Stuck in a Rut
Harper Government Overrides Canadian Army, Insists on Buying Outdated Equipment
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ABBREVIATIONS

AEV Armoured Engineer Vehicle
APC Armoured Personnel Carrier
ARV Armoured Recovery Vehicle
C3I Command, Control, Communications, and Intelligence
CCV Close Combat Vehicle
COIN Counterinsurgency
DND Department of National Defence
FMEP Force Mobility Enhancement Project
IED Improvised Explosive Device
IFV Infantry Fighting Vehicle
LAV III Light Armoured Vehicle III
LAV UP LAV III Upgrade
LCVS Land Combat Vehicle Systems
MGS Mobile Gun System
MMEV Multi-Mission Effects Vehicle
MRCV Multi-Role Combat Vehicle
NPP Notice of Proposed Procurement
PRT Provincial Reconstruction Team
SOIQ Solicitation of Interest and Qualification
SOR Statement of Operational Requirements
TAPV Tactical Armoured Patrol Vehicle
TUA Tow Under Armour
TOW Tube-launched, Optically-tracked, Wire-guided
VBCI Véhicule Blindé de Combat d’Infanterie
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Introduction

Since the end of the Cold War, the Canadian Army has faced greater challenges of adaptation than the Royal Canadian Air Force or the Royal Canadian Navy. The Army was forced to shift from preparing for a “symmetric” engagement in Europe, to dealing with the very different “asymmetric” realities of Afghanistan. The threat posed by improvised explosive devices (IED) was completely unlike that posed by Soviet-built tanks. Complicating things further, halfway through the mission a radical new approach to counterinsurgency (COIN) was introduced by Canada’s principal defence partner, the United States.

One of the greatest complications for the Army was the fact that, shortly after taking office in February 2006, the Harper government had embraced the tank. At the urging of Defence Minister Gordon O’Connor, a former tank commander, the government deployed some of Canada’s aged Leopard C2s to Afghanistan, bought 80 second-hand Leopard 2A4s from the Netherlands, and borrowed some newer Leopard 2A6s from Germany.1 Canada also purchased an additional 20 Leopard 2A6s from the Netherlands, which would be converted to the German specifications and returned to Germany.2
Not surprisingly, the tanks proved to be less than ideal for the Afghanistan mission, especially after the United States altered its approach to COIN. It will always be difficult to “win hearts and minds” with heavy armour, and despite all that armour, the flat-bottomed low-slung tanks were rather exposed to the insurgents’ new weapon of choice — the IED.² Tanks might, in fact, be the most poorly suited form of equipment for the unconventional missions of the 21st century.

The Harper government, however, does not easily change course. Today, instead of moving away from heavy armour and embracing contemporary COIN, it is about to spend billions of dollars on Close Combat Vehicles (CCV) that are designed to accompany tanks into conventional battles.

What makes the situation all the more alarming is that the Canadian Army has reportedly told the government that it does not want or need CCVs.⁴ The Army, which has recently come under budgetary pressure from the Harper government, could use the funds for training, at a time when the Army is having difficulty maintaining a high level of readiness.⁵ This report recommends that the Harper government listen to the Army — and stop the CCV procurement before any contract is signed.

### The Tank in Canada’s History

Armoured combat vehicles were a decisive addition to the battlefields of the 20th century. The tank, which arrived during the latter stages of the First World War, became the centrepiece for land operations during the Second World War. A new doctrine of warfare crafted by German General Heinz Guderian took Europe by storm.⁶ Rather than the trench warfare of the First World War, it called for a quick armoured “spearhead” and supporting mechanized infantry units to punch through enemy lines, form a “pincher movement,” and thus encircle enemy forces. The “Blitzkrieg” strategy changed the way wars were fought on land.

The first tanks fielded in Canada were British-designed, Canadian-built Mark VI Valentines, delivered just before the start of the Second World War in the summer of 1939.⁷ The first tanks used by Canada in the Second World War were the British-designed Churchill and Matilda tanks.⁸ Canada acquired U.S.-designed Sherman tanks in 1943⁹ and later deployed one battalion of Shermans in the Korean War.¹⁰

During the Cold War, most of Canada’s tanks were stationed in West Germany. In 1952–53, Canada acquired 274 British-designed Mark III Centurions.
Canada replaced these with 127 German-built Leopard 1A3s (designated C1s) in 1979. After the 1999 Kosovo war, Canada sent five upgraded Leopard C1s (now designated C2s) to that country as part of a UN peacekeeping force.

The mechanization of warfare did not stop with the tank. The need to protect soldiers in the new battlefield environment led to the development of the armoured personnel carrier (APC). In addition to armour, speed became an essential requirement for these vehicles. But for NATO, whose forces were outnumbered in Europe, there was also a need for “force multipliers” — technological innovations that equalize quantitative disparities with qualitative advantages. Nuclear weapons were the main force multiplier; however, NATO strategy also focused on disorienting and constraining the enemy by targeting Command, Control, Communications, and Intelligence (C3I) facilities. While tanks remained important, air power and missiles dominated NATO strategy during the later stages of the Cold War and beyond.

Canada’s Leopard C1/C2 Fleet

The Leopard 1 tank first entered service in 1965. In 1979, Canada procured 127 Leopard 1A3s, which it designated as “C1s.” At the time, the C1s were an advanced design with a welded turret, improved sighting device, night vision capabilities, and more room for the crew. They had crews of four, a maximum speed of 65 km/h, and a maximum range of 600 km. The main armament was a 105 mm cannon, supplemented by two 7.62 mm machine guns and smoke grenade launchers.

During the Cold War, most of the C1s were stationed in West Germany. But when the Cold War ended, the need for Western forces to maintain tank fleets in Germany disappeared. Although a small number of C1s were later deployed as part of Canada’s contribution to peacekeeping in Kosovo, geopolitical developments had weakened the rationale for Canada to have a substantial number of the vehicles.

Nevertheless, in 1996, the Chrétien government announced that the C1s would receive an upgrade. The existing turrets on 123 of the tanks (designated C2s after the upgrade) were replaced with Leopard 1A5 turrets equipped with computerized fire-control systems that incorporated thermal imagers. Adding this capability cost an estimated $145 million. At the same time, a further $400 million plan to install additional armour on the tanks was left unimplemented — for cost-saving reasons.
Canada and APCs

Along with tanks came the need for armoured personnel carriers (APC). The Grizzly entered Canadian service in 1976, followed by the Bison in 1990. The Bison has eight wheels and weighs 12.4 tons, with a maximum range of 665 km and maximum speed of 100 km/h. Many of the original 199 Bisons remain in service today as ambulances and other kinds of support vehicles.

With the end of the Cold War came an increase in UN peacekeeping missions, and with it the realization that Canada needed a more lightly armoured combat vehicle — albeit one that could provide direct fire support when necessary.

In 1991, the Mulroney government launched the $2.8 billion Multi-Role Combat Vehicle (MRCV) project with a view to replacing its various types of APCs with a single chassis. It settled on the TH-495, an infantry fighting vehicle (IFV) built by the German company Thyssen-Henschel, now known as Rheinmetall Landsystems, part of the Rheinmetall group. The TH-495 was a tracked vehicle with a crew of three and room for seven infantrymen. Armed with a 25 mm rapid-fire cannon, the TH-495 was similar in appearance and weight to the American M2 Bradley Fighting Vehicle.

Thyssen-Henschel proposed to have the TH-495 built in Cape Breton by a newly established company called Bear Head Industries. However, the deal had some murky aspects, including the involvement of Karlheinz Schreiber, and was ultimately abandoned by the Mulroney government.

The Chrétien government, shortly after being elected in 1993, issued a White Paper in which it announced a shift in focus to land forces:

Most areas of defence will be cut. The relative weight of the naval, land and air establishments will be altered to allow for the transfer of more resources to where they are most needed — mainly to operational land forces. Everything is being made leaner. Everything is undergoing the closest scrutiny.

As part of the shift to land forces, the plans for a new combat vehicle were resurrected. In 1996, the Diesel Division of General Motors of Canada won a $1.59 billion contract for 651 of its Light Armoured Vehicle III (LAV III). The firm was acquired by U.S.-based General Dynamics in 2003 and became General Dynamics Land Systems-Canada.

The LAV III entered service in 1999. It has a maximum range of 450 km and maximum speed of 100 km/hr. The LAV III comes in multiple variants, including infantry carriers, command vehicles, and forward observa-
tion vehicles. Unspecialized variants have a 25 mm M242 Bushmaster cannon, grenade launchers and machine guns.®

The acquisition of the LAV III is a defining moment for the Canadian Army. Indeed, Lt.-General Peter Devlin has said that Canada now has a “LAV-based army” — and he expressed the view that Canadians are “the best in the world fighting [in] that vehicle.”33

The LAV III acquisition was also a very significant commitment by the Chrétien government, in light of the more general defence cutbacks being imposed at the time. It was offset by a reduction in spending on tanks, including the limitations to the Leopard C1/C2 upgrades described above.

**Retiring the Leopards**

In October 2003, Liberal Defence Minister John McCallum and Chief of the Defence Staff Lt.-General Rick Hillier announced the retirement of Canada’s Leopard C2 tanks, which by this point had been in service for nearly a quar-
ter-century. They also announced that Canada would focus on acquiring the U.S. Stryker Mobile Gun System (MGS). The Stryker MGS is based on Canada’s LAV III but has a much larger, 105 mm cannon. As David Pugliese of the Ottawa Citizen explained, Hillier was of the view that the “Leopards had served their purpose and, despite recently undergoing a $145-million upgrade, were now of limited use.” Future combat scenarios required a vehicle such as the Stryker, and it was proposed that Canada would acquire 66 of them for $460 million.

In Hillier’s own words:

Tanks are a perfect example of extremely expensive systems that sit in Canada because they are inappropriate to the operations we conduct daily around the world. The [Stryker] MGS, in conjunction with other combat systems, will give us a much greater capability on operations such as those being conducted in Kabul, and still give us options for high-intensity combat.

Adopting the Stryker was also seen as logistically sensible because, as a variant of the LAV III, they would be easier and cheaper to maintain than a set of entirely different vehicles.

But the plan to scrap the tanks and acquire Strykers was never implemented.

Gordon O’Connor and the Return of the Tank

In February 2006, Stephen Harper became prime minister and appointed a former tank officer, Gordon O’Connor, as his minister of national defence. Within four months, O’Connor had set aside the plan to replace the Leopard C2s with Strykers — even though the Department of National Defence (DND) had already “blown up, sold or given away a little less than half of the army’s fleet of 114 Leopards.”

At the same time, Canada’s role in Afghanistan was changing. As the result of a decision taken by the Paul Martin government, the Canadian Forces had just taken on the lead role in Kandahar Province. A three-phased counterinsurgency (COIN) strategy was developed: “strategic survival and reorganization; establishment of foothold bases in remote areas; and mass mobilization using tribal and religious elements.”

The Harper government’s decision to send tanks to participate in a COIN operation came as a shock to many. The government, however, said the
tanks were needed to provide more protection to Canada’s Provincial Reconstruction Teams (PRT), and not for direct combat missions.\textsuperscript{43}

Canada initially deployed 15 Leopard C2s to Afghanistan.\textsuperscript{44} The tanks proved to be effective at knocking holes in earthen walls, which increased the mobility of Canadian infantry.\textsuperscript{45}

Then, in September 2006, the Canadian Forces led Operation Medusa — an offensive aimed at re-taking areas of Kandahar Province under Taliban control.\textsuperscript{46} More than 400 Taliban militants were killed in battles in which they engaged the Canadian soldiers directly.\textsuperscript{47} One of the lessons taken immediately from Operation Medusa was the need for sustained high-intensity combat operations — operations in which, the Harper government decided, tanks could play a useful role. Unfortunately, the approach taken by the Taliban soon changed, with implications that will be discussed below.

**Enter the Leopard 2**

By 2006, the Leopard C2s were nearing the end of their service lives. For this reason, simply delaying their retirement was not going to provide the capability that Minister O’Connor insisted was needed.

DND determined that it needed a total of 100 Leopard 2 tanks: 40 for deployed operations, 40 for training, and a further 20 for specialised functions.\textsuperscript{48} And so, in April 2007, an agreement in principle was announced whereby Canada would purchase 80 second-hand Leopard 2A4s and 20 2A6s from the Netherlands.\textsuperscript{49} The deal was formalized eight months later, in December 2007.\textsuperscript{50}

More advanced than the C2s, the 2A4s had flat titanium/tungsten armour, an automated fire-and-explosion suppression system, and an all-digital fire control system that could handle new ammunition types.\textsuperscript{51} However, the Leopard 2A4s still required refurbishment — a job that was done, as part of the Canada-Netherlands deal, by the original German manufacturer Krauss Maffei-Wegmann.\textsuperscript{52} Not all of the 100 tanks were refurbished; some were cannibalized for spare parts.\textsuperscript{53}

The acquisition cost of the Dutch Leopard 2A4s and 2A6s was estimated at $650 million, plus another $650 million for 20 years of in-service support.\textsuperscript{54}

At the same time, DND announced that it was borrowing 20 of Germany’s Leopard 2A6s.\textsuperscript{55} The 2A6s were more advanced than the 2A4s, with a longer L55 gun, an auxiliary engine, and crucially, both improved mine protection and an air-conditioning system.\textsuperscript{56} The borrowed German 2A6s were promptly
deployed to Afghanistan. Then, in 2008, Canada decided to purchase 15 disused Leopard 2A4s from Germany for spare parts.

Significantly, Germany and the Netherlands were only too glad to off-load the tanks onto Canada. After the Cold War ended, rendering large tank fleets obsolete, the two countries embarked on what was dubbed “der grosse DeutschePanzerSchlussverkauf” (the great German tank fire-sale).

Were Tanks Effective in Afghanistan?

In the end, the Leopard tanks were only of limited effectiveness in Afghanistan, because the Taliban quickly abandoned the “stand and fight” approach in favour of the IED. Flat underbellies are acutely vulnerable to the explosive force of a mine or IED, which is why Canada later upgraded its LAV IIIs (through the LAV UP program described below) with deflective V-shaped hulls. But tanks cannot be modified in this way, since they are designed with low clearances so as to reduce their profiles as targets. Moreover,
the majority of a tank’s armour is located in the front and side sections, not underneath. One of the reasons Canada borrowed the Leopard 2A6s from Germany is that the 2A6 has additional belly plates that provide it with somewhat improved protection against mines and IEDs.62

One of the arguments for the deployment of the Leopard tanks in Afghanistan was that they would be more effective in difficult terrain than the LAV IIIs. However, the tanks also had difficulty in “cultivated areas, culverts and canals [which] presented numerous opportunities for tanks to become hopelessly mired.”63

Tanks are not integral to COIN operations and can in fact hinder them, since it is difficult to “win hearts and minds” from behind heavy armour. When the Afghan government expressed a desire to acquire tanks for its army, Australian Brigadier General Adam Findlay, the deputy chief of operations for ISAF, dismissed the request: “We are making a counter-insurgency force and we have our Afghan partners asking for things we would call ‘high-end war fighting’ — tanks and what have you.”64

In Canada’s case, PRTs were deployed to repair the damage caused when the tanks were operationally deployed: for instance, damage to earthen walls.65 The repairs were done to mollify local populations, though arguably there were other things the PRTs could have been doing instead — had they not been cleaning up after the tanks — to win the locals over.

Several of Canada’s allies deployed some tanks to Afghanistan, though the United States did not do so until 2010, and only then in limited numbers.66 Denmark sent a small detachment of Leopard 2A5 tanks to Helmand Province in 2007.67

Significantly, the United Kingdom has a modern tank fleet but never deployed any of those vehicles in Afghanistan, though it did sometimes make use of the presence of Danish and Canadian ones.68

**Force Mobility Enhancement Project**

The Harper government’s decision to procure and deploy tanks quickly resulted in some unfortunate mistakes. For instance, the Statement of Operational Requirements (SOR) was incomplete, and failed to address all of the deficiencies in capability that the project was intended to remedy.69 It was not until the Leopard 2s arrived in Afghanistan that anyone realized they could not be fitted with implements the Canadian Forces considered necessary, such as mine ploughs, mine rollers, and bulldozer blades. Indeed, the
Auditor General found that “no research was done to find out if these implements could actually be fitted on the tanks.”

For this reason, some of Canada’s old Leopard C2s were kept in Afghanistan to perform roles the better-armoured Leopard 2s could not accomplish. This was very hard on the Leopard C2 crews, since air-conditioning units had not been installed in those older vehicles.

After the Leopard 2s’ inability to operate implements became apparent, the offshoot Force Mobility Enhancement Project (FMEP) was approved by the government, in the spring of 2007. The FMEP entailed the purchase of 13 Armoured Engineer Vehicles (AEV) and 2 Armoured Recovery Vehicles (ARV), as well as mine ploughs, bulldozer blades and “tactical mobility implements” (i.e., mounting brackets). The total project value of FMEP has been estimated at $376 million. The AEVs and implements are supposed to reach initial operational capability by February 2015 and full operational capability by December 2016.
The FMEP is part of a larger Land Combat Vehicle Systems (LCVS) project. The Close Combat Vehicle (ccv) project, which was announced in July 2009, is located within the LCVS and closely associated with the FMEP.

Close Combat Vehicle

The decision to procure ccvs for Canada today is directly linked to the flawed decision, taken in 2006, to retain and grow Canada’s fleet of Leopard tanks.

The purpose of the ccv is to provide “an operational capability that can operate in intimate support of the Main Battle Tank or independently within a high-intensity environment.” In other words, the ccv will defend Canada’s Leopard 2s against infantry, in traditional battlefield situations where the tanks themselves are engaging enemy armoured vehicles. Although the LAV III could fulfill this role, the heavier armour of the ccv would provide better survivability.

The Solicitation of Interest and Qualification (SOIQ) to industry set out the requirements for the ccv, including a maximum range of at least 450 km and maximum speed of at least 60 km/h. The ccv must carry a crew of three and have room for at least five infantry. (By comparison, the LAV III can carry 6–7 infantry.) According to Major Howard Mark Anthony, there is no requirement that the ccv be tracked, which opens up the possibility that the vehicles might be wheeled.

The SOIQ also specifies that the ccv “must provide protection to its occupants against NATO Level 4, Kinetic Energy Threats and Artillery Threats for a full 360 degrees arc.” NATO Level 4, according to the NATO AEP-55 STANAG 4569, means that the vehicle has to provide protection against heavy machine gun fire (14.5 mm calibre). The ccv must also provide protection against NATO Level 4B for Grenade and Blast Mine Threats. Level 4B is a 10 kg explosive device under the centre of the vehicle.

Significantly, the LAV III has the same 14.5 mm calibre protection. And while the LAV III’s level of mine protection is not public information, the LAV UP upgrade (discussed below) includes a double V-shaped hull which likely also provides NATO Level 4B protection. In other words, the SOIQ does not require a vehicle with different traction (tracks versus wheels) or armour than Canada’s recently upgraded LAV IIIIs.

Nevertheless, the ccv is supposed to bridge the armoured weight gap between light (5–25 tonnes) and heavy (45 tonnes) armoured vehicles, a weight class Canada does not operate. It is proposed that 108 ccvs will
be procured in four different variants: Infantry Fighting Vehicle, Forward Observation Officer, Engineer Reconnaissance, and Tactical Command configurations. There is an option to procure up to 30 more vehicles and “the development and implementation of an in-service support contract.” The estimated cost of the ccv project is $2 billion. The in-service support contract will be bundled with the acquisition contract.

In the actual circumstances of 2013, the ccv is both redundant and out of date. This procurement is proceeding only because of the Harper government’s 2006 decision to retain and acquire tanks, and its stubborn refusal to back away from that error. As former ADM Materiel Alan Williams has commented about the ccv project, the “government [is] again politicizing the acquisition of military hardware.”

Three Unnecessary Options

The ccv procurement was mishandled from the outset, when the original Notice for Proposed Procurement (NPP) and the Solicitation of Interest and Qualification (SOIQ) disqualified every competitor for not meeting the armour requirements. The SOIQ was then rewritten and all the competitors—the Véhicule Blindé de Combat d’Infanterie (VBCI), the CV9035, and the Piranha 5—were deemed compliant.

Another aspect of mishandling concerned the issue of whether the ccvs would be tracked or wheeled. In 2008, the Ottawa Citizen reported: “Defence sources say the current LAV III does not have the mobility needed for the job in off-road conditions. The likely preferred option is to go for a tracked vehicle.” However, the SOIQ did not specify that the vehicles had to be tracked, and as a result, two wheeled vehicles (the VBCI and Piranha 5) entered the competition, reportedly catching DND and analysts by surprise.
1. **VBCI**

The VBCI is built by French government-owned Nexter. A wheeled vehicle, the VBCI has a maximum range of 750 km and a top speed of 100 km/h. Its main armament is a 25 mm (NATO standard) cannon. The VBCI has a flat-bottomed, all-welded aluminum hull onto which steel or titanium armour plates can be bolted. Due to the lighter aluminum armour, its maximum weight is 28 tonnes. The French deployed the VBCI in the recent conflict in Mali. It is operated only by the French Army and can accommodate two crew, eight infantry and a commander.
2. Piranha 5

The Piranha 5 is built by General Dynamics Land Systems, the same company that built Canada’s LAV III. Its main armament is a 30 mm cannon made by Kongsberg. A wheeled vehicle, the Piranha 5 has a maximum speed of 100 km/h and maximum range of 550 km. Its armour is made of steel. It has a total weight of 30 tonnes and can carry up to 8 infantry personnel.
3. CV9035

The CV9035 is built by BAE Systems. It has a maximum speed of just 70 km/h and a maximum range of 600 km.\textsuperscript{105} The CV9035’s main armament is a 35 mm or 50 mm Bushmaster cannon. It is the only tracked vehicle in the competition, with a low ground clearance and flat bottom. Its steel armour plating gives it a maximum weight of 35 tonnes.\textsuperscript{106} That weight, combined with the tracks, lower profile and heavier gun, make the CV9035 more like a tank than the other two competitors. It can accommodate up to 10 infantry personnel.\textsuperscript{107}
Evolution of COIN Operations

For decades after the Cold War, the U.S. Army made no significant changes to its counterinsurgency (COIN) doctrine — until December 2006, when a new American field manual on COIN operations was published. The manual’s lead author was General David Patraeus, who was appointed head of U.S. forces in Iraq in 2007 and head of U.S. Central Command (which includes Afghanistan) in 2008. The new “Petraeus Doctrine” was promptly implemented in both theatres.

The doctrine calls for soldiers to go outside their bases and engage with the local people in a “population-centric” approach. Step one is to secure concentrated populated areas, provide for law enforcement and engage the local population — so as to gain their trust, determine what their concerns are, and maintain the host government’s legitimacy by addressing those concerns. The theory is that, if the population does not feel isolated from its government and has the means to live adequately, this will erode any incentive to side with insurgents. In short, COIN operations are not about defeating the insurgents with force, but winning the “hearts and minds” of the indigenous population.

Tanks and CCVs do not fit well into the Petraeus Doctrine. And while heavier armour might be needed to protect against the threat from IEDs, for Canada that issue has already been addressed through the LAV UP project.

LAV III Upgrade (LAV UP)

Canada’s LAV IIIIs are somewhat reduced in number, 13 of the original 651 vehicles having been destroyed in Afghanistan. But the remaining LAV IIIIs will soon be better than when they were new.

The LAV III upgrade project (LAV UP) was announced in 2009, the same year as the CCV project. In October 2011, the $1.064 billion contract was awarded to General Dynamics Land Systems, which is doing the work at its plant in London, Ontario.

LAV UP is intended to improve the survivability, mobility and lethality of the LAV III. One upgrade includes the installation of a double V-shaped hull in the undercarriage that is designed to deflect explosive force away from the personnel inside. Additional upgrades include a more powerful engine and improvements to the drive train and suspension.

Other upgrades include larger tires, air brakes and an anti-skid braking system, all of which will provide better traction. Improvements to the tur-
ret sights and gun control electronics will increase the range of the vehicle’s gun and reduce the demands on the crew.\textsuperscript{116}

Together, the upgrades increase the weight of the \textit{LAV III} from 17,000 kg to 25,000 kg, which accounts for the need for a more powerful engine.\textsuperscript{117} Significantly, the new weight also puts the \textit{LAV III} in the same medium-weight (25,000 kg–45,000 kg) class as the \textit{CCV}.

The \textit{LAV III} is fitted with a 25 mm M242 Bushmaster cannon, which is comparable to the main weapon on two of the contenders for the \textit{CCV} contract. The \textit{VBCI} also has a 25 mm cannon, while the Piranha 5 carries a 30 mm cannon.\textsuperscript{118} Only the CV9035, which can be fitted with either a 35 mm or a 50 mm cannon,\textsuperscript{119} carries substantially more firepower than the \textit{LAV III}.

It is also noteworthy that the \textit{LAV UP} project will extend the lifespan of the \textit{LAV IIs} to 2035.\textsuperscript{120} In other words, the upgrades are so extensive that they are essentially creating new vehicles. This raises the question: After having just spent $1.064 billion to upgrade more than 550 \textit{LAV IIs},\textsuperscript{121} why spend another billion dollars to purchase 108 \textit{CCVs} that add little in terms of capability?
An Adaptable Canadian Army

The Canadian Army saw the wisdom of the Petraeus Doctrine and followed the U.S. military in shifting its focus to low-intensity asymmetrical COIN operations. The Department of National Defence’s 2009 document *Towards Land Operations 2021: Studies in Support of the Army of Tomorrow — Force Employment Concept* foresaw a force that would be “joint, interagency, multinational and public (JIMP)-enabled. Such a force would see diplomatic, defence, development and commercial resources, aligned with those of numerous other agencies, coordinated through an integrated campaign plan and applied in areas of operations as needed.”122 In the same document, DND recognized that the Canadian Forces will have to counter not only insurgents but also “media-savvy terrorists” and other criminal organizations.123

Several recent moves by the Canadian Army manifest its desire to move towards a broader, lighter footprint, consistent with modern COIN. Prominent here has been the replacement of the Army’s light patrol vehicles.

1. TAPV Procurement

In June 2012, a contract was awarded to Textron for 500 new Tactical Armoured Patrol Vehicles (TAPV).124 The TAPVs will replace 202 Coyote light armoured reconnaissance vehicles,125 76 Nyala RG-31 armoured patrol vehicles,126 some of the 1,039 “Standard Military Pattern Light Utility Vehicles, Wheeled” (Mercedes “G-wagons”)127 as well as a portion of the remaining Bisons.128 The TAPVs, the design of which is based on the United States’ M1117 Armoured Security Vehicle,129 will provide better protection from IEDs than any of these existing vehicles.130

The acquisition cost of the TAPVs is estimated at $603.3 million. In addition, Textron has been awarded a five-year in-service support contract for $105.4 million. Additional in-service support contracts will be needed before very long. The total project cost for the 500 vehicles is estimated at $1.25 billion.131

2. TOW II Missiles and Launchers

The Tube-launched, Optically-tracked, Wire-guided (TOW) missile system is the Canadian Forces’ primary long-range anti-armour weapons system. The system requires an operator to guide the missile while in flight by keeping the target centred in crosshairs.132 The TOW system, which is composed of
the “launcher, sight unit, missile guidance set and the TOW encased missiles,” is usually mounted on a vehicle. The Canadian Army has used some of its remaining M113A2 armoured personnel carriers for this purpose, with the combination being known as “TOW Under Armour” (TUA). In 2004, Canada procured 33 LAV IIIIs mounted with the TOW Under Armour launcher/system.

In the past decade, Canada has spent hundreds of millions of dollars on TOW missiles and launchers. However, in May 2012, documents leaked to the Ottawa Citizen revealed that 40 TOW missile systems, 33 TUA turret-mounted launchers, and 2,200 TOW missiles are being removed from service. The Canadian Army will retain just 33 TOW Improved Target Acquisition Systems.

An Army public affairs official, Captain Marc Greatti, was quoted at saying that the retirement of most of Canada’s TOW missile systems will have “no impact on the Canadian Army’s ability to defend Canada and protect our interests.” He was right: in an age of asymmetrical COIN operations, anti-armour weapons systems are increasingly out of date.

### 3. Cancelling the Procurement of MMEVs

Back in 2006, the Harper government cancelled another procurement that was geared towards conventional, symmetrical warfare. In September 2005, the Paul Martin government had announced the purchase of 33 Multi-Mission Effects Vehicles (MMEV) for $750 million. The vehicles would have been equipped with a missile battery able to engage both enemy tanks and aircraft. However, asymmetrical operations (including COIN) generally take place without any threat from enemy tanks or aircraft — the kinds of threats the MMEV was intended to counter. And so in July 2006 DND asked for permission to cancel the MMEV program and use the money that would be saved on “urgently needed equipment such as automatic grenade launchers and missiles designed to destroy bunkers and other fortifications. Such equipment would be of use in Afghanistan and in future missions.” The MMEV project was cancelled.

More recently, the Canadian Army made a similar request, this time concerning the CCVs.
The Canadian Army No Longer Wants the CCV

Consistent with the changing geopolitical, technological and economic climate, the Canadian Army has reportedly expressed its desire to cancel the CCV project. As David Pugliese of the Ottawa Citizen wrote on May 21, 2013:

The Canadian Army tried to cancel the purchase of a new armoured vehicle fleet, wanting to use the $2 billion instead to offset budget cuts that are hurting its combat readiness.

But the Conservative government decided against scuttling the Close Combat Vehicle project, worried that the cancellation would give it yet another military procurement black eye. Instead, it is proceeding with the purchase of the new armoured fighting vehicles the military’s leadership is not overly keen to acquire.141

Pugliese explained that the Canadian Army’s request came after a 22 percent cutback in the Canadian Army’s budget, as well as “billions of dollars in contracts to purchase new tactical armoured patrol vehicles for the army, refurbished Leopard tanks, and an upgrade to the military’s fleet of light armoured vehicles.” Some senior members of the Canadian Forces, he reported, “saw the Close Combat Vehicle (ccv) as something that, while nice to have, is not essential at a time of cost-cutting.”142

The most serious impact of the CCV procurement may be on the Canadian Army’s ability to engage in training. In December 2012, Lt.-General Peter Devlin, then the Commander of the Canadian Army, told the Senate Committee on National Security and Defence that the “real effect on me with the 22 per cent reduction is that it touches people, infrastructure and training.”143 He said the Canadian Forces were already training to a lower level than during the Afghanistan mission, with training budgets about “45-plus per cent lower.”144

Stuck in a rut, the Harper government is pressing ahead with the CCV procurement. As Pugliese reported in May 2013: “Industry representatives have been told that a winning bidder has been identified. That winning company will be announced when it suits the Conservative government’s public relations plan.”145

The announcement may be imminent. Treasury Board, the cabinet committee that needs to provide final approval for the contract, is meeting tomorrow, September 19, 2013. Will the Harper government persist in ignoring the advice of the Canadian Army?
Conclusion

For some, the Harper government’s recent cutbacks on defence spending have raised the spectre of another “decade of darkness” with regard to military procurement. But it is not as if the government has stopped spending on military equipment. The problem, instead, is that it is spending the money unwisely, on equipment including Close Combat Vehicles which are designed to accompany troops into the symmetrical wars of the last century. The impact of this mistaken approach is compounded when the billions of dollars being spent on outmoded and therefore not particularly useful equipment result in deep cutbacks to training for today’s complex counterinsurgency (COIN) missions. If the Canadian Army is to remain available for deployment, and if our soldiers are to be effective and safe, training must be an ongoing priority.

And so we conclude:

• The CCV is based on outdated Cold War tank doctrine.
• The CCV would duplicate a capability Canada already possesses as a result of the recent LAV III upgrades.
• The Canadian Army does not want this $2 billion procurement.
• The Harper government should not proceed with the CCV procurement.
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