canadian Defence*¹

The procurement of military weapons and equipment in Canada has often been controlled by partisan political considerations—not by a clear desire to increase the military's capability.² Civilian leaders have typically given actual combat strength a low priority, thus Canada has often failed to effectively design, produce, or even to purchase the weapons and equipment its military needs to carry out the priorities of the civil power. Reliance on foreign military equipment has often been necessary owing to the limited size of Canadian industry and its inability to compete in international markets. This dependence on foreign sources has frequently hampered the scheduling of Canadian defence acquisitions and created deficiencies regarding operational performance. While the need to equip a military for operations is just as important as all other factors involved in preparing a national defence force, weapons and equipment procurement in Canada has generally been extremely inefficient; scandals committed for political gain are not unexpected. In order to secure even the most modest materiel, officials within the Department of National Defence (DND) have had to comply with a succession of rules that can only be described as illogical from a standpoint of military performance. The DND has not helped itself, however, by making the process more efficient from its end. The internal process has continually evolved into an amorphous mass of bureaucracy, complicated by a myriad of committees that require endless analysis, re-evaluations, and approvals. It has been difficult to assess these weaknesses fully, however, as the topic has received scant attention from Canadian military historians. As David Bercuson asserts: "In any well-stocked bookstore today, there will be tomes on great military leaders, decisive battles, the evolution of strategy and tactics, intelligence, the art of war, military leadership, even supplies, logistics, and communications. But nothing on procurement."³ Equipment acquisition, therefore, is ahistorical in Canada, and the political misdirection of the process means valuable lessons are ignored.

The absence of literature on procurement is most notable during the period before Canada's entry into the Great War. There are many publications on the early defence policies, attempted reforms, and personalities involved in Canada's military development before 1914,⁴ but there is still extremely little on how the Canadian military of that time equipped itself. One reason is that the political parrying between the General Officer Commanding and the government's representative,

the Minister of Militia, is a truly fascinating story of political patronage, corruption, and lassitude. The other reason is that there is really very little to tell. Canada's early militia was very thinly armed; the weaponry used was rarely current by international standards, especially with respect to the soldier's basic rifle. This was partly because, in this nation's early years, Canadian governments believed that the British would always be there to save them in the face of an emergency, specifically against the United States (US). It was also because these governments had concluded that there was little tangible threat from the Americans themselves. In short, there was no impetus for Canada's leaders to invest time, energy, and most importantly, money, into the Canadian militia. As C.P. Stacey asserted: "[Canadian] history is full of warlike episodes, and they have proved on many occasion that they can be skillful and determined fighters; but few nations have shown more profound antipathy to the idea of military preparations in time of peace, or less interest in military affairs generally except in moments of emergency."⁵ Nowhere has this lack of preparation been more obvious in Canada than in the field of weapons procurement.

Although Canada has been buying weapons of war since before Confederation in 1867, the few historians writing on Canadian acquisitions have had a very narrow focus. There exists extensive commentary on the Canadian Ross Rifle and the munitions industry of the Great War.⁶ Most authors, however, have focused on the industrial defence effort of the Second World War and the post-war period, particularly the Avro Arrow and the Canada-American defence production (1956) and defence development (1963) sharing agreements.⁷ As Dan Middlemiss noted: "Notwithstanding the availability of many useful procurement case studies, what is lacking is a general overview of weapons acquisition in Canada."⁸ This trend most likely exists because of the perception that, as one historian has put it: "With the exception of a Government Factory established in Quebec City in 1882 and the Ross Rifle fiasco of 1904–15, the Canadian government made no attempt to establish an armaments industry or even to develop an industrial preparedness policy until just prior to the Second World War." These efforts offer an incomplete understanding of Canadian procurement history. Even the latter study, which claims to be a history of Canada's defence industrial policy, begins in 1935. Although the present work will not remedy the lack of a comprehensive narrative on procurement history, a wider scope of case studies will be highlighted to demonstrate the dominant themes.

Trends in procurement history began to be revealed even before Canada was a nation. In 1862, John A. Macdonald, the first administrator of the Militia Affairs portfolio for British North America, received the initial indication that the electorate was not willing to invest in its own defence. The American Civil War and the subsequent Trent Affair of 1861—where

the Federal Navy seized Confederate envoys aboard a British vessel—had heightened tensions between the United States and Britain. Although direct conflict was averted, the British had begun military mobilization resulting in increased calls for defence improvements in British North America. A Militia Commission was formed in 1862. When its recommendations came back within the year, Macdonald used them as the basis for introducing a *Militia Bill*. The commission reported a need for a trained force of 50,000 and a reserve of the same size. It quickly became clear to the opposition that such a force would cost approximately 500,000 dollars and that no such investment was possible; instead of proposing amendments, the opposition attacked it absolutely. The Cartier–Macdonald ministry was in a weak position at the time, and with Macdonald drinking heavily, the bill was poorly defended; it was subsequently rejected, and the Cartier–Macdonald ministry resigned the next day.¹⁰ The bill called for an expenditure that was simply too large for a small colony. From the perspective of the British, its rejection meant that their colony had no intention of defending itself. This example also made politicians in British North America clearly aware that defence expenditures were politically dangerous.

In the 1880s, the government focused on building a public arsenal system to produce all war stuffs for the Canadian militia. The Canadians, for their part, were also more forthcoming than usual on defence as there were riots in Quebec in 1878 and talk of a resurgence of the Irish Fenians in the United States.¹¹ The arsenal would be government owned because there was no company willing to undertake the scheme. When the Conservative administration approved the project at the Citadel in Quebec City in 1880, however, it was decided that only ammunition would be produced. Guns and other necessities would, for the most part, still come from England. Cost was always the biggest factor in further developing the arsenal; it remained little more than an assembly plant for expensive British import materials to create a small amount of cartridges. As one author put it: “Canadians, having become accustomed to bearing no responsibility, and little of the cost of their own defence ... in view of the ever decreasing external threat from the USA, thought that any expense, however small, was a waste of money.”¹² In addition, it never became a full arsenal system with competing contractors because it was politically healthier for the government to reserve the small number of contracts for industrial friends. Politicians were certainly not going to turn these patronage possibilities over to the military for the sake of development and efficiency; they were reserved for loyal party followers who happened to be interested in the military.¹³ The nature of early Canadian equipment procurement was one of political favouritism.

Weaknesses in Canadian equipment during the South African War of 1899–1902 placed pressure on the government to acquire a new rifle for the militia. For the first time, thoughts regarding defence materialized

into serious interest in weapons procurement. In 1902, the Minister of Militia, Frederick Borden, investigated whether British weapon designers would come to Canada and build them a rifle. It was believed that it would be more practical to have the guns built domestically in order to be able to produce more in a time of crisis. After this failed to create any interest, Borden decided that Canada would adopt its own rifle made in Canada and designed by a local entrepreneur, Sir Charles Ross.¹⁴ The government subsidized the production of the Ross and it became one of Canada's first weapons purchased primarily for political reasons. As Ronald Haycock pointed out:

political manipulation of procurement was rife because acquisitions came under the civilian sphere of the defence department, where they were controlled by the Deputy Minister. The military had no input into this area until well after the turn of the century, and even then acquisition would remain more a political process than a military one. Most often in the post-Confederation decades, the civilian contractors had to be of an acceptable political persuasion, as the Canadian Militia was constituent based and highly politicized, and because few cared about defence.¹⁵

Ross was subsequently given a contract in 1902, as well as a twenty-five acre site to build a factory in Prime Minister Wilfrid Laurier's constituency near Quebec City. He paid a dollar a year for rent. But between 1904 and 1907, Ross failed to produce the amount of rifles stipulated in the contract. His political friendships ensured that he was still paid in full, however.¹⁶

At the Imperial Conference of 1909 on the naval and military defence of the Empire, Sir Richard B. Haldane, the British secretary of state for war, inquired: "Are the Dominions prepared to adopt as far as possible imperial patterns of arms, equipment, and stores?"¹⁷ Borden, who was still the Canadian minister of militia, responded that he agreed that all arms should be identical, and the only reason that Canada had a different service rifle than the British Lee Enfield was that he could not convince English manufacturers to come to Canada and establish factories. He assured Haldane that the rifle chosen used the same ammunition as the service rifle of the Imperial army and, therefore, there would be little difficulty in coordination. Borden felt certain Canada was poised propitiously to unite with the Imperial military, and he confidently stated that using British models simply made sense without diminishing Canadian autonomy. The dedication to being independent militarily was, therefore, not the primary consideration, and the Canadians were very receptive to the Imperial military pattern regarding their equipment. If they could procure British style kit, they did.

The rest of the story of the Ross Rifle is well documented elsewhere.¹⁸ What should be noted is that Canada's attempt to build its own weapon

was universally determined to be a failure on the battlefield. The Ross was an excellent target rifle, but it was deficient as a service weapon. It was unable to fire rapidly without overheating and seizing up. On the battlefields of Ypres it was reported that some 3,000 men cast aside their Canadian rifles—most jammed with mud—and armed themselves with British weapons.¹⁹ In a strange twist that highlights the political bent of the matter, Ross eventually sued the government for 3 million dollars, and was given 2 million dollars in an out-of-court settlement after the Deputy Minister of Justice advised them that Ross had a strong case owing to the vagueness of his contract.²⁰

The Canadian service rifle was not the only piece of kit that was considered a failure. The Canadian contingent was originally to be supplied with its own boots and greatcoats, but because of profiteering, much of the manufactured equipment was of very poor quality compared to British products. Two million boots ordered by the War Office were useless as they were made largely of cardboard and fell apart in the rain.²¹ Canadian coats were also too thin and inferior for British use. The Canadian Service Wagon, although reportedly deemed of high quality, was also eventually rejected as its turning radius was too large for English and European roads.²² The McAdam shovel-shield carried by all Canadian soldiers was useless for digging and cutting wire; they were sold for scrap in 1917.²³ The Dominion's primary contribution was artillery shell production. The Shell Committee was created on 6 September 1914. But because of political patronage, profiteering, production failures, and extensive delays in shell delivery, it, too, was largely a failure.²⁴ Although shell production was revamped and improved over the course of the war, Canadian attempts to deviate from British weapons and equipment models did not succeed.

By the end of the First World War, the failure of Canada's indigenous military equipment²⁵ irreparably shook the country's confidence in its domestic military industry. Moreover, the war had weakened Canada financially. It became, therefore, more expedient for the Canadian government to use British models than to pay for independent research and development for its own specific equipment needs. Notwithstanding a constant Canadian quest for independence—best illustrated by its insistence on a separate signature at Versailles and its independent membership in the League of Nations—Canada still deemed it expedient to use British military prototypes. Naturally, the British did not alter their designs to meet Canadian requirements; equipment specifications were dictated to Canada. Moreover, Canada was not often able to recommend changes to British designs, as that would have inevitably delayed procurement. Because the Canadian equipment base was already quite sparse, they simply could not wait for suitable machines to be designed. This meant that Canada was constantly seeking approval for modifications to their own equipment, which was rarely possible at least partly due to

the difficulty of exchanging blueprints.²⁶ The historic lack of investment in the defence industry often hindered Canadian military capability, and foreign equipment purchases have placed the military at the mercy of foreign technologies, processes, and political decisions. In the event of a crisis, Canada could easily lose its supplier, which was common practice in the post-war era. The Canadian government did not desire any freedom concerning equipment designs, and this trend continued at the Imperial Conference of 1926 where Imperial standardization again became absolute.²⁷

The 1929 stock market crash hindered expenditures on the Canadian military but there was also a theme of anti-militarism resonating throughout the international community in the late twenties and early thirties. Popular rhetoric at the time held that international conflicts were fomented by private enterprise armament industries.²⁸ All three Canadian military services were drastically reduced; the Royal Canadian Navy (RCN) was almost abolished completely.²⁹ Despite increasing indicators that there could be another international conflict, equipment acquisition in Canada was not a priority. When the government finally did attempt to manufacture a light machine gun for the Army in 1938, it simply became another example of the political nature of procurement in Canada. As early as the summer of 1936, the DND came to the conclusion that it would be necessary to arm the Canadian Forces with the Bren gun.³⁰ While an Interdepartmental Committee on Armament Contracts was appointed by Prime Minister Mackenzie King in January 1937 to report on the control of profits for these contracts, the government was still inexperienced with the intricacies of contracting and weapons development.³¹ On 31 March 1938, a contract to produce 7,000 Bren guns was signed with the John Inglis Company of Toronto. When the British War Office decided to purchase 5,000 of the guns, the order increased to 12,000 units, and it appeared that Canada was successfully involved in its own defence production. The contract was quickly criticized, however, as only the John Inglis company was given an opportunity to tender the bid.³²

A Royal Commission was appointed to investigate the situation and concluded that the Interdepartmental Committee on Profit Control provided inadequate protection against profiteering. It recommended that any negotiations between the government and private manufacturers regarding armament contracts should be placed in the hands of an expert advisory group of competent businessmen.³³ The Canadian government subsequently brought in legislation to establish a Defence Purchasing Board (DPB).³⁴ This transferred control of military acquisitions from the DND to a civilian agency. But as C.P. Stacey astutely asserted, there was nothing wrong with purchasing the gun from a sole source as it had been decided that it was necessary from the standpoint of military capability. He correctly wrote: "this proved to be one more case where political considerations took precedence over military expediency with

unfortunate results.”³⁵ The Canadian government, however, was not competent in the direct involvement of arms acquisition or production in the 1930s. The contract also illustrated the struggle between private industry and the Canadian government as to who should take primary responsibility for the construction of materiel.

The Second World War forced the Canadian government to invest in its defence industry, and domestic production effectively supplemented the traditional British source. Britain was economically devastated by the war and could not help arm Canada. Domestic industry subsequently became responsible for Anson and Harvard training planes, Mosquito fighter bombers, Hurricane fighters, and Lancaster heavy bombers. None of the planes were designed in Canada, and no aircraft engines were produced domestically.³⁶ Canada still did not have trained engineers for its own defence design and construction, and Canadian industry continued to use foreign models. Examples from Britain included the 25-pounder field guns, 3.7-inch anti-aircraft guns, 2-pounder anti-tank guns, and Boys anti-tank rifles.³⁷ During the war, 815,729 transport vehicles and trucks were built in Canada, representing one of its most distinguished industrial achievements. This situation was facilitated by American dominance³⁸ over the Canadian automobile industry.

Canadian industry also built corvettes, frigates, and Tribal class destroyers for the RCN.³⁹ Although four were ordered in Canada in 1941, the Tribals were not completed until the end of the war; other tasks had been prioritized. Canadian Minister of National Defence J.L. Ralston later claimed that the delay was actually because of the British admiralty’s unwillingness to lend naval personnel to help Canada construct the destroyers.⁴⁰ Indeed, the lack of weapons specialists in Canada created many difficulties for the RCN. This was most notable in the field of anti-submarine warfare (ASW), which Canada focused on during the war. As W.G.D. Lund argued: “It was through its commitment to anti-submarine warfare that Canada was able to gain some measure of control in the Battle of the Atlantic.”⁴¹

The RCN played a role second only to the RN in the protection of trade routes in the North Atlantic and this created a need for highly developed ASW technology. The RCN had to keep pace with the science of radar, asdic, high frequency direction finding, and offensive anti-submarine weapons (for example, the Hedgehog ahead-throwing mortar). At the outbreak of the war, however, there was not a single technical or scientific advisor in Naval Service Headquarters in Ottawa. All of the RCN’s weaponry came from Britain, and after the war started and British supplies disappeared, they were on their own. The attempt to design and procure advanced technology necessary for the success of the RCN in the North Atlantic has been described as “a national failure.”⁴² David Zimmerman noted that

Even in weapon design their efforts were a failure because of the dissimilar priorities of the institutions involved and the inevitable conflict that developed between them. The National Research Council of Canada, the supreme wartime scientific agency, and Naval Service Headquarters did not succeed in resolving their difficulties, the effects of which on the anti-submarine campaign were profound as RCN escorts went to sea with inferior, outdated, or unusable equipment.

One exception regarding weapons design in Canada was the Ram tank. Although it was based on the American M-3 medium tank, Canadian engineers believed the fixed gun to be a liability. A Canadian prototype was built in twenty months and the tank had a cast steel hull, a large revolving turret on a 72-inch ring, and a 75mm calibre gun. It used an American engine. Not only did American defence officials agree that it was a sound model, they installed the Canadian turret and gun on what came to be known as the M-4 Sherman tank.⁴³ But as with the Lancaster and the Tribals, Canadian inexperience resulted in lengthy production delays. There were also engineering and armour plate problems as well as a high final cost for the Ram relative to the Sherman. The Sherman subsequently became the main battle tank of the Allies, and the Canadian armoured divisions were only equipped with Rams until they could be replaced by the American model.⁴⁴ Although the decision to switch to the Sherman due to the inability of domestic industry to produce a tank quickly and cheaply was well-advised, the disadvantages of purchasing military equipment rather than producing it in Canada became obvious after the war. Minister of National Defence Brooke Claxton was forced to write to the US defense secretary as a last resort in 1949 to try to procure improved bogie wheels and treads for Canadian Shermans. His attempt failed because it was claimed that they were needed for American units.⁴⁵

Canada did have the option to purchase some military materiel in the United States during the war. In August 1940, Prime Minister King and President Roosevelt signed the *Ogdensburg Agreement*, which established the Permanent Joint Board of Defence meant to facilitate discussions on the defence of the continent. The *Hyde Park Declaration* that approved a statement by the Joint War Production Committee of Canada and the United States calling for a combined production effort⁴⁶ was subsequently signed in December 1941. The relationship with the United States regarding joint defence production during World War Two, however, did not completely replace the British agreement.⁴⁷ This trend gradually changed in the post-war period. The Canadian government made the decision to standardize American pattern military material in 1947, and all three Canadian military services subsequently moved, to varying degrees, towards that goal.⁴⁸ As Peter Archambault explained,

however, defence ties with Britain remained substantial despite their lack of formality, and Canada still purchased British equipment when it was advantageous to do so.⁴⁹

By the time of the Second World War, many defence products were built in Canada and in tandem with its new continental partner. Although after the war the Canadian government did finally accept the concept of military preparedness in peacetime to a certain degree, the Canadian military was still forced to rely on a combination of foreign options because it did not maintain its defence industry.⁵⁰ While the transfer to the American production scheme was due to proximity and a burgeoning economic co-operation between the two nations, it was also a symbol of casting off the yoke of the British Empire and conducting business under more favourable conditions.⁵¹

The Canadian government's endorsement in the late 1940s of the construction of an all-weather jet-fighter interceptor—the CF-100—is one example of a Canadian effort to advance its defence industry and procure domestically. But the aircraft failed to make an impact on the international market because of a lack of Canadian industrial experience in defence production and in meeting deadlines. The design proved that Canadian industry could create superior weapons technology, but its inexperience in manufacturing hurt the project. Canadian industry had also engaged in an overly ambitious endeavour; one company tried to make its first-ever jet engine even as it built a modern fighter. The company that was to build the new engines and the CF-100 was A.V. Roe (Avro) Canada; it began operating in November 1945. It was announced in January 1947 that the TR5 engine, later known as the Orenda, would be ready at the end of August 1949 and that the CF-100 could “tentatively” fly by that same time.⁵² While this was a year later than first expected, it was progress never before seen in Canada.⁵³ While this innovation in aircraft was impressive, it was still late and firm production schedules have always been vital to any defence acquisition. The United States was originally interested in the CF-100, as it was determined to be a high quality fighter, but American officials were firm that they could only use it if it was available before September 1952. The United States never acquired the aircraft, as the first delivery of the CF-100 was completed on 30 September 1953. By the end of the Korean War, only ninety fighters had been built compared to the 1,000 F-86s that were produced in Canada during the same time.⁵⁴ The Canadian government had spent almost 750 million dollars from start to finish, and it sold a total of only fifty-three CF-100 aircraft to Belgium in 1957.⁵⁵ Despite the increased budget allotments generated by the Korean crisis, the Canadian defence industry was simply too immature to undertake such a project, and the aircraft were simply not ready when they were needed in 1950.⁵⁶ The long history of Canadian reliance on foreign sources up to that time rendered the country largely unable to successfully produce advanced military technology independently.

A major exception to the reliance on foreign sources for equipment was the Canadian-designed, St. Laurent class anti-submarine warfare escorts of the Royal Canadian Navy. Radically new ships were needed to counter the threat of Soviet submarine innovations.⁵⁷

Canada was committed to international security by this time, and the 1949 Defence white paper announced that a new type of escort ship designed especially for Canadian needs was under construction.⁵⁸ Captain R. Baker of the Royal Corps of Naval Constructors proposed that Canada construct a new design largely based on the British Intermediate Class destroyer, but with the addition of a continuous forecastle to allow for more space for the operations rooms and communication centres needed by modern vessels.

Unfortunately, no Canadian shipyard was experienced in preparing naval designs; they had always relied on the British. Moreover, the technical offices at Naval Service Headquarters were not staffed as a warship-design authority. The Canadian government accepted the idea of a ship designed in Canada and subsequently authorized the growth of the engineer-in-chief's department. The department—supported by civilian engineers, technologists, and project managers—expanded from five officers in 1948 to twenty-one. A Naval Central Drawing Office was also created for the first time, and the Naval Central Procurement Agency was organized as an offshoot.⁵⁹ Davis concluded that “this new professional core gave the RCN the ability to design its own warships from scratch, rather than merely copying those of other Navies.”⁶⁰

The St. Laurent class anti-submarine warfare escorts were, as noted above, generally based on the British Intermediate Class destroyer design, but it was completely redrawn to meet modern Canadian needs. In addition to extra space for operations and communications, the improved design provided passageways and excellent access routes to facilitate the rapid closing down of the vessel. These were the first ships within the North Atlantic Treaty Organization (NATO) to provide such arrangements for closure as a means of defence against nuclear, biological, and chemical attack.⁶¹ For the first time, the RCN had designed a major war vessel. The inexperience in weapons and equipment design was still apparent, however, as financial planning for the original program proved highly inaccurate; the final cost was at least three times greater than first projected. Naval planners also wanted domestic industry to be able to fully support the ships, thus the major systems had to be developed or manufactured in Canada. This resulted in myriad delays as many of the pieces had to start on the drawing board, and indecision regarding the final shape, weapons, and electronic suite to be used prevailed. The St. Laurents were not operational until 1955—three years behind schedule.⁶² Such a situation places any procurement at risk of cancellation. But as Michael Hennessy noted: “The perceived likelihood of general war,

however, distracted the government's attention from matters of ultimate cost." ⁶³ The project was also marred by the fact that they were quickly shown to be ineffective against modern submarines; they were too slow and the range of their hull-mounted sonar and anti-submarine weapons was too short. ⁶⁴ They needed upgrades soon after their introduction to the RCN. Although the St. Laurents are a rare example of industrial independence in Canadian procurement history, it was apparent that having a platform designed strictly for Canadian needs was a costly and time-consuming venture.

The impact of American weapons systems in Canada after World War Two was neither immediate nor total. When it came time to send the Canadian Army Special Force to Korea in the spring of 1951, it was equipped with Second World War, British-pattern equipment. ⁶⁵ The infantry's rifle was the bolt-action Lee Enfield .303 No. 4, Mk. I. The army's anti-tank guns, mortars, small arms, tanks, field artillery, radios, signals equipment, and helmets were all from the previous war. ⁶⁶ Once in Korea, the Canadian army began to adopt American pattern weapons and equipment—such as the M2 semi-automatic rifle and the Thompson sub-machine gun—in piecemeal fashion. ⁶⁷ Although this placed Canada within a more recognizable North American framework, it continued the trend of trying to adapt foreign designs to Canadian needs. The Korean War had also spurred the Canadian government to increase defence spending. ⁶⁸ On 5 February 1951, Minister of National Defence Brooke Claxton told the House of Commons that the government intended to undertake a three-year, five-billion-dollar defence program. The program included: standardization on American military equipment, shipment of obsolete United Kingdom pattern equipment to Korea and Canada's NATO allies, and closer coordination of defence production with the United States. ⁶⁹ A few days later, Prime Minister St. Laurent created the Department of Defence Production (DDP) to oversee Canadian rearmament. ⁷⁰ Under the leadership of C.D. Howe, the Canadian government possessed a new administrative agent to control its defence procurement program even as it absorbed the Canadian Commercial Corporation and Canadian Arsenals Limited, which had previously functioned under the broad rubric of the Department of Trade and Commerce. ⁷¹

One of the primary areas of investment was aircraft to meet the Soviet bomber threat. The military desire for a domestic source for aircraft continued after the war and the result was the penultimate procurement failure in Canadian history—the CF-105, or as it is more commonly known, the Avro Arrow. Even Canadian citizens with no interest in military history have heard of the Avro Arrow. Since it is perhaps the one topic in the procurement field that has received adequate academic attention, a simple outline of the principal events will suffice here. ⁷² The CF-100 was outdated and no match for Soviet aircraft by 1953. ⁷³ The answer was the CF-105 supersonic, twin-engine, all-weather jet fighter.

The project had been in development in 1949 and was accepted by the Liberal government in 1953. By 1955, the necessary redesigns of the airframe and fire-control system put it vastly over budget. The Liberal government continued to pour money into the venture in the hopes of creating the world's best jet interceptor to counter the appearance of the Soviet supersonic intercontinental bomber in 1954, but production delays continued. To make matters worse, nobody wanted to buy it; it was completely unproven, especially the avionics and weapons systems, and Canada still did not have a reputation for building jet aircraft. As with the CF-100, the lack of experience in designing and producing military materiel was a major liability. Dan Middlemiss correctly wrote that

by 1956, the development of the "Arrow" had burgeoned into an all Canadian programme despite the initial intentions by the government to keep Canadian participation strictly limited. As later events were to demonstrate, an attempt of this sort to develop and produce all the major components for a major weapons system by inexperienced manufacturers was almost predestined to fail ... no allowance was made for the inevitable development problems and delays that would be encountered in such an ambitious project.⁷⁴

The former chief of the general staff, Lieutenant-General Guy Simonds, criticized the project at the time for consuming too much of the defence budget and ignoring the trend towards ground-to-air missiles. He realized, however, that the desire of the air force, the aircraft industry, and defence research scientists to participate in a project they could call their own swept aside any opposition to the venture.⁷⁵

By 1957, the Liberals happily passed the problem on to the new Conservative government under John Diefenbaker. On the same day the first Arrow prototype rolled off the Avro line, the Soviets launched *Sputnik I* into orbit. The age of intercontinental ballistic missiles had begun, and the rationalization behind the Arrow quickly began to fade. On 20 February 1959, the Diefenbaker government scuttled the entire project, and Avro was forced to fire 14,000 employees. The existing prototypes were subsequently destroyed without explanation. The initial reason for the cancellation of the Arrow was that it was obsolete in the missile age and that the American Bomarc defence missile was more appropriate. The truth was that the aircraft had simply taken too long to produce and had become too expensive. The Diefenbaker government had little information on the project and even less desire to search it out. As Desmond Morton asserted: "In power, he [Diefenbaker] had taken one hard look at the costs of technological independence, quailed, and fled."⁷⁶

The Arrow was not the only attempt to design and produce a weapon system for export in the 1950s. Between 1948 and 1955, the Canadian Army Research and Development Establishment (CARDE) developed a 3.2 inch,

medium anti-tank round called the Heller. CARDE considered it to be more accurate than the 17- and 25-pound "pot sabot" round, and it could be carried and fired by an individual soldier. The Canadian Army adopted the weapon between 1956 and 1960. The real goal, however, was to have it procured by both the British and the Americans to improve the level of standardization within the North Atlantic Triangle. Canadian hopes were dashed when the British purchased the Karl Gustav from Sweden instead. The British felt no compulsion to support Canadian weapons development and did not defend the decision to Canadian officials.⁷⁷

There was also the Canadian Bobcat armoured personnel carrier (APC) meant to carry troops quickly into the field in the case of war. The design began in 1953, and by 1956 a prototype had been created. Although the Cabinet Defence Committee approved its development that year, by 1958 Canada was still unable to generate any interest from Britain or the United States. The Canadian Army had hoped that it would be the standard NATO APC. The British and the Americans had their own models under development, however, and their projects took only half the time to get to the same point. It was not until 1964 that the Cabinet Defence Committee finally gave up on the Bobcat project due to cost and remaining technical problems. The Canadian Army then looked to the American model of M-113s for its APC requirement. As Peter Archambault noted: "The Bobcat and Arrow projects had met the same fate, for the same reasons: cost overruns; no foreign market; and the failure of the manufacturers concerned to make a successful transition from development to production of the prototypes."⁷⁸

The failure of the Arrow program had the most profound effect on the political will to design and produce weapons and equipment in Canada. After the Arrow program was first curtailed in September 1958, the Canadian government began discussing the future of the Canadian defence industry with the United States; the conclusion was to forego independent Canadian weapons production and enter into production-sharing agreements with American defence firms for major projects. Canadian military officials had very little involvement in this decision, and it was clear that politicians were going to handle the procurement strategy. The government's objective was to increase the participation of Canadian industry in the production and support of weapons and equipment used in North American defence. But Canada could not afford to do so without some form of sharing agreement between the two nations. The Canadian defence industry was weakened by the Arrow project and needed help from its neighbour. The American government agreed that this was an effective way for Canada to contribute to continental defence and a series of defence production and development sharing arrangements were concluded near the end of 1958.⁷⁹

The industrial defence alliance with the United States obviated the creation of a Canadian industrial defence base focusing on domestic designs. Grieg Stewart succinctly summarised the advantages of a domestic industrial defence base, writing that

when Canada spends money in Canada to design, develop, and manufacture high technology products ... the unit cost of such items is not of overriding importance. The money spent in Canada to provide jobs for Canadian workers who in turn pay taxes and buy goods and services strengthens other Canadian companies and the economy as a whole. Design, research, and development are investments in the future, raising the level of Canadian technology and lowering our reliance on foreign technology and expertise.⁸⁰

But others have pointed out the difficulties with such an attitude; John Treddenick, for example, asked the following question:

How should one treat a particular defence production activity which generates considerable domestic employment but produces a weapons system at greater cost than an equivalent [product]. On the one hand it contributes to the goal of full employment, yet on the other, it reduces the military capability which could be achieved from a limited defence budget. In the absence of a higher order criterion, such trade-offs are difficult to disentangle and economic significance difficult to assess.⁸¹

Dan Middlemiss, another of the relatively few Canadian authors writing about this topic, argues that defence procurement is a vital component of defence policy: "It is what puts the 'arms' into the armed forces and because of the many (sometimes very large) contracts and jobs involved, it is also "big business" in Canada."⁸² But as Treddenick revealed in 1988, the overall impact of defence procurement as a factor in the Canadian economy was minimal. He wrote that "total defence production accounts for considerably less than 1 per cent of both gross domestic product (GDP) and total employment."⁸³ None-the-less, Middlemiss's point still holds. There are still very large contracts to be had, and in Canada, economic offsets, regional development, and employment matters can be more important than the military operational requirement. As Dr. Craig Stone concluded, "despite the relatively small impact to the overall economy, the dominance of domestic economic and political considerations in Canadian defence capital spending, to the relative neglect of security or strategic military factors, is the normal defence climate in Canada."⁸⁴

The Canadian government lost the sovereignty it was desperately trying to gain when it procured all its military equipment from Britain

before and after the First World War. It was necessary for the government to invest in industry and in research and development, train its labour pool, and attempt to stay current with military technology removed from foreign dependence. This would have ensured military preparedness for the Canadian nation that still had full intentions of going to war to defend Britain. The investment in domestic designs and sources of supply would have given the military a distinct identity, ensured sovereignty in crisis situations, fostered national economic growth, and given the defence industry the experience it would need for future warfare. Canadian governments have largely chosen to avoid the costs of such a commitment, and by the end of the 1950s, they had a good alternative. Industrial co-operation with the United States was an exceptional example of continental unity for the defence of North America. It was, for the most part, a fluid and symbiotic relationship for the production of war material. When problems did arise, several vital avenues of communication, such as the Permanent Joint Board on Defence (PJBD) and the Military Cooperation Committee (MCC), helped to mitigate the situation. If Canada deemed it necessary to procure foreign weapons and equipment, then the industrial arrangements and agreements with the United States were the best system to fall back on.

This is clearly only a snapshot of the history of procurement in Canada up to the 1960s. It does, however, explain that Canada had, to that point, relied mostly on foreign sources for its equipment. Canadian industry rarely designed its own weapons. The most common course was for the DND and the government to purchase foreign prototypes and then alter them to meet Canadian needs. This practice invariably led to delays in the procurement process. The attempt to create a domestic industrial base to tailor weapons and equipment to specific Canadian military requirements also rarely met with success. Inexperience with design and production usually resulted in recurring delays and escalating costs. As with the case of the Arrow, the longer a defence project goes on in Canada, the more politically vulnerable it becomes. There is no better evidence of this than the multiple attempts to replace the fleet of Sea King maritime helicopters.

The Sea King helicopters were first acquired in 1963 to provide an anti-submarine warfare platform to counter the rapidly evolving Soviet submarine threat during the Cold War.⁸⁵ The initial idea was to operate helicopters aboard a Canadian aircraft carrier. The decision had already been made to procure an old and stagnant carrier from the British and attempt to modify it in order to keep costs down. This was, after all, the Canadian way to acquire weapons and equipment for its military. The carrier was later named HMCS *Bonaventure* and was entirely Canadian owned.⁸⁶ Its purchase also followed the dominant theme of politics in Canadian procurement. As David Bercuson asserted in 2005, "Her Majesty's Canadian Ship *Bonaventure*, the last Canadian aircraft carrier,

was built in the United Kingdom and acquired by Canada in part to maintain Canada-UK defence ties at a time when Canada was starting to turn to the United States for many military requirements.”⁸⁷

The use of rotary wing aircraft aboard smaller destroyer escort vessels instead of aircraft carriers in the 1950s was a distinctly Canadian advance. The pressing concern at the time was that, although the St. Laurent class vessels were entering service and plans for a new Mackenzie class were underway, the RCN still did not have enough ships for its international commitment to ASW, and they were concerned about obsolescence. The Chief of the Naval Staff stated that the use of helicopters could be “a marked step towards making up the deficiencies in the lack of surface escorts.”⁸⁸ More importantly, Canada had only one carrier, and if the aircraft could be retrofitted to fly from escorts and destroyers, it would vastly increase the RCN’s capability. The technical innovations used by Canadian engineers to carry this out changed how ASW operations were conducted by every other modern navy in the world, including those of Britain and the United States.⁸⁹ Discussions on the procurement of a fleet of ASW helicopters for the RCN had been ongoing since 1954, and by 1961, officials were still wavering over which aircraft to buy. This was largely because of the uncertainty of the exact role helicopters were going to fill in the RCN and to rivalries between the three Canadian services: army, air force, and navy.

The helicopter-carrying escort concept had been formally accepted in Canada by the 1960s and this allowed procurement officials to better define their requirements, always the first step to any procurement in Canada. Throughout this period, the process included: a definition of military requirement; validation of the requirement; government approval of the project; selection of a procurement strategy; bid solicitation and source selection; negotiation and an award of contract; administration of the contract to purchase the piece of equipment decided upon; and finally, delivery of the product.⁹⁰ While these core phases have been present since the 1960s, the time it took to complete them increased continually. It is fascinating to note that the first ever Staff Requirements written for naval helicopters in the 1950s was not even two pages long.⁹¹

The actual acquisition of a maritime helicopter remained elusive for the navy, however, as their vision surpassed the actual specifications of any existing model; they could see the future and they refused to recommend a purchase that would soon be outdated. The key difficulty that was eventually encountered was that since the RCN was the only navy considering flying helicopters from smaller ships, it had difficulty finding a capable aircraft of the desired size. It was clear that Canadian industry could not produce the technology that they demanded in an aircraft and they could only watch for new developments being designed by their allies, most notably their principal source of helicopters, the United States.

The winning helicopter was eventually called the Sea King and forty-three were delivered between 1963 and 1969; they became an integral component of Canadian naval operations. But the ASW capability of the Sea King began to lag behind subsurface technology by the late 1970s and discussions to replace the fleet began officially in 1975. It began as a low priority project, as they had just completed delivery in 1969, but the Sea Kings were designed in the 1950s, so it was not unusual for them to begin to discuss future possibilities in 1975. Although it was not at the top of the list during the late 1970s–early 1980s, considerations for the replacement of the helicopter fleet had to begin early as the procurement process itself for major acquisitions had already revealed itself with the original Sea King purchase to be a long one. As always, after the need was identified by the DND, the process moved to the creation of the Staff Requirements, which was by then called the Statement of Requirement (SOR).

After Pierre Trudeau and the Liberals came to power in 1968, a Management Review Group was appointed by the new Minister of National Defence, Donald Macdonald, to examine all aspects of DND management. Their final report, entitled *The Management of Defence in Canada* and submitted in July 1972, stated:

Effective coordinative management is lacking despite the obvious need and, in consequence, there is no focal point of accountability for performance ... it is because of failure to adequately assess the financial and technological risks inherently faced in procurement programs that there is a corresponding failure to accommodate those risks in either the planning or administration of the program as events unfold.⁹²

They subsequently recommended that all research, engineering, and procurement be consolidated under one Assistant Deputy Minister, Materiel (ADM Mat). The person filling this role had to be a civilian with experience in industry. The report maintained that procurement of military equipment should fall solely within the DND owing to its complexity and cost, and these specific items would be handled by the new ADM instead of through the Department of Supply and Services (DSS). The DSS replaced the DDP in 1969. They believed this change would provide a focal point of accountability. Before the report was published that year, it was announced by a new MND, Edgar Benson, that the military and civilian elements of the DND and Canadian Forces Headquarters would be integrated into a new Canadian National Defence Headquarters (NDHQ). The new position of ADM (Mat) was created within the new organizational structure.

Adding to the procurement problems of weak project management, risk assessment, accountability, and an overall lack of policy outlined by the Management Review Group, the money for new equipment disappeared in the early 1970s. The only bright spot for procurement was the four

new Tribal DHH 280 Iroquois class gas turbine destroyers that arrived in Halifax in 1972. The ships had been promised by the government in 1964 after extensive scheduling delays, lack of design finalization, and massive cost overruns led to the cancellation of the General Purpose Frigate in 1963.⁹³ The savings resulting from *Bonaventure's* retirement made it possible for the RCN to revitalize part of its surface fleet by procuring the new destroyers. The commissioning of HMCS *Iroquois*, the first to enter service, took place on 29 July. The ships were expressly designed and produced in Canada for integrated helicopter ASW operations.⁹⁴ But as with the other ship building programs, the one for the 280 was characterized by inept project management and unchecked cost overruns. The quest to reorganize and integrate the Canadian Forces created a management vacuum at the DND, and it was unclear who had control of the project. The original estimate for the program was 142 million dollars. By the time it was finished, it was revealed to have cost 252 million.⁹⁵

Although the process varied for each procurement, the outline was the same for major Canadian defence acquisitions. The three services of the Canadian military all required equipment upgrades to keep pace with developments in their respective areas of operations. As a result, each had to take their turn with respect to major purchases and competed with each other for scarce resources. By 1975, Pierre Trudeau's government launched a re-equipment program as part of the 1974–75 *Defence Structure Review*. The first major project was for the CP-140 Aurora long-range patrol aircraft. It had been approved in July 1976, and as Middlemiss noted, it:

was the first to move beyond the traditional "Canadian Content" provisions of previous offshore defence procurement programs, and to stipulate in elaborate contractual language (including clearly specified financial penalties for non-compliance) the need for the foreign prime contractor (Lockheed Aircraft Corporation) to attempt to achieve a wide variety of economic objectives over the lifetime of the program."⁹⁶

The government added to the process a funded Contract Definition Phase to increase competition between potential contractors and the level of offsets, or indirect reciprocal purchases in Canada, for the project. This policy invited numerous other departments into the procurement process to ensure that Industrial Regional Benefits (IRBs) were addressed within the military's large acquisition programs. This brought intergovernmental representatives for industry into the process. It could also include Western, Atlantic, and Quebec regional development agencies, and of course, the Finance Department had to play an integral role.

This IRB policy was also extended to the procurement of the C-1 Leopard main battle tank built by Krause-Maffei in West Germany. The project was to replace the British-built Centurion tank and was approved on 30 September 1976. The obvious lack of a tank industry in Canada,

however, combined with the relatively low cost of the project gave the government little leverage to negotiate with the German company. The contract was for 187 million dollars compared to the 697 million spent on the Aurora. The final offsets amounted to only 40 per cent of the contract price, whereas they were 96 per cent for the Aurora program. Moreover, Krauss-Maffei did not spread their offset purchases widely across Canada. Notwithstanding the comparative level of success of the two acquisitions, they both made explicit the Canadian government's desire to tie non-military economic factors to defence purchasing, and IRBs became inextricably tied to defence procurement.

The new policy of IRBs directly affected the procurement of a new naval helicopter. The Sea King Replacement Project (SKR) was renamed the New Shipborne Aircraft (NSA) Project on 1 January 1981 and was re-registered into the Defence Capital Program under that title. During the summer of 1985, the decision was formally made by the DND to replace the Sea King. On 23 May, the project was recommended for approval by the Program Control Board of the DND. On 10 June, it was approved departmentally by the Defence Management Committee, and the NSA Project office finally opened in August 1985. Already by this point, the procurement process at the DND had become unwieldy and required unremitting approval and analysis at many levels. This dilatory process continued as the SOR that was first accepted for the SKR in 1979 was subject to another review after the new NSA project office was opened. And that was only the beginning. In April of 1986, the DND authorized the issuance of a Solicitation of Interest (SOI) package to industry. This step outlined what the military was looking for in order to gauge how many companies might be able to fulfill the requirement. A submission was then made to the Treasury Board in May. In August, the Canadian government approved the project definition phase of the NSA.⁹⁷ After the application of minor amendments and reformatting, the new SOR document was re-approved for the NSA on 1 October, and the official Request for Proposal (RFP) was released to ten companies on 12 November. It was an eleven-volume document that outlined what Canada needed in a maritime helicopter, and only a few of the companies were expected to compete. The increased complications to the procurement process within the DND was obvious. The stated requirements for the first naval helicopter procurement in 1951 were written on only a couple of pages.⁹⁸

After a need is identified, a project is approved, and an SOR written, a procurement strategy and an evaluation methodology must be chosen. The NSA is significant in that the project office had decided that the procurement strategy was aimed at the employment of a "Canadian Prime Contractor," vehicle manufacture or assembly in Canada, system integration in Canada, DND-funded Research and Development Projects, and the establishment of domestic lifetime maintenance.⁹⁹ The

implementation phase was to consist of the development, qualification, and production of a fully supported helicopter by 1994. The precedent for the inclusion of a Canadian Prime Contractor came from the Canadian Patrol Frigate (CPF) Project, which had been awarded in 1983. The CPF Project Office did not simply want Canadian industry to participate in the fulfillment of the contract—it wanted a Canadian company to manage it.¹⁰⁰ This policy was extended to the NSA. Clearly, the government wanted Canada to be thoroughly involved in the procurement of the new helicopter, and any foreign company that bid on the NSA had to make an economic partnership with domestic industry.

In 1987, a defence white paper (*Challenge and Commitment: A Defence Policy for Canada*) was issued by the Mulroney government. It recognized that the influence of a nation was partly dependent on its investment in collective security and set out to reverse the damage done to the CF through budget cuts since 1971. A large part of the paper focused on the acquisition of new equipment. The white paper acknowledged that a significant “commitment-capability gap” prevented the military from carrying out the government’s mandates.¹⁰¹ It acknowledged that decades of neglect had to be overcome, and as part of this, a new defence investment framework was established to link it with domestic industry. This continued the commitment to domestic IRBs established during the 1970s. The paper asserted that where major equipment must be procured off-shore, the government would promote teaming arrangements with Canadian industry to foster technology transfer and the creation of an indigenous support base. The ADM (Mat)’s primary responsibility as part of this policy was to facilitate the development of industrial capabilities.¹⁰² The operational requirements of the military, therefore, were mixed within a system of competing priorities.

Regional benefit programs have been notorious for creating opportunities for political patronage. One of the most infamous was the maintenance contract for the New Fighter Aircraft (NFA), the CF-18. The actual NFA contract was also a symbol of the battle for regional benefits. In 1978, the Manitoba government created a task force to lobby the federal government and the contractors involved for a 10 per cent share of the project’s IRBs. The Manitoba lobby could not compete with Quebec’s, however, as the latter had lost the main portion of the IRBs for the NFA contract to Ontario-based McDonnell Douglas. Quebec was already in the middle of the sovereignty-association referendum, and relations with the federal government were strained. As a result, the federal government attempted to assuage Quebec by awarding the maintenance contract to that province. It was awarded to Canadair on 31 October 1986. This decision went against the advice of the NFA project evaluation team that Winnipeg’s Bristol Group offered a better quality bid.¹⁰³

On 5 August 1987, Minister of National Defence Perrin Beatty announced that the Canadian government had made a decision to approve funding for thirty-five helicopters designed around the EH-101.

EH Industries, a joint British and Italian company, had been formed specifically to design and produce the EH-101 to replace the British and Italian Sea Kings, and prototypes were underway by 1987. (this would be note 103) The company was awarded a definition contract in April 1988 to begin defining how they would comply with the Canadian requirement of domestic technology within the electronic mission suite.¹⁰⁴ The complexity of creating this new mission system in Canada and then installing it into the EH-101 airframe was obvious; these developments took years. By 1992, as hundreds of companies scrambled to be part of the Canadian content portion of the contract, the Program Control Board of the DND accepted the conclusion that the EH-101 was also the best helicopter for Search and Rescue (SAR), and it therefore directed that the NSA and the New Search and Rescue Helicopter (NSH) projects should be pursued as a joint venture. The contract definition phase had to begin again. The new proposal was not given to the government until March 1992; it was eventually accepted in September of that year.

Another factor that had already delayed the overall program was the fact that the DND did not want to be the first to procure the EH-101 as they had already experienced problems with such an undertaking with the procurement of the CF-18. The NFA project continued the policy of linking procurement to IRBs and because Canada was to be the first major foreign customer of the McDonnell Douglas company, the government was able to negotiate a more extensive benefits package.¹⁰⁵ The first models received were originally calculated to have 6,000 flight hours available; upon delivery, however, it was discovered that their limit was only 2,000 hours of flying time. The first models produced were thus two-thirds less capable than later models. On the basis of this experience, DND senior officials decided that they would not enter into a contract for the first production run of a new weapon system again. This problem was solved in October 1991 when Britain's Ministry of Defence ordered forty-four ASW versions of the EH-101.¹⁰⁶

A more serious problem, however, could not be fixed. Putting the two projects together created one highly expensive program rather than two moderately expensive programs. The total project cost for the NSA/NSH was 4.4 billion dollars. While some considered this merely a semantic issue, Canada's citizenry tend to be very sensitive to defence expenditures, and they were preparing to go to the polls. Canada had entered a recession in 1989 and the Mulroney government had reneged on its own 1987 white paper plans to rebuild the Canadian Forces.¹⁰⁷ By January 1993, Chrétien made the bold move of claiming publicly that he would cancel the project if elected. Chrétien knew it was far easier to

sell education and social programs in Canada and that he could gain valuable political advantage by portraying the Conservatives as wasting the taxpayers' hard-earned money on the tools of war in a time of recession and peace. In short, he knew Canadian sensibilities very well and how to spin expenditures on defence. He linked the acquisition of new helicopters to the inability of the Conservative government to solve the deficit problem. The Liberals claimed that the Cold War was over, international peace was about to return, and Canada no longer needed "attack helicopters" to hunt Soviet submarines.

Although more money was expected to flow into Canada over the lifetime of the project through IRBs than the government was to spend on it, there was not a clear understanding at the DND that the most dangerous threat to the project was delay. The contract definition phase alone took five years. By the time Cabinet gave its final approval to carry out the NSA/NSH program in 1992, the political climate in Canada had changed. It had been underway for too long with too few results, just like the Arrow. By 1993, the existing recession and the necessity of an election by November turned it into a giant political target. Chrétien cancelled the NSA/NSH within hours of officially taking power. The total costs of the contract termination amounted to 478.3 million dollars.¹⁰⁸ The lesson is clear: time was an important factor for the procurement of a naval helicopter in Canada owing to its political sensitivity.

A. Crosby, a member of the staff of the Project Management Support Office within the DND in the late 1980s, later wrote that project management was poorly understood within the Canadian Forces and the government.¹⁰⁹ He cited its complexity and lack of uniformity as the primary weaknesses at the time; the procedural manual on project management extended into several volumes, and despite these guidelines, each project emerged with an ad hoc form. The absence of an agreed-upon framework only created confusion. This trend continued when the new Liberal government finally admitted that a replacement naval helicopter was in fact necessary the following year in the 1994 *White Paper on Defence*.

In order to justify the cancellation of the NSA/NSH, government pressure was placed on senior defence officials responsible for the procurement to create a new SOR with a reduced capability; this is where the politicization of the Maritime Helicopter Project (MHP) really started. Rear Admiral G.L. Garnett, the commander at Maritime Command Headquarters, had to deal with the reality that if a new SOR was returned with "Cadillac"-like requirements, another replacement project could fail. The cost and capability, therefore, were cut in order to sell the project to the government. It was to be an off-the-shelf procurement as much as possible, which meant that it would avoid the inclusion of developmental or non-certified technology. The government and the DND had ostensibly learned that prolonging such projects put them at

high risk. The Maritime Helicopter Project (MHP) was then registered in the Defence Capital Program. The project seemed to enter stasis at this point, as the debate continued on the reduced SOR. In this regard, DND officials had only themselves to blame. They were too afraid to deliver a true SOR that reflected what the forces actually required. For over six years, the department worked on the project without seeking formal government direction. Their trepidation allowed the Liberals to successfully put the project on hold. But knowing the political climate, those at the DND felt they had no choice.

The Liberals decided that it was indeed necessary for the SAR helicopters to also be replaced. They would be replaced first, and the SOR for the new Canadian Search and Rescue Helicopter (CSH) was complete in the summer of 1995. The EH-101 won again. It was then being called the Cormorant. Although the government tried to escape the decision through various independent assessments regarding the validity of the competition, they were forced to concede that the EH-101 was still the best aircraft or they would face a powerful legal battle with EHI. The political fallout over the CSH procurement served as an example of what had to be avoided for the MHP. With the CSH, the politicians had failed to get involved early enough to influence the competition; after the RFP was too late. The key to influencing the outcome of any procurement was to intervene before the release of the RFP to industry.

In its final form and after much sculpting, the procurement strategy for the MHP was chosen by the government in 2000. It was an unprecedented approach for an acquisition of that type. The Liberals had created a committee chaired by Deputy Prime Minister Herb Gray to assess the process.¹¹⁰ Once again, there would be a lack of uniformity in Canadian procurement and the process would evolve in an ad hoc manner. They chose to split the contract; one company would build the airframe and another, the mission systems and avionics inside. The project office then had to lay out two sets of requirements. The government refused to explain its rationale for choosing this strategy and ignored the advice of both the DND and the Department of Public Works. This political decision increased the risk of massive delays and cost overruns owing to the modifications that would be needed to incorporate the electronics inside the airframe and then recertify the aircraft. It also effectively precluded any possible savings through EHI (which by that time was being called AgustaWestland [AW]) derived from the commonality of aircraft that Canada already used for SAR, specifically with respect to life cycle costs. The split procurement allowed more companies to compete, which would make it easier to avoid choosing AW. The EH-101 variant had always been the strongest competitor in attempts to replace the Sea King.

The Liberals also realized that if they cast aside the "best value" methodology used in the CSH project, it would be easier to avoid going with

the EH-101 model; it was more capable, but it was also more expensive than its competitors. A “lowest-cost-compliant” matrix was then implemented, which essentially stated that if one company’s bid was a dollar less than the others, as long as it was deemed compliant, then it would be chosen, regardless of overall quality and value. This contradicted the Treasury Board Contracting Policy. The procurement strategy also extended the timeline for delivery from 2005 to 2008. The mistake of using the split procurement strategy was later admitted; midway through the process, it was changed back to a single contract for the sake of efficiency. This, of course, delayed the procurement even further. Almost a hundred million dollars was spent to keep the Sea Kings in the air in the interim; however, no amount of money could make them competent in modern operations. The government directed the procurement to award the contract to the company that fulfilled the minimum requirements with the lowest price. Military officials at the DND went along with that political direction because they knew it was the only way to get helicopters. The problem was that there was no actual accountability placed on the companies to prove that they could fulfill these requirements—specifically the ability to deliver on time. The original pre-qualification process as stated by the DND had been specifically constructed to eliminate bidders that could not deliver their product on schedule.¹¹¹ After all, the whole idea from the beginning of the procurement was to avoid a developmental aircraft and purchase off-the-shelf. This was amended after it became clear that one of the bidders, Sikorsky, did not have an existing helicopter. As part of the pre-qualification phase, the process then permitted bidders to promise that, to the extent their aircraft did not exist, they would develop it for Canada.¹¹²

On 23 November 2004, Sikorsky was awarded a 4 billion dollar contract for the acquisition of twenty-eight fully integrated, certified, and qualified helicopters with mission systems installed and a twenty-year period of in-service support.¹¹³ Delivery of the first helicopter was required to be no later than 30 November 2008. It had also been decided that the penalty for late delivery would be capped at 36.5 million dollars, regardless of how long the helicopters were delayed. The government was subsequently sued for over 1 billion dollars in damages by AW. They had always claimed the Sikorsky could never deliver their aircraft on time, asserting that the government chose Sikorsky despite its non-compliance because the Cormorant was not a politically acceptable aircraft.¹¹⁴ On 10 January 2008, the Canadian media discovered that the military staff at 12 Wing in Shearwater had been told by Sikorsky that the first new helicopter would not arrive until 2010 or 2011. The helicopters were not ready; they were not even certified. It was a developmental aircraft and the DND and Public Works and Government Services Canada (PWGSC) knew this at the time the contract was awarded to Sikorsky. Any military equipment project over 100 million dollars is required to go through PWGSC after approval from Cabinet and the Treasury Board. The reality may be that the government had decided to take deliveries beyond 2008 from the

beginning. It is clear that the Cyclone could never have been delivered within the RFP timeline. They are not even close. Nobody knows when the helicopters will be delivered. It was reported in April 2008 that Sikorsky had asked for up to 500 million dollars in new funding and that the government threatened to cancel the entire contract.¹¹⁵

Chief of Defence Staff General Rick Hillier gave a speech at the historic Pier 21 in the Halifax Harbour the day the delay became public. He said he was frustrated by the delay and that Canada needed to shed its reputation of being “world-class at maintaining old equipment.”¹¹⁶ It is still undecided if any penalties will be assessed for breach of contract. The replacement of the Sea King has been the longest running equipment procurement project in Canadian history. It is the worst case of procurement incompetence on the part of both the government and the DND and highlights every weakness of defence acquisition in this country.

The semantics of “political interference” in Canadian procurement has recently been challenged. In 2006 Former ADM (Mat) Alan Williams wrote that

The behavioural implications for ministers are quite clear. Since they can no longer interfere in the procurement process once it has started, their only opportunity to do so comes prior to its formal commencement ... It must be emphasized that there is nothing wrong with ministerial involvement prior to the beginning of the process.¹¹⁷

The logic holds that, in the Canadian system, it is not considered “interference” for politicians who are ultimately responsible for the operation of the DND and the PWGSC to express a preference for one evaluation methodology over another. Williams goes on to say, however, that “the problem is when ministers try to distort the form the procurement process will take for political purposes.” So whether one calls it interference or not, the MHP procurement strategy that had been given to the DND by the government before the RFP was issued falls within the “problem” he outlined in the last sentence. Ministers *were* distorting the process for political purposes. The strategy that was chosen was completely unconventional and against common business practice. Williams correctly explained that “at times they [members of cabinet] have delayed the process by interfering with the marketplace in an attempt to influence the list of respondents to a request for proposals.” Again, this was done with the MHP. Politicians ignored the advice of military professionals and tendering agents in order to influence the outcome of a procurement. This may not be called interference according to Mr. Williams if it comes before the RFP, but as it was in the case of the MHP, it certainly creates the potential for the competition to be biased and unethical.

Williams did provide a good example of what he felt was political interference—the attempts to replace the ageing ILTIS utility vehicle for the Canadian army. He wrote that

In an effort to reduce cost and risk, the vehicles had to be “non-developmental,” meaning already in use by another army so it could be bought for a predictable cost off-the-shelf. And the army was supposed to receive its new vehicles by 1999. So far, so good. Unfortunately, politics then began to interfere. Instead of sticking to this strategy, Minister of Defence Art Eggleton was persuaded by officials from a British Columbia firm called Western Star to distort the process. Western Star had previously provided the military with a truck, the Light Support Vehicle Wheeled, and was now offering a new truck they had just built. In February 1999, 16 months after Treasury Board approved the procurement strategy but before the process had formally started, the strategy was changed to allow “developmental vehicles” into the competition. Sixteen months of unnecessary delays. The irony or perhaps tragedy in this case was that Freightliner, the owners of Western Star, announced in 2001 that Western Star would not bid on the LUVW [Light Utility Vehicle Wheeled] contract but would instead be closed down.

More than three years after the Treasury Board approved the initial procurement strategy, contracts were finally signed in October 2002 for General Motors Militarized Commercial Off-the-Shelf (MilCOTS), which are based on the Silverado, and deliveries were scheduled for October 2003 to August 2004. A contract was also issued in October 2003 for the Mercedes Benz GWagon with deliveries scheduled between March 2004 and August 2005. The author continued: “Five years needlessly lost due to political interference. And for most of that time Canadian troops were deployed in the Afghan combat zone with vehicles known to be inadequately protected.”¹¹⁸ This is exactly what happened with the MHP regarding the political choice of including “developmental vehicles.”

In Canada, as in most liberal democratic states, civil control of the military has meant the control of the armed forces by civilians elected to Parliament acting in accordance with statutes passed by that legislative body.¹¹⁹ Civilian control is intended to ensure that the decisions affecting the defence of a nation and the use of the armed forces are taken by politicians that are responsible to the people—not professional soldiers. It could also be argued, however, that the politicians have a responsibility to use the information that they are given by military experts, despite their possible bias, to make informed decisions. But they are under no obligation to do so. As one author put it, “civil control of the military is managed and maintained through the sharing of responsibility for control between civilian leaders and military officers.”¹²⁰ Each side,

therefore, agrees to assume certain responsibilities and accountabilities within a formalized regime of understandings. This regime should, theoretically, allow each a measure of independence, but the civilian authority ultimately reserves the right to make the final decisions.

The way procurement is currently being handled has also incurred a great deal of criticism. It is actually quite similar to the MHP. The sculpting of the procurement before the RFP is still essential. As the accusations go, the SOR and the RFP are drafted in such a way that there can only be one company that could deliver the requirements. Much like the Bren Gun purchase in 1938, one company is determined to be able to provide a necessary capability to the military without a competition for contract. It is more complicated today, however, as other companies are theoretically given a chance to compete. An Advanced Contract Award Notice is posted on MERX, the government's electronic tendering service, to make clear what the DND requires and that it intends to award a sole-source contract to a particular company. Other possible competitors, therefore, are given a small window, usually fifteen days, to prove that they can also deliver on those requirements. But the military is usually aware that only one company can comply with the parameters set out in the requirement specifications, thus no other company is able to submit a compliant bid. The winner of the contract is predetermined, and competition is bypassed based on urgent need. Canada is actually unique among its western allies in requiring, through the Agreement on Internal Trade (AIT), that military equipment be acquired through a competitive process. Article 506.11, however, states that if urgency is clear then competition can be circumvented.¹²¹ And much like the Bren Gun contract, there is the assertion that this goes against common and fair business practice. The criticism is also that the firms chosen are often American and that Canadian industry is not given a fair chance to compete.¹²² The advantage to this strategy, however, is that the SOR does not take six years to write, another four to sign a contract, and another seven to deliver the product, as was the case with the MHP. By 2001, the procurement process was estimated to take approximately fifteen years,¹²³ but on the modern battlefield, a new technology can be outdated within five. If it takes over a decade to procure a weapons platform, it will likely be obsolete by the time it is delivered. With a sole-source procurement, the timeline is considerably shorter. A company's ability to deliver equipment quickly to fulfil the CF's needs is key to them being selected. Operational urgency necessitates off-the-shelf purchases of existing models that avoid any developmental technology.

In the summer of 2006, the Conservative government led by Prime Minister Stephen Harper promised funding of 15 billion dollars for equipment procurement, including ships, trucks, helicopters, and

transport aircraft. The fact that Canada was at war and was in serious need of new hardware for the Afghanistan mission was used to justify the new investment. Although this was a bold and encouraging move from the point of military capability, it was another example of how Canada prepares for war after it has already begun. When Canadian soldiers first arrived in the field they were drastically under-prepared. This was best illustrated by the issue of green (woodland) camouflage uniforms for a desert campaign. These embarrassments created sympathy for the CF and slowly changed public sentiment towards military spending. The DND, in co-operation with the government, began to try to reverse the damage done by the budget cuts and lack of defence purchasing during the 1990s. This reversal actually began with Chrétien's successor and the Liberal government of Paul Martin, which authorized what were being called Immediate Operational Requirements and created a new strategy for defence acquisitions demanding quick delivery.

One of the first examples of accelerated procurement was for Unmanned Aerial Vehicles (UAVs) used for aerial surveillance and reconnaissance. The SPERWER drones acquired from Quebec-based Oerlikon-Contraves were sent to Afghanistan in 2003 under accelerated procurement processes within clause 506.11(a).¹²⁴ Another example was the acquisition of the M777 155mm gun for the Canadian artillery, which was purchased in November 2005 and sent to Afghanistan so quickly that it was there before most analysts had heard of the project. In 2008 the PWGSC posted a notice on MERX for an additional thirty-four pieces from industry, but it is speculated that the requirements were written specifically with the M777 from BAE in mind and that it was unlikely that any other company would compete.¹²⁵ This procurement is symbolic of the debate on sole sourcing. Although it is possible that a rigorous competition may save the government—and Canadian taxpayers—money, it may also prolong the acquisition of necessary equipment needed by the CF immediately. And most often, open competitions have only resulted in massive cost overruns and a lack of actual capability. Our history proves they do not necessarily save money. The M777 is a highly effective artillery piece and has received nothing but positive reviews from our soldiers.¹²⁶ It also makes little sense to operate two different models in the field and there is no evidence that another gun of equal quality could be acquired as quickly and/or for less.

The more recent acquisition of the C-17 Globemaster for Strategic Airlift is another example of how sole source procurement can eliminate one of the largest weaknesses of the Canadian procurement system—delayed acquisitions. Canada has never had this capability, and getting supplies and troops to the Canadian battle group in Afghanistan's interior had caused incessant logistical difficulties. These aircraft would also be vital for rapid reaction to domestic emergencies, such as a west-coast earthquake. The outcome of the process used to purchase the C-17

from Boeing was predetermined; only their Globemaster model could fulfill the set requirements. The issue with this sole source acquisition is that the Airbus consortium claimed it could supply the same number of planes for considerably less. The government, therefore, is seen as wasting tax dollars to buy the plane that they want. What is not fully understood by the public, however, is that the Airbus A400M model is still on the drawing board and is not a certified aircraft. Just like the Cyclone, nobody has any idea when it will be ready. And as we have seen with the MHP, this is not how the government should acquire equipment when the need is immediate. Part of the requirement specification for the strategic airlift, therefore, was a rapid delivery schedule and this factor excluded Airbus in favour of Boeing. The contract, including maintenance, was for 3.4 billion dollars. This was a wise decision; the C17s have already been delivered.¹²⁷ In April 2008, Canada took delivery of the fourth and final C-17 only fourteen months after it was ordered. Based on previous Canadian procurement history, this is a stunning success.

The same process was used to procure replacements for the forty-year-old C-130 Hercules Tactical Airlift with the new C-130J. The accelerated delivery requirement was the same. Lockheed Martin, which built the original Hercules fleet, was the only competitor who could replace the obsolete aircraft quickly. By allowing the CF to enter into a rust-out phase in the 1990s, the luxury of slow acquisitions based on years of competition and price haggling is no longer an option. Any neglect of the CF by a government in power, therefore, only increases the costs to taxpayers later. The contract for seventeen aircraft, valued at 1.4 billion dollars, was awarded on 20 December 2007. The first aircraft is to be delivered within three years.¹²⁸ While leasing or purchasing used Russian aircraft was always an option, the Canadian public had already been made aware of the problems with this type of acquisition. The Canadian government bought four 1980s-era mothballed submarines from the British in 1998 for 891 million dollars. On its first voyage to Canada, there was a fire aboard the HMCS *Chicoutimi* that killed a crew member and crippled the sub. The subs were all in a deteriorated condition and, ten years after they were purchased, they have never been fully operational. This goes back to the theme of Canada being forced to consistently waste time and money on maintaining obsolete equipment. This is also why it was announced within the Conservative equipment plan to purchase up to 2,300 new, medium-sized logistics trucks for the army.¹²⁹ At the time of the announcement, the DND had spent up to 80,000 dollars per vehicle to keep the twenty-five-year-old trucks on the road.

The procurement of new trucks is also a good example of how IRB programs are developing. The target value of the IRB is equivalent to 100 per cent of the contract value for the capital acquisition, which will be approximately 1.1 billion dollars.¹³⁰ The chosen company will have to offset the purchase by investing the equivalent of the contract cost into

Canadian industry. In fact, the entire 2006 equipment announcement was being promoted as a national job creation scheme. The completed C-17 procurement had the same IRB policy, and it has been successful. As long as the government does not ask Canadian industry to experiment and develop a portion of the aircraft, this style of IRB is low risk and usually does not delay the acquisition. Maintenance contracts offer the lowest risk and make the most strategic sense. The government may buy a piece of equipment from a foreign source, but they can establish the means to maintain it domestically over its lifetime. This creates long-term industrial development and jobs for Canadians without posing a risk to the delivery of the military capability.

Not all of the sole-source contracts have been successful. In June 2006, it was announced that the CF required “medium to heavy” lift helicopters. The dangers of moving troops overland in Afghanistan include exposure to ambushes and suicide bombers, as well as Improvised Explosive Devices. This lack of tactical transport helicopters is consistent with Canadian procurement history, as the government had sold this exact capability—seven CH-147 Chinooks—to the Dutch in 1991. The CF now has to borrow transport helicopters from the United States to reach the front lines. As Canadian military historian Desmond Morton once exclaimed: “Our capacity to prophesy what we’ll need our defence forces for, when, why, and how, had proven so far to be zip.”¹³¹ And so the government set out to reacquire transport helicopters. No other model complied with the DND’s requirements, and so the contract went to Boeing for sixteen new Chinooks. The Liberals claimed that there was no competition simply to please the Americans and that because it was an American firm, Canada may not have control of the aircraft after delivery.¹³² Both assertions were ridiculous. Notwithstanding the typical criticism, it was expected that it would be another streamlined procurement, with Chinooks entering Afghanistan relatively quickly. This has not been the case. The report on Canada’s role in Afghanistan headed by John Manley that was released in January 2008 highlighted the delayed acquisition by stating that their entry into the field should be considered necessary for any extension of the mission beyond 2009. This created a panic at the DND on how they were going to comply with this recommendation. Although Harper claimed that the Chinooks were already “on order,” there was still no contract signed with Boeing, and the aircraft were not expected until 2011—years after the extended mission will have ended.¹³³ It was a classic example of how there is no synergy between policy and procurement in Canada. The RFP has been released but there has yet been no answer from Boeing. The current estimate remains at 4.7 billion dollars, including maintenance, but nobody really knows what the final cost will be or if the CF will get them before 2011. Although delays in delivery are often caused by untested prototypes or IRB contracts, timelines are still contingent on how fast

the company can manufacture them and how many clients are ahead of the Canadian government. As it stands, it has been rumoured that the United States military is preparing six additional older Chinooks for the CF to use as a temporary measure starting in the fall of 2008. The *Manley Report* also recommended the procurement of more UAVs to conduct surveillance by February 2009, and a lease of the drones was expected under an accelerated timetable sometime in the summer. Instead of the more common six years, they were expected within six months from the time the contract was awarded. In May 2008, however, the company expected to supply the Predator drones, General Atomic, wrote a letter to the government and explained that such a rapid schedule was impossible and that it exposed the company to an unacceptable level of risk.¹³⁴ They revealed they would not be bidding on the contract. Once again, just because a government finally realizes that it needs to acquire equipment quickly in order for the military to carry out its orders, there are limits to how fast industry can deliver on highly technical products.

Not all current procurements are being sole sourced. There was a competition for the Joint Support Ship (JSS), which is set to replace the two current refuelling and resupply vessels that have become very expensive to maintain, as they were first launched in 1968 and 1970. The new ships will be built in Canada in an attempt to revitalize the domestic shipbuilding industry. On 24 November 2006, the government announced contracts for the Project Definition phase, which included two teams—ThyssenKrupp and SNC-Lavalin—who will receive contracts for 12.5 million dollars to complete proposals to design and build the ships. The contract is set at 2.9 billion dollars for three ships to be delivered in 2012. This design definition phase is what they did with the NSA project, and although Canada does have experience building capable naval vessels, it has been quite some time since it has done so. Delays should definitely be expected due to the developmental nature of designing a sophisticated, modern ship for the navy. Once again, our history with such ambitious design projects gives cause for concern regarding delays and cost overruns. As with the original St. Laurent project, the cancelled General Purpose Frigate, and the 280 Class, the ship that is described in the specifications is different than any other existing ship design. There are also other replenishment ships available on the market.¹³⁵ After the Definition Phase competition, then there is still the Implementation Phase discussions that must be carried out with the government and finally, the completion of myriad subcontractor negotiations. The first test will be whether the prime contractor is selected as scheduled sometime in 2008. If this is delayed, the entire project will likely follow suit and meet the same fate as the other Canadian-designed ships.

A less complicated procurement to replace the Heavy Logistics Vehicle Wheeled also included competition, but by avoiding developmental research and technology, it has created a model for accelerated procurement.

According to the *Report on Plans and Priorities 2007–08*, after the need was identified, a Request for Price and Availability was released to industry in August 2006, where four potential bidders were identified.¹³⁶ The SOI was released to industry that October. The RFP was completed by January 2007 and a contract signed a month later with Mercedes. The contract was to achieve Full Operational Capability a year later. Indeed, the eighty-two trucks were shipped directly from the plant in Germany to Afghanistan and are currently operating to great effect in theatre. The contract also follows the IRB policy of 100 per cent of the 87 million dollars contract value being invested in Canada by the winner.

Another possible success story for the future could be the replacement of Canada's fleet of wheeled Light Armoured Vehicles (LAVs). The LAV IIIs were one of the few major procurements made throughout the 1990s, and they are the backbone of the army's combat fleet. They are made in Canada by the American branch plant of General Dynamics Land Systems (formerly GM Defence) in London, Ontario, and in Edmonton, Alberta. Although 651 was the total number of vehicles to be procured, the government decided to purchase them in smaller batches to make the final total expenditure seem smaller to the Canadian public in an effort to avoid a repeat of the NSA/NSH experience.¹³⁷ Although there are new American options under development that could offer a replacement for the fleet of vehicles, General Hillier has stated that he wishes to continue the purchase of off-the-shelf items that can be delivered quickly.¹³⁸ General Dynamics does have a new model—the LAV-H—in development for just such a project and the DND would be wise to explore it as the primary option as it could be integrated easily into the current fleet. Since the IRB aspect is also already in place, this mitigates the risk to any approved project timetable.

Although there has been a great deal of progress in getting the CF the equipment it needs to carry out government objectives, there is still cause for concern. In early 2008, all three services chiefs announced in their strategic assessments that they were still in need of major equipment revitalization.¹³⁹ The announcement revolved around the necessity of acquiring spare parts, funding repair work, infrastructure, and allotting money to the most basic of needs—fuel. Although new equipment is on its way, the chiefs assert that there is no money left over to operate the equipment that they have. They conclude that planes will be grounded, ships will be docked, and vehicles will remain unserviceable. And there are still items that need to be replaced. One of the major reasons that the military does not seem able to catch up is that massive investment is going to the mission in Afghanistan. This upsets the balance between investment in operations and in capital spending. And DND officials have been known to exaggerate; part of their job is to lobby for money. But there is clearly a need for more investment. Although the replacement of Canadian Fixed Wing Search and Rescue planes was considered a top

priority in 2003, the CF have been asked to keep them flying until at least 2014,¹⁴⁰ though they were scheduled to be retired in 2010. The existing Buffalo aircraft are forty years old, and it will cost approximately 75 million dollars to keep them in the air. In some areas, therefore, the CF will have to continue its reputation for maintaining obsolete equipment.

The purchase of used equipment due to limited resources has also created problems. In addition to the Canadian submarine problem, the government has also had problems with its more recent procurement of heavy armour for Afghanistan. In December 2008, the government agreed to purchase 100 used Leopard 2s from the Dutch as part of a 1.3 billion dollar tank program to replace Canada's existing, thirty-year-old Leopard I models. But as with the submarines, the tanks were in long-term storage, and they must first undergo upgrades before they enter the field. Since Canadian industry lost the ability to overhaul tanks because of the defence cuts in the 1990s, there was no company ready to undertake the work.¹⁴¹ The tanks, much like the Chinooks, may not become operational until after the Afghanistan mission is over.

Another problem for the CF is that there has always been a lack of an overall, long-term procurement strategy. The DND no longer relies on the annual Strategic Capability Investment Plan, and the Report on Plans and Priorities remains the best source for information about the general shopping list of the CF. It provides an outline of where a project is and a future timetable. But it does not prioritize between projects, and many of those included are no longer on schedule or within budget. As we concluded in the *Opaque Window* report, most of the major procurement projects no longer resemble the original plan.¹⁴² The MHP is not even close, and the Mobile Gun System, which has been discussed since 2003, is still included in the report.¹⁴³ Approximately 17 million dollars has been spent on the project but the obvious intent is to close it out completely, given that the CF reversed its decision to retire heavy armour capability and is buying new tanks.

This absence of long-term procurement planning is symptomatic of the lack of highly trained personnel within the department who have overseen multiple projects over a long period of time. Most often, ad hoc project offices are created and once the project is over, the members of the team scatter to other posts. There is, quite simply, a lack of expertise in an area that is vitally important to the CF. There is also a lack of accountability within the departments involved in the process. When Alan Williams appeared as a citizen before the Standing Committee on Defence in 2007, he explained: "If you wanted to bring a minister here to be held accountable for defence acquisition, you could not do that."¹⁴⁴ But Williams' book does offer a solution. Of his twenty-five recommendations on how to improve the process, his main conclusion is to have a single agency responsible for Canadian defence procurement. He calls it

“Defence Procurement Canada,” which would be under the authority of the Minister of National Defence.¹⁴⁵ He is absolutely right. In fact, this same recommendation was made within *The Management of Defence in Canada* in July 1972. Although this created the ADM (Mat) position in the first place, the expansion of departments and committees involved in Canadian defence procurement sustained a lack of accountability.¹⁴⁶ Although defence contracts are far more expensive, technical, and complex than are other government purchasing contracts, there is no specialized agency to effectively carry out these projects. This would also remove the functional overlap between the DND and the PWGSC.¹⁴⁷

If Defence Procurement Canada—or some derivative of it—is eventually formed, the real need would be to focus on procurement-specific training and on retention of the people with these skills. It must be a professional organization with a memory; the history of Canadian defence procurement is vital to understanding the pitfalls of our past in order to avoid the mistakes that have characterized it. And since there will never be enough money available to fully equip all aspects of the CF, Canadian procurement must be as efficient as possible. Part of the training and retention of talented and experienced procurement officials would also solve the ongoing problem of weak project management of major defence acquisitions. The DND’s financial oversight committee, the Chief of Review Services, recommended in April 2007 that twenty-five capital equipment projects totalling 7.3 billion dollars required further investigation owing to various types of cost overruns, project mismanagement, and an inability to stay on schedule. The specifics of which projects and companies were targeted has not been released. In fact, under the new system there is very little information available to the public regarding acquisitions under development. Although the government and the DND are getting equipment into the field, there is a lack of transparency regarding how and when. In this case, the specifics of poor project management are also being withheld. As of 2007, media questions about procurement are no longer handled by CF public affairs officers. Any information must first be approved by the Prime Minister’s Office or the Privy Council Office. It has been referred to as the Harper “gag order,” and answers related to defence acquisitions are rarely readily available.¹⁴⁸ Companies interested in bidding on equipment contracts are even prevented from talking publicly about any possible projects. This secrecy only results in public confusion and an inability of Canadian citizens to judge responsibility with respect to such a large portion of government spending.¹⁴⁹

For the majority of its history, Canadian governments have been incapable or unwilling to properly equip its military. When it has tried, the motives have usually been driven by non-military considerations. From the beginning of our history, politicians have endorsed projects that took too

long and cost too much only to have to start all over again once they were complete. The government supported the use of the Ross Rifle because it was made in Canada long after it had been proven flawed. The Bren Gun affair of 1938 also demonstrated how getting a weapon into service quickly was less important than the need to have as many companies as possible compete for the contract. Procurements during the 1970s and 1980s were turned into regional benefit schemes that, as in the case of the NSA Sea King replacement, dragged the acquisitions out so long that they became vulnerable to outright cancellation. The lessons of the St. Laurent class ships, the Bobcat APC, the General Purpose Frigate, or the infamous Avro Arrow were not learned. And from the way that the Joint Support Ship project is currently progressing, this ahistorical behaviour is primed and ready to continue. It would seem that those at the DND have little understanding of our most common procurement failures or why they happened in the first place. The decision to select the H-92 from Sikorsky to replace the Sea Kings is another daunting example. Those responsible for procurement should have known that there was a high risk attached to accepting the first production run of an untested and uncertified aircraft; the CF-18 purchase experience made this clear. This should also have been learned directly from the NSA project itself, but this lesson was lost by 2004; the memory was gone. Each procurement project office has been assembled and conducted in a vacuum; they have made little use of the experiences of those who came before them. This is not truly the fault of the DND, as politics reigns in defence procurement and lessons are often cast aside in the name of protecting the reputation of the government or to achieve regional benefits. It is not about project efficiency, saving money, or how the acquisition is meant to help the CF. Much of how the military behaves regarding these acquisitions is dictated to them by the civil power, and they are forced to comply with government purchasing strategies that are completely illogical from the perspective of military capability. Even the writing of the SOR, which should be a straightforward document about what the military needs, is often sculpted to reflect the political realities of the day. The alternative is to have the government ignore the requirement completely.

This trend of the neglect of defence acquisitions was particularly acute during the 1990s, as successive Canadian governments neglected to maintain the equipment standards necessary for an effective national defence force. The end of the Cold War did not bring world peace or a decrease in the CF's operational tempo. In fact, the opposite occurred. This created the oft-cited commitment/capability gap as equipment stores were pushed to the limit of their operational effectiveness. The Harper government set out to narrow this gap, but because the rustout is so severe, the priority has become getting the equipment the CF needs into the field rapidly—not simply to create regional benefits to industry. This means that the current government may at times have to pay a premium

to accelerate procurement timelines. The purchases are often off-the-shelf from companies that guarantee delivery schedules. There is usually only one product that best fulfills a requirement. In such cases where the need is immediate, extensive competitions should be avoided. Anything that drags out a procurement in Canada will hurt the chances of the military getting what they need to do their job. The focus should be on equipping the CF to avoid international embarrassments and the endangerment of our soldiers' lives. There are many nations that are more interested in matters of defence that make more advanced and effective military hardware. More secure investment and a larger defence industry in countries like the United States have ensured that they can produce equipment faster and for less. This was most obvious with the Sherman tank and the F-86 fighter; the Canadian Ram and the CF-100 could not compete and were cast aside as a result. When the Canadian Forces have an immediate need for equipment, as they so often do, the smart play is to purchase tested models from countries like the United States. The lack of prior investment in the CF means that Canada has lost the luxury of time to research, develop, and produce its own equipment on a broad scale. National IRB programs are fine as long as they do not include an extensive Definition Phase, which usually makes a mockery of any established delivery timetable. The current use of Canadian industry to maintain foreign purchases over their service lifetime and the demand for the winning company to invest a comparable amount of the contract into Canadian industry are ways to lessen the risk of these regional programs.

After the equipment investment announcement in 2006, J.L. Granatstein correctly noted that "within five years, the military will be able to respond better to domestic and international crises than at any time in the last half-century."¹⁵⁰ There have been annual increases in funding, and the government is clearly committed to having a capable military. They have also proven that they have learned some of the lessons as to why it has been taking fifteen years to get equipment into the field, and more importantly, why this paralyzes military capability. The procurement of the C-17 is a success story: the CF needed a capability, they found a company that could deliver, the government bought it, and the company delivered the product. This example, along with the others cited, are reason for optimism despite that fact that there will still be equipment that comes online long after it was needed. Hopefully there are people at the DND taking stock of these successes and failures who will still be involved in the process when the time comes to create another project office.

EPILOGUE

On 12 May 2008, the day that this manuscript was to be submitted for review, the Harper government finally announced its *Canada First Defence Strategy* and how equipment procurement would be affected. Harper

described it in his speech as a long-term investment plan that could include an increase in funding to the military of 30 billion dollars over the next twenty years. Part of the focus is to distribute economic benefits across the country and create jobs in the defence industry. The idea of designing and building in Canada is not new, of course, and it will mean that things take longer and cost more, at least at first. But there is a vision. The plan is not only looking at what is needed now, such as Search and Rescue planes; it also considers other projects, including the replacement of the RCN's destroyer and frigate fleets, fighter aircraft, maritime patrol aircraft, and land combat vehicles that will end their operational life over the next twenty years. It has identified six specific, core equipment fleets and it is a guideline aimed at their replacement.¹⁵¹ If the Canadian defence industry is able to anticipate future requirements far enough in advance with secure funding, perhaps it will be able to supply much of what the CF needs to carry out the government's mandate for the first time. But this has been promised before. The focus on rebuilding the CF and using domestic industry to do so was exactly what was declared in the 1987 white paper. A recession quickly made the document politically impossible. In the case of *Canada First*, there is not even a document, despite the fact that one was promised two years ago. How it will be carried out is unclear, and the list of things that need replacing has still not been prioritized. Although the idea of established, long-term funding for equipment is a wise one, it can be overturned by any future government. It is far too early to judge whether *Canada First* will improve how Canada purchases equipment or if our procurement history will continue on the repeat cycle.

ABBREVIATIONS

AgustaWestland (AW)
Agreement on Internal Trade (AIT)
Anti-Submarine Warfare
Armoured Personnel Carrier (APC)
Assistant Deputy Minister, Materiel (ADM [Mat])
A.V. Roe (Avro)
Canadian Army Research and Development Establishment (CARDE)
Canadian Patrol Frigate (CPF)
Canadian Search and Rescue Helicopter (CSH)
Defence Purchasing Board (DPB)
Department of Defence Production (DDP)
Department of National Defence (DND)
Department of Supply and Services (DSS)
Industrial Regional Benefits (IRBs)
Joint Support Ship (JSS)
Light Armoured Vehicles (LAVs)

Maritime Helicopter Project (MHP)
 Militarized Commercial Off-the-Shelf (MilCOTS)
 Military Co-operation Committee (MCC)
 National Defence Headquarters (NDHQ)
 New Fighter Aircraft (NFA)
 New Search and Rescue Helicopter (NSH)
 New Shipborne Aircraft (NSA)
 North Atlantic Treaty Organization (NATO)
 Permanent Joint Board on Defence (PJBD)
 Request for Proposal (RFP)
 Royal Canadian Navy (RCN)
 Sea King Replacement Project (SKR)
 Search and Rescue (SAR)
 Solicitation of Interest (SOI)
 Statement of Requirement (SOR)
 Unmanned Aerial Vehicles (UAVs)
 United States (US)

NOTES

1. Desmond Morton, *Understanding Canadian Defence* (Toronto: Penguin Canada, 2003), 82.
2. This study is based in part on my thesis, *Casting off the Yoke: The Transition of Canadian Defence Procurement Within the North Atlantic Triangle, 1907–53* (unpublished Master's thesis, Royal Military College of Canada, 2001) and on my doctoral dissertation, *The Politics of Procurement: Weapons Acquisition in Canada and the Sea King Helicopter* (University of Calgary, 2006); the latter has been accepted for future publication by the University of British Columbia Press.
3. David Bercuson, "Time to Wake Up on Procurement," *Legion Magazine* (Nov.–Dec., 2005).
4. See Desmond Morton, *Ministers and Generals: Politics in the Canadian Militia, 1868–1904* (Toronto: University of Toronto Press, 1970); Stephen Harris, *Canadian Brass: The Making of a Professional Army, 1860–1939* (Toronto: University of Toronto Press, 1988); Richard Preston, *Canada and "Imperial Defense": A Study of the Origins of the British Commonwealth's Defense Organization, 1867–1919* (Durham: Duke University Press, 1967); Donald C. Gordon, *The Dominion Partnership in Imperial Defence, 1870–1914* (Baltimore: Johns Hopkins University Press, 1965).
5. C.P. Stacey, *The Military Problems of Canada: A Survey of Defence Policies and Strategic Conditions Past and Present* (Toronto: Ryerson Press/Canadian Institute of International Affairs, 1940).
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ABSTRACT: The procurement of military weapons and equipment in Canada has historically been controlled by partisan political considerations rather than a clear desire to increase the capability of the military. This research demonstrates the ahistorical nature of military acquisitions in Canada and how few lessons have been learned from a long list of project failures, owing largely to the political misdirection of the procurement process and the weakness of the civil-military relationship in Canada.



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