2 ARMOUR BULLETIN

2020

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Vision Statement

The Armour Bulletin is the official journal of the Royal Canadian Armoured Corps. The Mission of the Armour Bulletin is to annually publish unclassified, bilingual articles of professional interest, with a view to stimulate discussion and exchange ideas concerning topics germane to the Canadian Army and RCAC.

The views and opinions expressed are those of the authors and do not necessarily reflectofficial Department of National Defence policy.

Foreward

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Corps Update and Discussions

FORWARD

Word

from the Colonel Commandant Rousseau

Col (ret) G. Rousseau
COLONEL COMMANDANT

Dear members and friends of the Royal Canadian Armoured Corps (RCAC)

Firstly, although repetitive it is worth mentioning the tremendous work accomplished by the School's editing team in creating once again a terrific publication. My personal thanks go out to all those who have provided the articles. Your invaluable contribution to this perennial publication is needed and greatly appreciated.

This year's theme is a reflection on "change". The year 2020 began with mother earth placing a debilitating pandemic "left hook" on humanity. Civilisation "took a knee" to gather itself and is now fighting back with zeal and determination. So is the RCAC! We took a brief pause to reconnoitre the situation and have adapted accordingly. This is certainly not so easy when readjusting an organisation that functions on the close quarter "team" concept. Nonetheless through purpose and innovation we have rapidly introduced workable changes. The collective determination of each members of the RCAC will ensure that we win the day.

Amongst the readings you will discern that as always the RCAC is adroitly preparing to meet the requirements that will underpin the Army Modernization Strategy and Force 2025. While our "raison d'être" is often misconstrued when introducing new paradigms, it behooves us all to communicate beyond this constituency our fervent intent to remain relevant regardless of the many challenges that may lie ahead.

Albeit difficult and on the whole upsetting, we must embrace change for it is required, constant and more often than none rejuvenating. Without such periodic adjustments our profession would undeniably lose its efficacy and dwindle. This must never happen!

In four plus decades in the RCAC, witnessing first-hand many alterations to our doctrine, teaching methodology, structures, and equipments, I can attest that we have always adapted to meet our requirements and missions. Yes winning is in our DNA. Our success in times of adversity can be attributed in part to our leadership but more so the inexhaustible passion of each members of our Corps. The spirit of the mounted warrior has remained with use since days of yore. Consequently, I encourage you all to stay engaged in a constructive discourse regarding Corps matters whatever they may be. Although excellence remains an elusive objective we must nonetheless strive towards it. The bulletin is but one venue where all are equal in the pursuit of bettering our profession. Continue the good work.

> **"There is a time for everything, and a season for every activity under the heavens."**
>
> *The Byrds (rock band circa 1965)*

Without diminishing the many contributors and/or other visionaries, in this time of great uncertainty which may impact morale, I offer that the succinct message therein by our Corps Sergeant Major, CWO R.J. Clarke stick with you after reading this bulletin. Well done and thanks RSM!

As always, it has been an honour and privilege serving as your Colonel Commandant. I am looking forward to my seventh year in the service of our terrific Corps.

Good reading!
Worthy!

Georges

G. Rousseau
Colonel (ret)
Colonel Commandant

Word

from the Senior Army Armour Officer
Brigadier General Major

BGen J. Major
SENIOR ARMY ARMOUR OFFICER

Team,

It is with great pleasure that I welcome you to our Armour Bulletin. This year's edition strikes at the heart of many critical issues as we prepare for today's, and tomorrow's, fight. It is a testament to how busy the Corps has been delivering excellence at home and abroad. It is also a great venue to highlight some of the efforts that will affect the Corps over the next few years, particularly Force 2025 and the Canadian Army Modernisation Strategy (CAMS). These initiatives will present some great opportunities for the Corps if we are bold enough to take them. Embrace and enable change, this will ensure the continued relevance of our Corps.

The last few years, and certainly this past year, have presented us with challenges that have been turned into opportunities to demonstrate the continued relevance of the Corps. The time that only infantry battalions could lead Battle Groups on operations is gone. All three of our Regular Force Regiments have commanded highly successful operations in either in Ukraine or Latvia (or both), which proved, once again, the strength of the Armour Corps and our ability to integrate numerous capabilities to achieve mission success. The COVID-19 pandemic has shown our flexibility and ability to adapt to any situation. Members of the Corps did tremendous work responding to the call to assist some of our most vulnerable Canadians in Long Term Care Facilities in Quebec and Ontario. It is important to note that all these efforts were done as part of a 'One Corps' Team, leveraging the strengths of our regular and reserve force personnel and serving as an example to emulate across the force for the wider One Army Integration effort.

I would be remiss not to acknowledge the retirement of many of our members and senior leaders over the last year. Thank you for your dedication to the Corps and the many years of service to the Nation. The mantle has been passed and we will strive to meet the high standard that you set over your careers. Finally, I would like to take the opportunity to thank the outgoing DArmd, Col Steve Graham, for his incredible work. As we say farewell to one amazing leader we welcome another in Col Robbin Dove, who will take over the mantle this summer. There is no doubt in my mind he will be able to keep the Corps moving forward with the requisite speed and aggression for which we are so well known.

On this, enjoy your Bulletin, and thank you for all the hard work.

Worthy!

Josh Major
Brigadier General
Senior Army Armour Officer

Word

from the Armour Corps Director
Colonel Graham

Col S.G. Graham
ARMOUR CORPS DIRECTOR

I would like to welcome all readers, regardless of the colour of their berets, to this edition of the Armour Bulletin. The Bulletin is a valuable forum for members of the Royal Canadian Armoured Corps to describe new ideas and concepts in order to spark discussion and provoke thought. As the Army moves forward with the Army Modernization Strategy and Force 2025, journals such as this are more important than ever. These initiatives will impact the Corps, but how that impact is felt depends on the involvement and engagement of all those who serve in it.

There will be many visible changes to the Corps in the next few years. They will involve the equipment we use, the structure of our Regular Force Regiments, and the doctrine that we employ. We also, for the first time in a generation, have a common platform between the Regular and Reserve Regiments. We need to figure out how we can use that fact, along with the ongoing relook at Mission Tasks, to achieve a better level of integration within the Corps. It is in these areas that this edition of the Bulletin will focus.

1. **Equipment.** The Coyote, which has served the Corps well for almost 25 years, is on its last bound. We will soon start receiving the new LAV 6 based LRSS, which combined with the TAPV, will form the basis going forward for our recce squadrons. The Leopard 2 tanks will be centralized in Alberta to improve CSS efficiency and locate them where the Army will conduct all of its Level 5 and 6 collective training.

2. **Structure.** All three of our Regular Force Regiments look different, each having developed separately over the past years. We need to relook at our RHQs, our HQ Squadrons, and especially our Sabre Squadrons. Our recce squadrons are still using a structure designed for operations in the Sinai in the 1950s. We have come a long way since the Ferret Scout Car was our primary reconnaissance vehicle, we need to adopt today's capabilities to today's missions.

3. **Doctrine.** The spectrum of tasks which an Armoured Corps is best suited for can be graphed using dispersion and combat power as the variables. At one extreme is a widely dispersed screen while at the other end is a concentrated attack. Our current recce squadrons are good at the former while our tank squadrons the latter. But in between are a number of tasks that are currently being left undone. We need to better use our recce squadrons to fill that gap and in doing so to be more relevant and employable to the Army.

4. **Integration.** Force 2025 also includes the Strengthening the Army Reserve (StAR) and Mission Task initiatives. This represents an opportunity to reconsider and formalise the integration of all 21 Regiments of the RCAC – an opportunity that must be seized. With the potential for common capabilities between our Reg F and ARes Regiments such as TAPV-based Recce Troops and Assault Troops / Support Troops, we must work to align our Mission Tasks to those that support the RCAC's integration into one Corps, not divide it.

There are many important initiatives that are happening within the Corps today, but it is the revamping of our recce squadrons that I believe will impact the most us. To get there we need to change how these squadrons are organised, we need to change how the crews think, and we need to change how they are trained. With all of this change must come a new mindset; one no longer only focused on finding, defining, reporting, and picketing – but a new, aggressive attitude that will see us fixing, intimidating, imposing, and striking. To capture this new mindset the Corps is proposing a new name – one that better reflects what these squadrons do and those who serve within them – Cavalry. Think about what that word means to you and how you can help the make the change.

It is a great time to be part of the Royal Canadian Armoured Corps.

Worthy!

S.G.Graham
Colonel
Director of Armour

Word

from the Corps Sergeant Major
Chief Warrant Officer Clarke

CWO R.J. Clarke
CORPS SERGEANT MAJOR

Fellow black hats and esteemed colleagues in the profession of arms, welcome to this edition of the Armour Bulletin. As your Corps Sergeant Major, I am proud to represent all of you as the senior non-commissioned soldier within our ranks, and I pledge to humbly do so to the utmost of my ability.

With my first few bounds complete, I can honestly say that I cannot remember a time when the Corps shared so much uncertainty, applied broader self-critique, and faced such extensive Corps-wide change. Admittedly, COVID-19 contributed to a good portion of the current instability, but global pandemic aside, the time was ripe to take a holistic look inwards to better-situate the Corps within the Army going forward. With several new platforms, enduring struggles with existing ones, the apportionment of new tasks, and only reverent memories remaining from a war in Afghanistan that is now over a decade old, it was undeniably time for change – but not everything must.

While change is inevitable, and something we must perpetually embrace to remain relevant, I think we must remind ourselves that changing who we are as Armoured soldiers and Officers is not. Sure, armoured platforms come and go, doctrine evolves to counter advances in technology and threat, but what has served the Corps so well for the better part of a century has been our people. More explicitly, our crews – which to me, represents our vital ground.

It should come as no surprise that I am consistently reminded of how great our soldiers are, and how - from bottom to top - Armoured NCMs and Officers excel when it comes to tactical execution and aggressive agility on the battlefield. While some of you may have served on the Leopard or Coyote in Afghanistan, and others may have served on the Cougar, the Ferret or even the Sherman, it was our crews that carried the day. Crews make the Corps, and we will continue to be successful if we focus on that foundation; a footing personified by the soldier on your left and right.

Before I sign off and leave you to indulge in a series of short articles that will highlight our next major steps, I want you to take a few moments to reminisce about your first (or last) crew. Most of us can remember them, and for better or worse, remember what it felt like to be part of such a small, cohesive team. You ate, drank, slept, and laughed together. You shed blood, sweat, and tears together. You knew that you were a critical part of something larger, and you knew that you and your fellow crew members needed to excel in order to win. More pointedly, you needed to perform to not let each other down. That is what being a Regular or Reserve member of our Corps is about, and no amount of institutional change should endanger the synergy that resides in an armoured crew. Foster it, hone it, and safeguard it.

Worthy!

R.J. Clarke
Chief Warrant Officer
Corps Sergeant Major

Editor in Chief Foreword – Armour Bulletin 2020

LCol Sylvain Gagnon
COMMANDANT RCACS

It is a great honour to present the 2020 Edition Armour Bulletin. This publication comes at an important time in the Royal Canadian Armoured Corps' (RCAC) evolution, when conversations are rich and varied, when our collective sense of responsibility has increased and our need for relevance, pragmatism and resiliency grows. While we face more exigencies and adapt to face greater adversaries, the Royal Canadian Armoured Corps School (RCACS) has raised yet again to the challenge, proving its adaptability, its innovation as constant as change itself, in support of the Corps.

As mentioned by both the Colonel Commandant and the RCAC Director, 2020 was a year like no other. It is said that through adversity comes opportunity. Opportunities this year came manifold, as we reached a unique cross-road for the Corps.

While at the RCACS, our learning environment has been challenged, the Pandemic created circumstances to further interrogate our programs and courses and enabled a fulsome modernization of the Corps' Individual Training by elevating, motivating and offering a more meaningful and instructionally sound training for all the Officers and NCMs of our beloved Corps.

The end of the Military Employment Structure review for both our occupations confirmed a single stream for each occupations, simply Armoured; not Tankers, not Recce Soldiers. This also confirmed the necessity to completely re-align our Individual Training with the Occupation's Specifications.

The Corps' Force Development efforts focused and shone through all its work that lead the restructure of CAVALRY Squadrons and will continue to ensure the realignment of our units with all Force 2025 implementations.

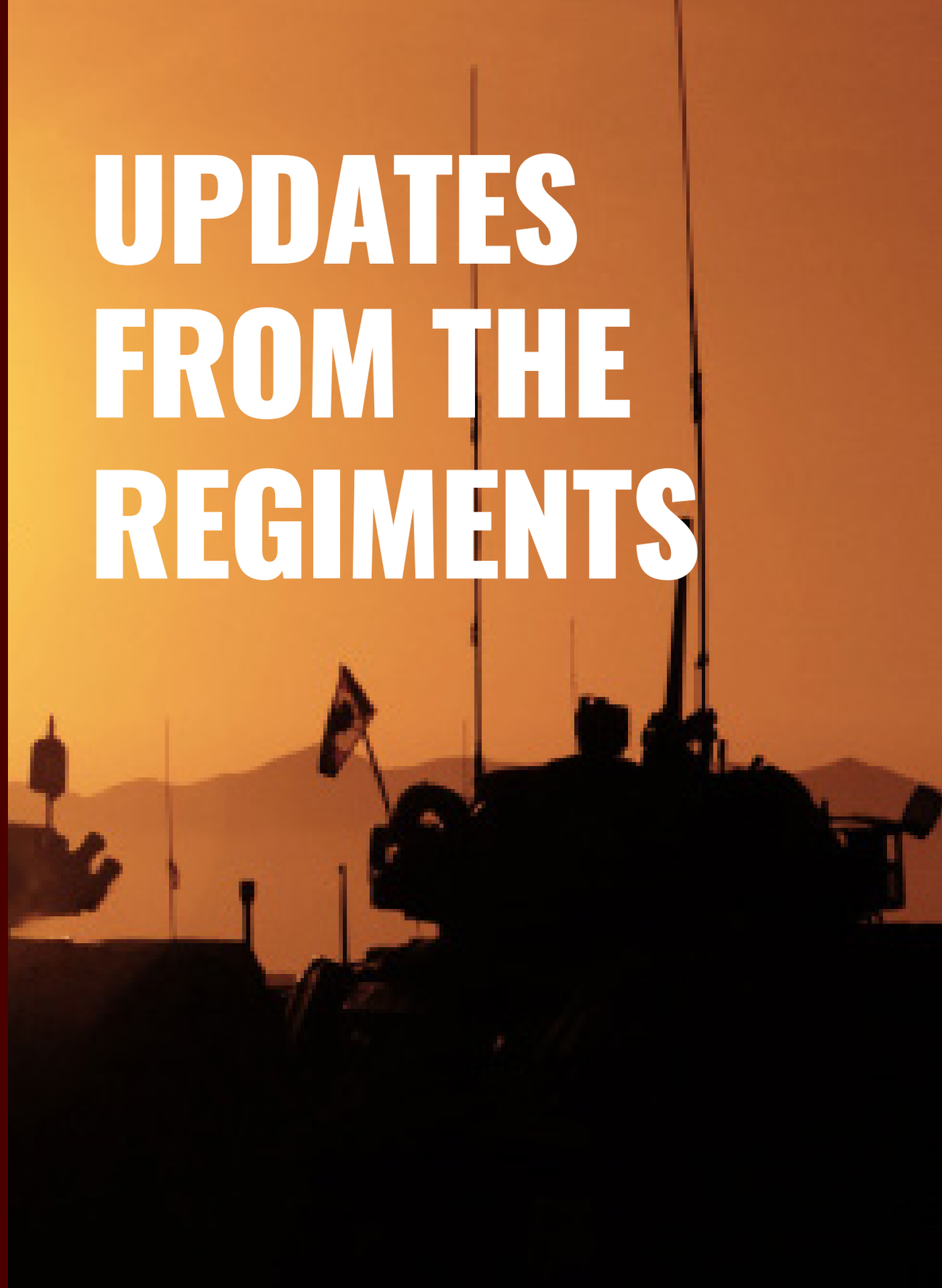
Finally, the revision of our Doctrine and Tactics, Techniques and Procedures will further shape our future employment concept and will ensure the Corps' relevancy as a combined-arms partner but more importantly, masters in mounted warfare and experts in information warfare domain, for decades to come.

It is truly an exciting time to be in the Corps. I hope the content of the different articles in this bulletin will continue to feed discussions and debates for the Corps as we continue the evolution of modern warfare. Enjoy your reading!

Worthy!

LCol Sylvain Gagnon
Commandant RCACS

UPDATES FROM THE REGIMENTS



SITREP

From the School

T9 : I am very proud of the work the School has done over this very challenging year. As such, I have collected the thoughts of each of my subunits and their commanders to give you a more in-depth view of what we have accomplished.

19: It has been an exciting and challenging year for A Sqn, one which has proven very rewarding for all involved despite the myriad of challenges posed by the current COVID-19 pandemic. Between taking the lead on several courses and providing countless support to other training being done at the school, all while ensuring our own personnel were able to pursue their professional development; A Sqn quickly saw what 'white space' there was quickly disappear. The Sqn can look back on this busy period with great pride at the work we have accomplished and the contributions we have made to the corps through the newly qualified personnel and 'new blood' we have helped bring into the fold.

A Sqn:

ACC 008.. At the beginning of the fall 2020, A Sqn ran the Armour Crew Commander (ACC) 0008 course for thirteen candidates. These candidates were all returning to complete their training that was interrupted by the outbreak of the pandemic in March 2020. The students all returned highly motivated and ready to get back into the field regardless of all the new COVID-19 protocols. Staff and students demonstrated a remarkable level of versatility, flexibility and indeed patience as the daily situation changed requiring constant shifts between vehicles and altered timings. Fortunately, the weather remained favourable throughout the course, allowing for the best use of training time to develop crew commanding skills during advance to contacts, hasty attacks, and defensive operations. The dedicated work of the A Sqn staff and instructors helped overcome the many challenges faced by the students and resulted in successful graduation of all thirteen candidates doing much to contribute to the ongoing overall health and effectiveness of the RCAC.

ATL 1.1. A Sqn soldiers executed the ATL 1.1 at the end of the fall 2020 and it was a resounding success. The course is one of the most difficult IT courses in the CA, and focuses on developing officer candidates in the ability to crew command the Leopard 2 MBT. The Gagetown Training Area welcomed A Sqn into the field with the usual Fall deluge of rain, snow, and mud. Over the weeks, students on the course learned how to employ critical skills expected of an Armoured Officer, including, but not limited to how to conduct battle procedure, tactically maneuver a vehicle, and react to the tactical situation. Course staff, students, and of course the maintainers burned hours and muscle to ensure the tanks were maintained and serviceable for training, while also providing mentorship and coaching for the students. The course finished with 11 students graduating to ATL 1.2, where they would employ the skills they learned and build on them to achieve their baseline qualification of leading an armoured troop.

Leopard 2 D&M. The course was run in-house to train additional drivers required to support ongoing training. Out of the five candidates selected, all passed under the watchful eye of our instructors. Thanks to this small, but dedicated cohort the Corps now has five additional drivers who are keen, capable, and ready to be entrusted with the care and control of their 60 ton steeds. Despite weather affecting the amount of time available, all candidates were immediately employed on the subsequent ATL 1.1, where they received an abundance of experience driving in the field in all conditions while providing essential support to ongoing RCACS training delivery.

29: Summarizing the activities of B Squadron over the past year in a few lines is, potentially, the most challenging thing I've been asked to do since I took command! While Standards Squadron might hold Right of Line because of some sports function or whatever, there's no more capable Squadron than ours at the School. That is not a brag by any means, it is simply a statement of fact. Shortly after I took command in last fall, B Squadron embarked on a journey to operationalize everything we touch, and that approach has paid dividends with back-to-back courses of 100% graduation rate and a work-life satisfaction that is irreplaceable.

Moving into the 20th Century.

A bit tongue in cheek, B Sqn took the lead in moving all documents to an electronic sphere. Starting with leave passes and slowly growing to everything that isn't a PDR/PER, B Sqn is almost paper-free. Even the dreaded Sqn sign-in/out sheet is now electronic and flows on ACIMS from one signature to the next. The OC and SSM stopped attending O Groups in person due to field deployment, opting for the already well-established Teams meeting while in the CP. This spread to the BC conducting School Ops meetings similarly. The ability to prosecute administration and the diverse requirements of the School from dislocated areas greatly enabled the next major transition – the operationalization of the Squadron.

Operationalizing Training.

Training is our operation. While we don't get field pay here, despite spending significantly more time in the field than our line unit brothers and sisters in arms, B Sqn adopted the approach that training was our Operation and, as such, any failure in delivering the best we could was a monumental fail. To achieve this end, B Sqn complete (less 5 soldiers) deployed to the field as part of DP 1.2 serial 0004. This change enabled the training on levels that were unexpected. With the entire Sqn in one place, every moment became a teachable one. Troopers led teaching moments about nutrition, fitness, field survival, and a host of other topics. Sergeants taught informal lessons on crew management to the more senior drivers. The DS led battle procedure sessions for the students and NCOs, and all were enabled by one another throughout. The proximity of the Chain of Command to the actual Sqn led to shifts in how

the Sqn does business. Late report times, Friday special lunches, improvements to PC44 air quality, all led to a more capable instructive force. Every course the Sqn ran in the field was obligated to stay in a hide or harbor one night a week. In lieu of pulling in and handing over range control, Sqn soldiers frequently ambushed into our locations and students were forced to make on-the-spot calls in terms of use of force, detentions, etc. The level of aggressiveness brought out of students while fighting off B Sqn personnel was exceptional, and we have truly delivered two serials of students capable of making the decisions they need to when the time calls for it. The operationalization of the Sqn also let the DS remain Troop Leaders, in a way, meaning that their skills have grown along with the students. The students were, perhaps, the focus, but they received as much as every other member in the field.

Morale, Welfare, and Their Stakeholders

Morale and welfare are different, whether we think of them as the same or not. B Sqn took a unique approach to these component pieces of a fight-capable force. The most significant shift was perhaps the key stakeholders – the OC is overall responsible for 50% of all morale while the individual is responsible for the other half. This breakdown let soldiers in B Sqn easily identify those soldiers not emotionally ready to have high morale and perhaps identify it at a lower level while, concurrently, positive changes were being made at the Sqn level. It is generally accepted that Senior NCOs are responsible for morale and welfare, however this is a misnomer – morale tangibly impacts Unit cohesion and, as such, is a Command function. That said, B Sqn's SSM masterfully advised the CoC in ways to improve morale, bolstered by the newfound agency the drivers found with the Sqn in the field together. The SSM organized weekly augmented lunches in the field, including pizza and poutine, and welcomed the students as part of our core team to those "events". Welfare, while still important, is less of a consideration here at the School where we deploy for 5-day periods and generally get to go home after that. The Sqn responded well to becoming masters of some of their own morale, and it is inarguable that B Sqn had the highest morale of the School as a formed body.

Mentor First, Assess Second

The RCACS takes a mentorship-based approach to learning. Nowhere is this more evident than the latest iterations of the training B Sqn has conducted. Over the past year, B Sqn has completed an ATW (exported to LdSH (RC)), 2 LAV 6 gunnery courses, a LAV 6 conversion course, a LAV 6 driver, ARPC, and 2 DP 1.2 serials. Without dipping in the standard, we have had a 100% success rate on all courses in terms of performance. The Sqn is acutely aware of the scoffs of others, however I would argue that this success rate is tangibly linked to the amount of energy the staff empower the students with. From the gunnery courses to the 1.2, from driver to the OC, B Sqn mentors every student at all times with an assess-second approach. This approach is not new, however it is still being refined. The assess-second approach will be vital as the School shifts to a year-long officer training model.

Again, tough to summarize a year of growth that was so significant. The soldiers of B Squadron took a mentor-first approach to working with students, and an operations-centric approach to the contextual background of that training. As the soldiers of B Sqn disperse to their next jobs or locations, the hard work and sweat equity they've given to each other has enabled soldiers at every level to continue to excel. There is always improvement to be made, growth to be painfully lived through, but I expect this last year has enabled all 87 of B Sqn's team to absorb that challenge with minimal friction

OC HQ: After the resumption of training, direction and guidance was issued and the instructors who did a phenomenal job delivering training. They coached, guided, and prepared to the best of their abilities new Armour NCMs for their units. Summer 2021 will see the last iteration of the DP1 Armour NCM course in its current form, with future serials being amalgamated with the BMQ-L course for some training efficiencies, along with modernizing the training to better prepare graduates for their responsibilities at their Regiments. The newly developed DP1 Rank Qualification (RQ) Trooper course is expected to run its pilot serial in the fall of 2021. Unfortunately this year, we saw a heavy reduction in social activities outside of the regular training, to the point where they were reduced or cancelled for safety reasons. All that being said, the SSM and I made sure we took advantage of the few opportunities we could to get together with soldiers to listen to them and make certain they knew the great work they were doing did not go un-noticed. Now that we are approaching APS, the leadership is doing all they can to set up the next command team and their staff for success.

HQ Sqn: Another busy, and unusual year for HQ Sqn. After standing down in the late spring of 2020, HQ Sqn was ready to resume training in the summer. Under ever changing health protocols, the Sqn graduated 115 students over 4 courses. With a 5th course scheduled to run over the summer with another 32 soldiers potentially becoming fully trade qualified. These newly trained Troopers were disseminated to the Regiments, with a few remaining posted to the RCACS. While there were new training obstacles, the course staffs were able to overcome some never before seen challenges and deliver world class training. In addition to the DP1 training, the Sqn ran the annual DP4 SSM Course which graduated 7 RegF and 3 ARes Snr NCOs, which will help prepare them for potential roles as a Squadron Sergeants Major. On top of the challenges that came with delivering IT, Worthy Troop assumed the task of tracking soldiers coming to the RCACS from out of province and their associated 14 day isolation, all whom required feeding, physical training and mental support as they awaited training or tasks. This diversified their requirements, but they were more than up to the challenge. HQ Sqn will continue to be busy over the summer months preparing courseware for the pilot serial for the new DP1 RQ Trooper, and conducting conversion training as required in line with direction from higher.

Stds Sqn: First and foremost, Standards is pleased to report that we are Right of Line after our resounding victory in the Fall Commandant's Challenge. Sgt Sainsbury has been lovingly maintaining the shell casing, and it is shiny enough to shame the latest batch of Troopers preparing for the Commandant's inspection. Standards has been extremely busy this year. We have reorganized the squadron. Tactics, D & M, and Gunnery are now Training Optimization, Training Support, and Canadian Army Instructor Gunnery (CA IG). This move was done to support the effort to modernize the Corps and reimagine our training.

CA IG can take pride in having proven that Leopard 2s can indeed fire in Semi-Indirect without the use of a specialized fire control computer, as their excellent collaboration with C Sqn RCD demonstrated. Further developments in gunnery are underway, including the rebuilding of the Corps' knowledge and skills with the .50 Calibre Heavy MG. The team continues to improve the quality of gunnery across the army, and has reviewed and rebuilt the advanced gunnery qualifications. "Army Direct Fire Specialist" is now up and running, with 10 graduates so far. Also, the team is excited to run the first serial of the Armoured Recovery Vehicle (ARV) RWS course. With the devolution of control of Training Plans (TPs) from CTC HQ to the schools, the IG Team has been hard at work reviewing and correcting the applications of fire and gunnery instruction for all major weapons platforms. As you can imagine, it has been a very busy year

Training Support Troop has also been involved in rationalization of TPs. As part of this reorganization, the School is now in control of over 60 TPs, covering everything from AFV Gunnery to Logistical Truck Driver. In collaboration with the Master Driver at CTC HQ, TPs are being reviewed and updated, resulting in courses that are more logical and more effective. Despite the many challenges of COVID, Training Support Tp continued to provide front line advice and assistance to training being conducted both here in Gagetown and dispersed out among the brigades.

Training Optimization Troop has been at the tip of the spear translating the Corps vision for a unified approach to armour into reality. Before even opening the books, all members of the Troop were trained in QSTP Management, Advanced Instructional Techniques, and a highly specialized PD

package specific to training development. Over the course of several months, they reviewed the Military Employment Specifications (MES) for both officers and NCMs, and engaged in a series of challenging discussion regarding the future of the corps. After receiving specific guidance from the Commandant at the Strategic Planning Session, Training Optimization hit the books. Over the course of six grueling months, they have successfully produced a brand new course for Troopers and a radical new approach to qualifying new officers. The new Rank Qualification Trooper (formerly DP1 Crewman) will provide a more efficient approach to giving Troopers the skills they need, while providing them a strong tactical foundation to better understand their role within a Regiment. The new Armour Troop Leader will be 160 continuous days of in-depth, highly adaptable training. With the inclusion of the new Basic Armour Skills package (think basic crew commanding, but on an ATV), and with a heightened focus on student participation in the instructional process, we have high hopes for the success of this new model.

1. OC Stds: Au cours de la dernière année, l'escadron des normes a subi une cure de jeunesse en incorporant à son équipe plusieurs jeunes sergents et jeunes officiers. L'escadron s'est également restructuré afin de mieux supporter le plan de campagne et la modernisation des cours de l'école blindée. Oscillant entre mon travail de major du Corps et celui de cmdt de l'escadron, j'ai eu la chance d'être aux premières loges des changements qui surviendront dans les prochaines années alors que l'ensemble des unités du Corps feront de la chasse soit en chars ou à roues. J'ai également pu constater le travail exceptionnel des membres de l'escadron lors des deux premiers « boards » effectués en 2020 alors que les cours de le PP1 blindé et le PP1 officier blindé ont été complètement modernisés. Encore beaucoup de travail à venir alors que la modernisation de l'entraînement va se poursuivre encore pour les quatre prochaines années, mais je suis confiant que l'escadron va réaliser cette tâche fondamentale avec dévouement et professionnalisme. Merci à toute l'équipe qui a su organiser, canaliser et concrétiser toutes nos idées en dehors de la boîte.

21st
Century Cavalry: a Concept Fit for Force 2025

LCol E. Kerckhoff
LCol S. Curley
Maj D. Silmser
Maj J. Maerz
THE ROYAL CANADIAN DRAGOONS

Reconnaissance has never been a tactical task executed alone – the purpose is to find information for other actions to be taken, either as a means to facilitate the movement of friendly troops or to gain a tactical advantage over the enemy. In current Canadian doctrine, reconnaissance forces are inextricably linked with supporting the Commander's Decision Action Cycle by filling Critical Information Requirements, allowing for the cueing of other assets. Simply put, reconnaissance forces are linked with the "Sense" combat function. Cavalry, on the other hand, is a manoeuvre arm capable of both finding this information and exploiting it rapidly. It is clearly aligned with the "Act" function.

Historically, cavalry has always had light and heavy elements – lancers and cuirassiers in the 19th century or armoured cars and heavy tank destroyers in the mid-20th century, for example. With the evolution of reconnaissance in Canadian service, a schism occurred, where tanks conducted armour tasks and reconnaissance squadrons conducted tasks akin to surveillance over traditional reconnaissance. This doctrinal shift was accompanied by a new mindset of aversion to enemy contact, where fighting for information was looked upon negatively as risking decisive engagement.

Over the past ten years, The Royal Canadian Dragoons and the US Army's 3-71st Cavalry, "Ghost Squadron", have participated in a series of small-unit exchanges named Exercise GHOST SPRINGBOK, with hosting duties alternating between units. These mounted and dismounted experiences have shown the advantages of pairing modern technology with an aggressive mindset. With Dragoons in LAVs and Coyotes, Ghost Squadron in up-armoured HMMVWs mounted with HMGs and TOW missiles, the combined firepower, mobility and protection was more than sufficient to carry out cavalry tasks. The integration of sensors and weapons systems allowed the force to detect and engage at a point of the commander's choosing, with overmatch

against most OPFOR. These partnerships have resulted in a culture shift for both units. Dragoon TTPs and SOPs have developed Ghost soldier skills related to tactical movement, camouflage and concealment, surveillance, target acquisition, and night operations in diverse environments - to include winter warfare survival and operations. Ghost TTPs have re-developed and refreshed Dragoon mindsets, providing opportunities for young leaders to get experience in a much more aggressive, manoeuvre-oriented environment, using the same equipment they would in reconnaissance.

During multiple serials of Ex GHOST SPRINGBOK from 2014 to 2019, patrols and observation posts quickly and independently engaged without requiring a Battle Group or other Brigade elements. Depending on the size and composition of the enemy force, those elements detecting the enemy could rapidly mass to defeat the threat. Integrating sensors like UAVs and the Coyote surveillance system meant detection and target acquisition were done well outside engagement range. Then, rather than continuing with a passive surveillance approach for engagement by other forces, the cavalry commander was able to determine the best opportunity to conduct an attack.

When manoeuvering as an offensive force, the grouped Canadian and American elements retained the ability to provide a command and control function for the integration of a broad spectrum of enablers, including higher-level UAVs, artillery fire, CAS, AH and combat engineers. More importantly, however, they had sufficient firepower to defeat a wide range of enemy threats.

These experiences do not require partnership with Allies. Exercise STALWART GUARDIAN is the annual Army Reserve concentration held in the 4 Cdn Div area of operations. It brings together units from across Ontario and frequently involves support from Regular Force units. During Ex STALWART GUARDIAN 2014, the OPFOR was based around a light force,

with limited anti-armour capability. In this context, a Coyote-based squadron had sufficient firepower and stand-off ability to effectively manoeuvre and strike enemy positions with dismounted infantry. A combination of TAPV and LAV-based platforms could easily adopt similar tactics, finding the enemy, fixing them through a combination of direct and indirect fire, then conducting shock action-type engagements to destroy them. The ability to sustain itself at a distance with a robust echelon system also contributes to making the cavalry force more aggressively manoeuvrable. It can afford to engage, reposition to replenish, then resume the advance without requiring extended time in consolidation. Attachment of other enablers (such as anti-armour, fires and combat engineers) bolsters this combined arms grouping and, as long as these enablers have an integrated sustainment plan, would allow for rapid engagement of a wider range of threats.

While 'observe and report' may be suitable where the threat dictates that greater weight of combat power is required, an aggressive cavalry action can shape the close fight and strip enemy reconnaissance, force the enemy to deploy and buy additional time for friendly combat power to be massed at the decisive point. In smaller engagements, an aggressive cavalry leader can seize opportunities to shift the battle from a meeting engagement to an attack to a pursuit – all with the resources they control directly in a close fight.

The idea of shifting mindsets is more than just constructing exercises to suit. First and foremost, it necessitates the redevelopment of the ability to swiftly plan, coordinate and conduct all arms attacks as a core skill for cavalry forces. Secondly, leaders must be prepared for boldness in action rather than passive observation. Institutionally, it means professional development, testing the concept, fielding it in practice and then validating it as fit for purpose in the Army's new structures under Force 2025. So this is not to be done overnight. But the principles explored in Exercises GHOST SPRINGBOK and STALWART GUARDIAN have shown there is potential in this concept.

The RCAC holds itself up as the masters of mounted close combat. Given that Force 2025 is defining the structures under which the Army will achieve its objectives, there is a window of opportunity to reshape our mindset to become more aggressive and more effective. With an appropriate degree of enemy threat in the Contemporary Operating Environment, a cavalry unit can define and develop a more complete understanding for the commander. In order to preserve friendly force initiative for deliberate operations, a cavalry unit can also rapidly and effectively attack to destroy, if we have prepared it to do so.

Lieutenant-Colonel Enno Kerckhoff
Lieutenant Colonel Sean Curley
Major Dustin Silmser
Major John Maerz
The Royal Canadian Dragoons

Support

to Train or Train to Support: Understanding Tank Serviceability in the Canadian Army

Maj M.D. Timms
OFFICER COMMANDING
HEADQUARTERS SQUADRON
LORD STRATHCONA'S HORSE
(ROYAL CANADIANS)

The poor serviceability rates of Leopard 2 Main Battle Tanks (MBT) is an endemic issue and a strategic level concern since implementation in the domestic Canadian Army (CA). Considerable problem solving effort has been invested in the Leopard 2 Family of Vehicles (FoV). Much analysis, creativity, and strategic messaging resulted in the iterative implementation of partial solutions. Significant progress has been made through the consistent and dedicated work of tankers in Edmonton and Gagetown, the Corps of Royal Canadian Electrical and Mechanical Engineering (RCEME), the Royal Canadian Logistics Branch, and Army senior leaders vested in the tank capability. We are nearing the point of maximum efficiency within the resource envelope available – achieving the best serviceability possible within current constraints. Yet, tank serviceability continues to miss CA ambitions for employment. As a result, a perception persists that the deployment of tanks is not viable. The Royal Canadian Armoured Corps (RCAC) must frame the tank problem differently. The Corps has an opportunity to improve serviceability rates, to better communicate what is a reasonable expectation of the tank fleet, and to market what is an achievable tank deployment capability.

Understanding Serviceability

Tank serviceability is a persistent concern that requires attention. However, existing perceptions frequently exaggerate the extent of the situation. At headquarters, from the unit to Army level, we refer to the serviceability status within the Defence Resource Information Management System (DRIMS) on any given day.[1] This disregards the known pattern of serviceability, resulting from the burden of the inspection and repair work at the unit level with the entire fleet fielded; in contrast to a rotation through a separate repair and overhaul organization. Losing sight of this fact drives an overcompensated reduction in appetite for field use, and an atmosphere of defeat when evaluating tanks as a capability. A cycle occurs each year, in which the needed tanks are made serviceable for approximately one and half months each Fall and two months each spring. Outside of these periods, serviceability plummets as inspections come due. It is also worth noting that disused tanks do not remain serviceable. As tanks become grounded awaiting inspection, they typically develop additional faults. Unless we acquire a larger fleet and displace the technician workload to an organization external to the units, such as a contracted facility, this cycle remains a reality. We can reasonably expect to have sufficient tanks serviceable for these field training periods, but we cannot expect an arbitrary number of tanks to be serviceable on any given day.

"Maj Mike Timms, left, has commanded a tank troop in Afghanistan, served as a battle captain and a tank squadron second in command for back to back roads to high readiness, and commanded B Squadron, prior to assuming his current role as Officer Commanding Headquarters Squadron, Lord Strathcona's Horse (Royal Canadians)."

Leopard MBT serviceability hinges upon infrastructure, technicians, and spare parts (Ritchie 2018). Continuous efforts to improve our capacity have been made and must continue. However, incremental improvements only stem the decline of serviceability, and gains will require either external resource investment or reduction in technician workload. Additionally, our current philosophy toward maintenance neglects the individual and collective readiness of our technicians. The UK Army's Corps of REME used the axiom do we "support to train, or train to support," to describe the problem set faced when called upon to employ their Brigades' Combat Service Support (CSS) forces within training audience in British Army Training Unit Suffield (BATUS) exercises (Rogers 2021).[2]

Similar to what we are facing now, their uniformed technicians were consumed by the task of attaining the needed serviceability of armoured fleets. As a result, this strained their capacity to achieve the individual and collective training necessary to carry out CSS roles in a tactical environment. Reinforced by their experiences in Afghanistan and the acknowledged need for uniformed technicians to be soldiers first, this sparked a change in philosophy from support to train toward train to support. This included greater use of civilian contracts to carry out non-field maintenance, and a new whole fleet management strategy which allowed a greater portion of their fleet to be rotated out of use. The CA does not adopt one approach or the other, yet we are failing to achieve either. We expect our technicians to achieve training requirements and succeed in collective training events, but require them to commit all of their time to production to meet tank serviceability goals. The purpose of uniformed technicians is for them to be a soldier first, and deployable to sustain equipment in a hostile environment; this requires the training we demand. We should aim to reduce the expected production of our technicians to enable this training.

Capacity

In developing our sustainment practices for the Leopard 2, we adopted those used for the Leopard 1C2 (Dossev 2018). In practice, the sustainment needs of the Leopard 2 are greater than those for the Leopard 1C2, and this approach is inadequate. The volume of maintenance work, inspection and repair, far exceeds our capacities. While doctrinally unit 1st line would concern itself with repairs taking four hours or less, current expectations are that 1st line conduct inspections which in some cases require greater than 90 hours labour. We possess less than half of the technicians (vehicle, electronic-optronic, and weapons) necessary for the recurring 1st line in-

spection and repair of our tank fleet (Brown 2021). This is also predicated upon achieving the published standards of time per inspection or repair activity, which are targets that neglect the realities of our current infrastructure and tooling.

It is therefore mathematically logical that we have an averaged a serviceability of approximately 15 of 39 tanks over recent years. For the longevity of the fleet, it is important that the tanks employed be actively cycled. Also, concurrent 1st line inspections and repairs are necessary to continue to sustain this average serviceability. However, it is worth acknowledging that our given serviceable output for training within any given year will be at most half of our fleet. To achieve a higher rate, we require more than double the technicians and commensurate increase in parts availability to reflect the increased labour.

Technicians

Addressing the critical shortage of technicians is best accomplished through the use of contracted work for inspections and overhaul. However, in lieu of the resources and strategic priority to do so, it is possible to gain technician production capacity by studying and assuming risk. Currently, weapons technicians are our greatest shortage. This is in part due to recent gains in vehicle technician manning influenced by previous study, and due to a recent increased requirement to conduct barrel scopes deriving from the Leopard 1C2 barrel failure in 2014. That said, beyond reducing the interval of the Leopard 2 barrel scope to align with other Leopard 2 nation or manufacture recommendations, there is little that can be done to reduce weapons technician or electronic-optronic technician production demands. All turret related MBT inspection items are a matter of critical safety.

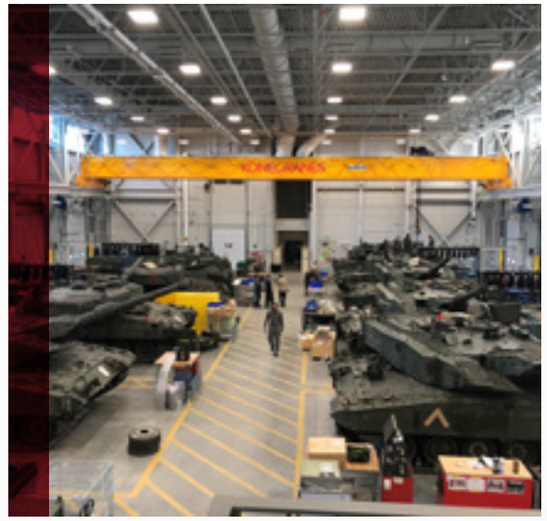
An opportunity exists to improve vehicle technician production through the reduction of chassis inspection requirements. While turret inspections are typically completed within a week, provided parts are on hand for identified faults, hull inspections often require vastly longer and account for the majority of unserviceable time for MBTs; F3 and F4 inspections can range from three to nine weeks depending on numerous circumstances. Ironically, these inspections are not always favourable to the serviceability of tanks. If accomplishing such inspections as part of an overhaul program, new or refurbished components are installed. However, the disassembly, repair as necessary, and reassembly we conduct during inspections results in fatigue and strain to bolts, track components, brackets, hoses, and so forth. While this wear is relatively minor, the time penalty and technician hours for hull inspections is significant. Additionally, due to the nature of tank part failures, these inspections frequently fail to find faults which appear only once a tank is in use. Even for operations, there are certain hull items which must be inspected at regular intervals as a matter of critical safety. Such items include service brakes, park brakes, fuel systems, power distribution systems, and fire suppression systems. Through analysis and rationalizing all of the F3 and F4 hull inspection requirements, a proposal could be made to accept risk by not inspecting non-safety critical items, repairing only on failure. The aim would be to design a hull inspection which minimized disassembly, and reduced the grounding time due to inspection.

"Intended as a temporary location to store Leopard 1C2's, this decades old tent structure serves as the primary storage facility for LdSH(RC) tanks. DLI considers the temporary structure expired, and has expressed no intent to invest in its upkeep. Photo credit to Sgt Larriveé-Larouche."

Infrastructure

Significant inefficiencies and measurable impacts exist as a result of the dispersed and ad-hoc infrastructure which exists for the Leopard 2 MBTs' maintenance in Edmonton. Crews' primary place of duty in garrison is separated from their tanks, reducing stewardship culture and cooperation of crews and technicians. Tanks must be moved between four different buildings for operator and 1st line maintenance, and significant time and complexity is added by the constant movement of tanks to accommodate the use of a limited number of available bays for maintenance. Additionally, existing facilities are not up to code in terms of operator safety (Johns, Tank Life Extension Survery 2021). In some cases, such as the Force Mobility Enhancement building, these deficiencies are less substantial. Nonetheless, multiple agencies, including Director Land Infrastructure, have identified notable risks. Gagetown based tanks face different but similar challenges, adapting old infrastructure to current needs.

To improve tank serviceability, the most valuable area for future investment is purpose built tank infrastructure. Ideally, this infrastructure is in the form of squadron tank barns, where each tank is assigned a specific bay for both storage and maintenance. These tank barns would double as the squadrons' primary workspace, and include provisions for both crew and technician work, such as classrooms, lockers, office space, and vaults. An adjacent maintenance facility is necessary for power pack run-up, welding, material technician work, specialty tool storage, and related work. This eliminates inefficiencies of moving tanks for most 1st line maintenance, with the majority of maintenance being completed in each tank's assigned bay. Particularly, while awaiting parts or labour in a state of disassembly. This also ensures the crews' primary place of duty is with their tanks and the technicians, fostering a culture of stewardship and cooperation. Actual technician efficiency would improve by eliminating the often not accounted for time spent moving, assembling and disassembling to shuffle equipment in bays, and coordinating crew support.



"Resulting from the tank infrastructure challenges, Commander 1 CMBG made a deliberate decision to repurpose the new TAPV maintenance facility, built as part of that project, for tank maintenance. The facility is in many ways ideal for tank maintenance, but has a limited number of bays. While intended as a temporary mitigation, the facility is likely to continue to be repurposed for tanks until proper tank specific infrastructure can be built. Photo credit to Sgt Wiscombe."

Employment

Cursory observation of the MBT sustainment challenge often leads to a perception that whole fleet management or motor pooling of tanks is the logical solution. Without a significant influx of resources, this is incorrect. Centralizing the Leopard 2 FoV both geographically and organizationally is beneficial, considering our lack of capacity to duplicate beyond 1st line sustainment functions. However, it must be acknowledge that serviceable tanks require the contribution of both technicians and armoured soldiers. For many platforms, operator maintenance

"B Squadron, LdSH(RC), commenced Exercise MAPLE RESOLVE 15 with 18 of 19 tanks, and experienced between 14 and 19 tanks serviceable for the majority of this exercises and the adjoining live fire Exercises REFLEX RAPIDE 15. The following year, the Strathcona's deployed both A and B Squadrons as part of the road to high readiness, both as three troop 15 tank squadrons. Although dipping to very low serviceability at times, the squadrons experienced more than 10 serviceable tanks each for the majority of the major exercises."

is an important but limited factor. For MBTs, it is hugely critical. Crews enable technician production, and without their work technician production needs are amplified. Many maintenance tasks are the responsibility of the crew, not technicians, notably track maintenance. Recent experience has shown that if a tank lacks a crew, or if a crew is responsible for multiple tanks, the serviceability of that tank suffers.

Acknowledging that attaining full serviceability is not realistic, it is possible to accept a hybrid solution. In garrison, the tanks should be distributed amongst the squadrons with each tank being assigned a crew. The crew commander should be accountable for knowing and reporting the state of their tank, and responsible for supporting its maintenance. In the field, all squadrons should contribute tanks to form a single squadron size fleet for each discrete field training period. Using loan cards and diligent handovers, rotating this fleet between squadrons for sequential collective training and primary combat function individual training is necessary. This allows us to achieve a garrison culture of stewardship and our field training aims.

Justifying the existence of a capability in the CA is challenging, if the CA cannot show what value that capability is beyond its own training. As a result of the current perception of Leopard 2 FoV serviceability, deployment of tanks on operations is not considered viable. Although, tank deployment was proven achievable in 2006, when the state of the Leopard 1C2 fleet was most certainly worst. As is done to meet the biannual training periods, a squadron of 19 tanks could be made serviceable for deployment in a reasonable period of time with the necessary impetus. Given the state of the fleet, deployment of tanks would impact our ability to meet Managed Readiness Plan (MRP) demands. However, the initial deployment of any CA capability initiates a re-evaluation of the MRP. The most recent revision of the MRP was to address the new normal of sustained CA deployments on Operations REASSURANCE, UNIFIER, and IMPACT. The CA and CJOC would benefit from the RCAC developing and communicating a deployable Leopard 2 capability construct. This would likely require a range from high resource requirement to meet a short time frame deployment, to a more moderate resource requirement to meet a planned longer horizon deployment, a year or more in the future.

Conclusion

Revision of our maintenance practices and external resource investment can create improvements in the mean serviceability of MBTs. In the near term, accepting risk and reducing the scope of hull inspections is our most notable opportunity. As a Corps, we must also develop and communicate a coherent framework for our future needs, including a clear definition of ideal tank infrastructure requirements. While the needed infrastructure is not currently prioritized, it will unquestionably not be prioritize if we do not clearly define our needs. Regardless of improvement to the current serviceability norm, it is important that we recognize and communicate the tank serviceability challenges with consideration of the annual pattern of serviceability, vice serviceable rates on any given day. Moreover, we must define and quantify a deployable tank option for the CA.

1. For the purpose of this paper the term serviceable is used to describe both serviceable and outstanding usable tanks, which have some fault awaiting parts or repair but are functional for training; a significant portion of the Leopard fleet being employed for training is in fact outstanding usable vice fully serviceable.
2. Support to Train refers to an approach in which CSS forces primary focus is on ensuring the sustainment and serviceability of combat arms in a training environment, at the cost of their own training and in an administrative fashion outside of the training scenario. This is as a result of resource deficits including personnel, time, equipment, and infrastructure. Train to Support refers to an approach in which CSS forces meet their own training requirements and conduct field sustainment and maintenance tactically, within the training scenario. To achieve this, the burden of routine and non-field expedient repairs, inspections, and overhauls must be displaced to a different organization.
3. This average serviceability refers to the number usable tanks for the Fall and Spring field training periods as noted above, and does not reflect the annual mean serviceable rate.
4. The infrastructure related discussion from Johns, Tank Life Extension Survery 2021, was drafted by the author of this paper, Maj Mike Timms, on behalf of Maj Matt Johns and has been repurposed for this article.

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"The LdSH(RC) Tank Barn, which for years was the sole facility to conduct tank maintenance. Most of the tank related maintenance has been moved to the new building which was designed for TAPV maintenance. In addition to TAPV maintenance, which was displaced to this smaller building, some tank work is still conducted there due to a lack of space elsewhere, notably turret inspections and repairs. A lack of ventilation, poor heating, no overhead crane, cramped space, and narrow doors make the facility totally unsuitable."

Professionalism
and Thoroughness: The Year at 12 RBC

Capt P.O.J. Lair
REGIMENTAL LIAISON OFFICER

The 2019-2020 training year would prove to be particularly busy for the Regiment. It started with the return of the contingents deployed on Op LENTUS, Op REASSURANCE and Op IMPACT. It was the first time in a year that the entire Regiment was together. The change of command between LCol P. Sauvé and LCol J.L.C Aspirault, which was presided by the 29th Lieutenant Governor of Quebec, the Honourable J. Michel Doyon, marked the beginning of an action- packed year.

In the fall, the Regiment led the 2nd Canadian Division (2 Cdn Div) team to total victory in the WORTHINGTON CHALLENGE. The team put up the best performance in the history of the competition, bringing home all of the trophies up for grabs, and were awarded the coveted title of best divisional team.

The challenge was followed by the SABRE AUCLAIR fall regimental training, during which the different squadrons perfected their offensive operations skills by conducting both daytime and nighttime combat team attacks.

Over the winter, the Regiment strengthened ties with its affiliated units. In the French Alps, B Squadron trained with the 4e Régiment de chasseurs as part of Ex CHEVALIER TRICOLORE 2020. On this side of the Atlantic, A Sqn introduced a contingent of the *Royal Tank Regiment* to our harsh winters at the 2 Cdn Div Support Base Valcartier training areas.

Ex WC 19


OP NN 20

As part of Op NANOOK-NUNALIVUT, Regimental Headquarters and D Sqn braved the arctic cold in Resolute Bay, Nunavut, to lead Joint Task Force FORTE and develop our ability to operate in this difficult environment.

While the world was dealing with an unprecedented health crisis, the Regiment had to quickly react to the sensitive situation overwhelming the province's long-term care facilities (LTCFs). Acting as an immediate reaction unit, the full Regiment deployed to the greater Montréal area to help civilian authorities with their pandemic response. Spending more than three months heading up OP LASER 20-01, our members distinguished themselves through their professionalism, thoroughness and dedication. Commanding a group of health teams including healthcare personnel, they managed to relieve the exhausted workers and helped preserve the lives of vulnerable members of the community. Upon their return to the Valcartier in June, the Regiment took a well-deserved summer break.


OP LASER 20-01


OP LASER - CHLSD

Change of CO

Although force protection measures meant subdued celebrations for the change in regimental sergeant major between CWO J.G.R.M. Rondeau and CWO N.P. Beaupré, the year 2021 is shaping up to be very engaging: celebrations for the 150th anniversary and the restructuring of the Armoured Corps are sure to keep us all very busy.

P.O.J. Lair
Capt
Regimental Liaison Officer

SMR

Operation

Laser 20-01: An Armoured Regiment on the Front Line

Maj M. Thébaud
12 RBC A SQUADRON COMMANDER

The year 2020 opened with 12e Régiment blindé du Canada (12e RBC) beginning its activities in force, with all its squadrons involved in different lines of operation.

A and B squadrons participated in reciprocal unit exchanges with the Royal Tank Regiment and 4e Régiment de chasseurs alpin. D Squadron and Regimental Headquarters were deployed to Canada's North as part of Operation NANOOK-NUNALIVUT. Given this operational tempo, nobody imagined that Operation LASER 20-01 would represent the regiment's biggest challenge this year.

As an immediate response unit, the regiment (Task Force East 1.1) stood ready a number of months before the pandemic to respond to any request for assistance in Quebec. Despite the COVID-19 situation, the general opinion in the unit was that no request would be made for personnel without medical training. What followed proved a number of us wrong, as we learned from a press conference that an official request would be made to have 1,000 members sent to long-term care facilities (LTCFs). The regiment's first members were deployed to LTCFs at the end of April 2020.

For the majority of the operation, each troop in the regiment was assigned to an LTCF and had medical teams integrated into them. As such, each squadron was responsible for a series of LTCFs located in the regiment's area of operations. There is no denying that the initial situation in a number of the LTCFs represented a significant challenge. A number of employees at these facilities had fallen ill, and others had simply quit, in some cases leaving few or no managers in charge and a much reduced medical staff. With respect to the residents, the infection rate ranged initially between 30 percent and 80 percent, and in some facilities, the COVID-19 mortality rate was 40 percent.

That being said, thanks to the determination of the employees at the various LTCFs, and with the assistance of the regiment's members and Canadian Armed Forces (CAF) Health Services personnel, the situation quickly took a turn for the better. During Operation LASER 20-01, leaders at every level were able to innovate, cooperate, and provide care and comfort to our seniors. The work done by regiment members and medical personnel also permitted implementation of a number of infection control and prevention measures and offset the employee shortage until the majority of the employees returned from their sick leave. The work of all these players created visible results such as the complete halt of COVID-19 spread in LTCFs, the return of employees and especially renewed smiles on the faces of the residents and employees who went through some trying weeks at the peak of the crisis.

In short, regiment members helped out at more than 20 LTCFs for two months to stabilize the situation brought on by the COVID-19 pandemic. This operation, which was unprecedented in the history of the CAF, certainly led to 12 RBC member growth and once again proved that the regiment has leaders and armoured personnel ready to operate across the full spectrum of operations regardless of the situation.

M. Thébaud
Major
12 RBC A Squadron Commander

Trooper Frédrick Ouellette dons his protective equipment before entering a hot zone.

A regiment member assists an LTCF resident with his meal.

Corporal Gabriel Houde prepares a trolley of supplies at the quartermaster established by the members of his troop.

Decentralized:

The virtue of IT outside of Gagetown

Ocdt Gallardo and Ocdt Jung
ESCADRON A (SABRE)
GOVERNOR GENERAL'S HORSE GUARDS (GGHG)

Fast moving changes within the Canadian armoured corps have gifted the Primary Reserve with not only newfound reconnaissance platforms, but also the responsibility to provide expert training on those platforms. Usually confined to the Centre of Excellence in CFB Gagetown, some Individual Training (IT) within the Armoured Corps has been decentralized to allow for Primary Reserve units to train personnel locally. COs and OCs within the Governor General's Horse Guards, Queen's York Rangers and the Ontario Regiment, aware of the need for instructors and tactical leaders, embarked on an ambitious decentralized training initiative to ensure their units and soldiers were prepared for the future of armoured training.

The introduction of the Tactical Armoured Patrol Vehicle (TAPV) which replaced the aging G-Wagon LUVW fleet, required armoured soldiers to not only learn how to operate the new technological systems like the Rheinmetall Remote Weapon System (RWS), but also perform gunnery drills and crew actions, crucial skills not organic to the Armoured Reserve since the days of the Cougar.

AVGP Cougar crewed by the GGHG during EX STALWART GUARDIAN (2003). The turreted vehicle required practiced gunnery drills and a proficient crew. After the retirement of this platform, the PRes would wait until the TAPV before gunnery drills would again become crucial to a Reserve Trooper's primary combat function. Source: GGHG Archives

The new skills needed to instruct the next generation of armoured soldiers would be taught during the Decentralized Direct Fire Instructor Gunnery (DFIG) Course, overseen by Captain Jeremy Golding (GGHG) as the Course Officer and the Course Warrant Officer, Warrant Officer Garry Smith (GGHG).

The course produced new gunners and developed them into future gunnery instructors. Soldiers found the course to contain new challenges, like the use of the DRWS instructor simulator. This helped instructor candidates to experience and learn the TAPV systems through a simulated experience. The decentralized DFIG was crucial for demonstrating the PRes' continued ability to train locally.

The decentralized DFIG course was successful, graduating all students and demonstrating the value and effectiveness of decentralized training despite the challenging nature of the technology. The TAPV's RWS control systems are similar to those on the platforms used by regular force units, increasing the employability of anyone TAPV qualified. The instructors ensured that not only were the lessons being

GGHG-crewed LUVW conducting convoy escort with 32 Svc Bn during EX IRON TALON II (2008). Photo credit: Sgt. Federov

DFIG Course graduation photo held at Denison Armoury (Pre-COVID). Source: Regimental Archives, GGHG

A GGHG-crewed TAPV prepares to move down-range during Ex STALWART GUARDIAN (2019) at CFB Petawawa. Photo Credit: Captain Andrew Zeitoun, GGHG

DFIG Course candidates learning and familiarizing themselves with gunnery skills located at Denison Armoury (pre-COVID). Photo credit: WO Garry Smith, GGHG

ARPC course Photo (Pre-COVID) – Members from the GGHG, ONT R, and the QY RANG were all present as both staff and instructors. Source: Regimental Archives, GGHG

A LUVW in the foreground being replaced by the TAPV with RWS, on the pad at J-Tower, CFB Petawawa. Photo credit: 2Lt Manpreet Saini, GGHG

taught of the highest calibre, but those graduating from the program were as well.

In addition to learning the technical aspects of the vehicle, it is also necessary to learn how to employ the vehicle tactically. To this end, a decentralized Armoured Reconnaissance Patrol Commander (ARPC) course was run by Capt Golding, Lt Nooristani, and WO Smith of the GGHG. ARPC is key course for Armoured MCpls and builds on the practical applications of Crew Commanding and introduces the added complexity of administering a junior call sign in the preparation and execution phase of a tactical scenario.

Recognizing the need for MCpls with this skill set, the decentralized ARPC drew on resources from across and outside 32 Brigade, with instructors and students from not only The GGHG, QYRANG, and ONT R as well. The first of its kind in 4 Div, the decentralized ARPC was successfully completed with the combined resources of all 3 Regiments and successfully graduated 11 new Patrol Commanders.

The ARPC was completed almost immediately before the onset of COVID 19 Force Health Protection Measures (FHPM) were enacted. This made it easier to administer than later courses, like the first decentralized Armoured Crew Commander Course (ACC), which was conducted at CFB Petawawa and led by Capt Charette (RCD) and Sgt. Birkett (GGHG).

Effective navigation of an armoured fighting vehicle and the conduct of armoured and reconnaissance drills are taught and practiced repeatedly to ensure soldiers are ready to lead effectively in all tactical situations. Students say the course offers more mental and technical challenges than DP training or PLQ. The need for familiarization with the TAPV also added a level of complexity for students who had previously worked on the LUVW platform.

The success of the distributed DFIG, ARPC and ACC show that, with the appropriate resources, decentralized IT can be conducted by the PRes units of the Armoured Corps providing not only skilled soldiers but also skilled instructors. Given the number of new crew commanders, patrol commanders and RWS gunnery instructors produced this year, the virtue of decentralized training run by PRes Regiments cannot be ignored.

Sherbrooke

Hussars 2020 Update

LCol Beaudoin
COMMANDING OFFICER
SHERBROOKE HUSSARS

Despite the precarious situation created by the covid-19 pandemic, The Sherbrooke Hussars conducted several training and education sessions during the year.

At twilight, the troops consolidate their position during an exercise.

The TAPV crews in preparation to Valcartier.

A Gwagon driver ready for his mission.

During a live fire range, the echelon replenishes a crew with ammunition.

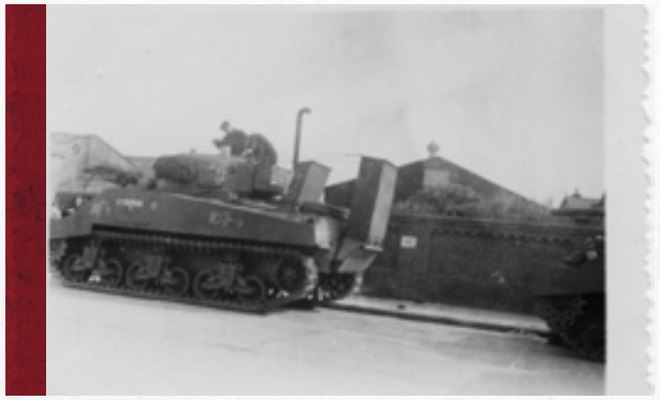
A Squadron deploys to support a Patrol Commander course.

Two APC vehicles demonstrating their off-road capability.

HOLLY
ROLLER

LCol A. Finney
COMMANDANT DU 1ST HUSSARS

This year, the 6th of June marks the 77th anniversary of the Normandy Landings. At 0415 hrs, 5 June 1944 General Dwight D Eisenhower, Supreme Commander of the Allied Expeditionary Force in Europe, gave the word to launch the invasion of North West Europe. A few hours later ships of all sizes began to move across the English Channel, slow moving ships went first, faster ships departed later so they could all arrive off the coast of France at their allotted time according to plan.



1 HOLY ROLLER with deep wading kit preparing to load on the LCT.

The 1st Hussars (6th Canadian Armoured Regiment) taking part in the assault were aboard 12 Landing Craft Tank (LCT). Both A and B Squadrons were in four LCT each. Each LCT loaded with 5 Duplex Drive (DD) tanks, the Squadron Headquarter LCTs only had four tanks each. Their job was to swim ashore and land ahead of the infantry and engage the many bunkers in NAN GREEN and MIKE RED sectors of JUNO Beach. Regimental Headquarters and C Squadron followed in three LCTs, they would land directly on the beach. Also, two Sherman Fireflies, with larger guns travelled in their own LCT. Their role was to engage from the LCT (CB) an Anti-tank bunker on the beach that could wreak havoc on the landing tanks in B Squadron's landing area .

All the LCTs transporting the 1st Hussars departed Southampton at 1100 hrs on 5 June and arrived off the coast of France shortly after 0500hrs 6 June . A Squadron landed behind the Royal Winnipeg Rifles at 0755hrs on MIKE RED Sector. B Squadron landed ahead of the Regina Rifles in NAN GREEN Sector at 0758hrs. C Squadron and Regimental Headquarters (RHQ) landed at 0820hrs on MIKE RED Sector. HOLY ROLLER, commanded by the Regimental 2IC Maj Frank White, landed as part of RHQ.

When HOLY ROLLER landed on the beach, there was a traffic jam due to the exit being blocked. 1st Hussars CO, LCol Colwell, and Maj White dismounted and walked the beach trying to find an exit. Eventually, the blocked exit was fixed, and the Regiment was able to move off the beach . Shortly after moving off the beach the CO's tank was disabled by a land mine, so he took over command of the HOLY ROLLER for the remainder of the day. The HOLY ROLLER advanced 7 miles inland on D-Day before developing a fuel leak, which required a quick repair by the hard-working mechanics at Number 54 Light Aid Detachment (LAD). Thus, began the HOLY ROLLER's time in Europe. HOLY ROLLER served in RHQ until 11 June and was then moved to B Sqn for the duration of the war, the name HOLY ROLLER remained with the tank.

HOLY ROLLER fought in 18 major battles taking part in the liberation of France, Belgium, and Holland, helping to liberate the people suffering under Nazi occupation. According to Maj Frank White HOLY ROLLER travelled 40000kms and never lost a crewman. In August 1944 HOLY ROLLER lost its main gun due to enemy AT fire hitting the welded-on track and deflecting upwards. HOLY ROLLER was repaired and put back into action. Shortly afterwards it was hit two more times, on the front. The tank was saved by the welded-on tracks. The hull of the tank was never penetrated. In April 1945 HOLY ROLLER lost both suspensions to enemy mines .

Due to the damage to HOLLY ROLLER, the tank was set to go the scrap yard, but legend has it the CO, now LCol Frank White, stepped in and had the maintainers fix the tank so it could go to the scrap yard with dignity as it had protected 1st Hussars throughout its time in Europe. HOLY ROLLER is the only tank of the 1st Hussars and one of only two Canadian Army Sherman tanks to have survived the entire campaign in North West Europe from D-Day to the VE Day on 8 May 1945. The second tank being that of the Sherbrooke Fusiliers named "BOMB". The

HOLY ROLLER in Normandy, June 1944

HOLY ROLLER outside of CAEN, August 1944

1st Hussars suffered the highest number of casualties amongst Canadian Armoured units in WWII and during this period lost 346 tanks . HOLY ROLLER was the only tank to survive.

HOLY ROLLER was returned to London, Ontario in 1946 and was part of the first ceremonies to take place in remembrance of the 1st Hussars lost during the war. Since 1946 the 1st Hussars have remembered D-Day every year with ceremonies taking place at Queens Park and later Victoria Park where the HOLY ROLLER has rested since 1956. HOLY ROLLER was presented to the City of London by the Regiment as a memorial in 8 August, 1949 .

Internal view of HOLLY ROLLER, 2018

In 2018 the Regiment was informed that someone had broken into the tank, through the grill at the back of the tank. Quickly sending a team to have a look it was determined further investigation was required as it appeared there was significant internal rust and corrosion. Upon further investigation it was revealed the corrosion was widespread and there were concerns the lower hull was becoming too thin to support the hull and turret.

A technical team was established to examine the costs of preserving HOLY ROLLER late in 2019. Their first task was to establish a cost to do the work, which came in at $250k. The memorial is owned by the City of London and sits in Victoria Park in central London, so it was necessary to get approval from City Hall to remove the tank to conduct the preservation work. This approval was granted in May 2020 and the HOLY ROLLER Memorial Project was initiated in June 2020. A website was setup (holyrollermemorial.ca) as well as a Facebook page (Holy Roller Memorial). The project is established under the 1st Hussars Cavalry Fund, a charitable foundation which allows those donating to receive charitable donation receipts. The work to be done on the tank will be done by volunteers under the close supervision of an expert in the field of Sherman tank rebuilds.

HOLLY ROLLER in Victoria Park

HOLLY ROLLER's D-Day Gunner, Bill Reed

Fund raising efforts have received a large boost from the local community and donors around the world. Even a local brewery, Toboggan Brewery, is making a lager beer named Holy Roller, which may be sold at all LCBOs throughout Ontario. A percentage of sales will go to the project. Finding a location that will allow us to put the tank indoors and work on it over the winter and allow us to bring in volunteers to do the work has been a challenge, but we have been able to rectify that recently. There have also been some unusual challenges. For example, HOLY ROLLER sits over the remains of a 19th century British Army barracks, a designated historical site. At the time, the tank was originally placed there it wasn't a concern. What this means is the archeologists will have to dig around the tank to find out what is there and prevent it from being damaged by the movement of the tank off and its return to the pad.

HOLY ROLLER is already our last D-Day Veteran, Bill Reed, the gunner of HOLY ROLLER on D-Day passed away in the fall of 2020. In a few years, it will be the last Veteran of the 1st Hussars from WWII. It is important for current and future generations to remember the sacrifice of Canadians in WWII and HOLY ROLLER is one of those artifacts that symbolizes that loss and help us remember those soldiers of the Greatest Generation. This is the reason why we are taking the extraordinary steps to preserve HOLY ROLLER. Should you wish to support this effort please go to holyrollermemorial.ca and click on the button "Donate".

1. Page 11, Special Points, 2nd Canadian Armoured Brigade Operation Order Number 1, 23 May 1944.
2. Page 2, 7th Canadian Infantry Brigade War Diaries, Operation Overlord, Part V Fire Support Table 1, Phase 1, 3 May 1944
3. Page 53, A History of the First Hussars, Hunter Printing London Limited, London Ontario,1951
4. Page 119, The Gallant Hussars – A History of the 1st Hussars Regiment 1856-2004, Michael R. McNorgan, 2004.
5. "Holy Roller" Wins Spot in Hearts of Hussars, Free Press Article, Burke Martin, 16 May 1945
6. Royal Canadian Armoured Corps Roll of Honour WWII, Compiled by E Group, Canadian Replacement Unit, 1945
7. "Holy Roller" Wins Spot in Hearts of Hussars, Free Press Article, Burke Martin, 16 May 1945
8. London City Council Minutes, 17th Report of No.1 Committee, 8 August, 1949

1 ST

Hussars 2020 Year in Review

2Lt J. Welan
1ST HUSSARS

This past year was nothing short of unexpected, and many of us may have felt underprepared. However, in a regiment whose origins pre-date Canada, preparing for and meeting the unexpected has become a matter of tradition. Hodie non cras, or Today not tomorrow, is the motto of the 1st Hussars, an armoured primary reserve regiment based out of London and Sarnia. Throughout the 2020-21 training year, the 1st Hussars exemplified their motto by continued participation in various operations and taskings. The Hussars formed a 28-member Recce Troop for deployment on OPERATION LASER in support of 1 TBG. Members worked in subunits such as the Arctic Response Company, Combat Support Squadron, and 1 Domestic Response Company. For the duration of the operation, many of the soldiers were employed in command and administrative positions, as well as in multiple Long-Term Care Facilities assisting staff and medics to care of our country's vulnerable senior population.

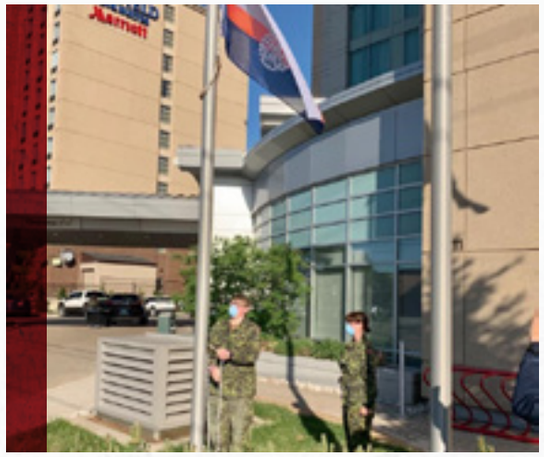
Back home in Sarnia and London, many Hussars were employed in Local Response Units, preparing to do their part for the communities they serve and eagerly awaiting Canada's call for aid. Meanwhile, the unit was able to maintain its training commitment to the TAPV platform. Numerous members were qualified on the TAPV RWS and driver, yielding greater proficiency with the platform while ensuring the practice of force health protection measures. Virtual training posed a significant move away from traditional approaches to learning. Still, the unit created a comprehensive plan to mitigate training issues by focusing on qualifications that did not require in-person attendance. As a result, the 1st Hussars saw high participation in parade night training and virtual exercises throughout the year.

Similarly, many staff positions in BSL courses were filled. Later in the year, the Hussars yet again answered the call for assistance in the pandemic. Multiple members volunteered for OPERATION VECTOR and are currently awaiting their chance to assist in distributing the vaccine. Though we may be uncertain of the future, it has been demonstrated that the 1st Hussars will keep to their creed and meet the tasks of today rather than put things off until tomorrow.

Hodie non cras.

Jarret Welan
Second Leuitenant
1st Hussars

CDS Gen Vance wih Lt Derek Leung, 1st Hussars



Members of the 1st Hussars raising the Camp Colours on the 76th Anniversary of D-Day during OP Lentus

Members of the 1st Hussars in the CSS Coy and ARCG on Op LASER. Photo by MCpl Lester.

Photo of MCpl Laughlin (left) and Cpl Marty (right) with a resident of an LTC facility. Photo by Sgt Knight.

1H's Troop preparing for deployment from Wolseley Barracks on Op LASER. Photo by LCol Finney.

Summary

of 'Crossing the LD with Aggression: Lessons Learned from the British Columbia Regiment's Rapid Integration of the TAPV'

MCpl K. Zhou

2021 marks the third anniversary since the TAPV was adopted by the British Columbia Regiment (Duke of Connaught's Own). Since then, BCR TAPVs have been deployed on a variety of operations and exercises and a considerable number of soldiers are now qualified on the vehicle. This article provides an overview of the lessons learned by the BCR regarding TAPV integration, in particular:

- The importance of combined arms training.
- Training for the contemporary operating environment.
- Maintaining core competency in gunnery.

The Importance of Combined Arms Training

Once the advisory is detected, a critical task is to conduct a handover to follow-on forces. For this to be effective, all ranks must possess a practical understanding of how other arms operate and to regularly train in a combined arms setting. Historically, the lack of common vehicle platforms between the Primary Reserves (PRes) and Regular Force (RegF) limited the opportunities for PRes soldier participation in combined arms exercises.

A BCR TAPV leading a VIP escort convoy on Ex MAPLE RESOLVE 2019 through a built-up area. The VIP was Lt Gen. Jean-Marc Lanthier who at the time was the Commander of the Canadian Army.

With the introduction of the TAPV platform, we now have that common platform. Within a year of receiving them, BCR TAPV crews joined the LdSH (RC) on Ex ORNERY RAM and Ex MAPLE RESOLVE 2019 as part of C/S 60. For most of our soldiers, procedures integral to handovers like the reconnaissance and marking of fire bases, assault positions, approaches, RVs, waiting areas, and breaching lanes were completely theoretical. Augmenting RegF units on such exercises are necessary to obtain practical experience in combined arms operations. As the demand for qualified PRes crews will only increase in future, and regiments should maximize every opportunity for combined arms training.

The Contemporary Operating Environment

For so many years, the focus of the regiment has been preparing members for service in Afghanistan; training against a near peer enemy was limited. Our crews that were on Ex MAPLE RESOLVE, where the battlefield was saturated with visual, electronic, and signal sensors assets had an eye-opening experience. They quickly learned that the TAPV was not an easy vehicle to camouflage and conceal. A TAPV requires significant preparation before it can effectively operate in an environment saturated with means of visual and IR detection. Though the regiment's SNCOs are well versed in such matters, crews had to adapt and improvise traditional camouflage nets and materials for such endeavour. To adapt to the contemporary environment, camouflage and concealment training needs to be a focus in training. Furthermore, all TAPV should have dedicated, pre-assembled scrim kits.

The Art of Gunnery: The Challenge of Making Practice Permanent

The final lesson in this reflection is one of the fundamental skillsets of armoured crews, AFV gunnery. A new weapons system and platform required new skills and equipment which is a scarce commodity upon which to build capacity. Our solution came in the form of a dedicated RSS Staff, development of unit DFIGs, and simulators provided by the LdSH(RC) which allowed the BCR to run our own DRWS courses. By training throughout the year on parade nights and taking advantage of simulators when available, we were able to maintain our competency.

Conclusion

In summary, the integration of the TAPV for the BCR was both rapid and challenging. While the introduction of the platform opened many new doors for the BCR to augment RegF units, it also presents new challenges that can only be overcome by meeting them head on.

A BCR TAPV with fresh scrim installed under the guidance of its crew commander WO McKee. Ornery Ram 2019

CS 60, composed of BCR and LdSH crews, marking a breaching lane. Ex ORNERY RAM 2019.

Le Régiment

de Hull in Charge of the Montreal Territorial Battalion Group (Mtl TBG)

Major F.M. Guy
CANADIAN DECORATION

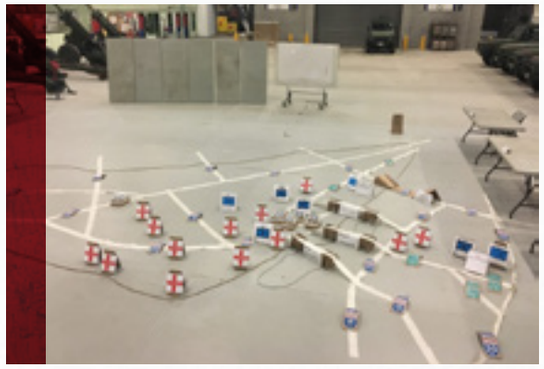
For the first time in the history of the Montreal Territorial Battalion Group (Mtl TBG), a unit from an arm other than the infantry is in charge of the TBG. It is also the first time a unit outside the Montreal area has been given this task.

Mtl TBG Staff. Left to Right: Maj Pilon (Plan O), Maj Blais (DCO), LCol Bisson (CO), MWO Boivin (RSM) & Maj (then-Capt) Ménard Guy (Ops O). Photo Credit: Maj Patrick Paulin, Mtl TBG Training Officer, in October 2020.

The Mtl TBG was formed in 2006. It is a team mainly composed of reservists from 34 Canadian Brigade Group (34 CBG) units. The primary responsibility of this multidisciplinary team is to support domestic operations in urban settings for territorial defence in the event of a crisis.

Members from the Operations Centre (OPSCEN), the Plans Centre and the other members of the Mtl TBG staff engage in a build-up validated by a final exercise such as Exercise RÉACTION ROYALE (EX RR). This process proved to be especially effective when the TBG was called to manage significant crises during the latest domestic operations like Op PODIUM (2010), LOTUS (2011), LENTUS (2017 and 2019) and LASER (2020), an Army Reserve responsibility.

A CAF member provides care to a Quebec LTCF resident during Op LASER. Photo credit: Public Affairs military photographer in June 2020.



Photograph taken by 2Lt Étienne Duclos, OPSCEN Watch Officer, Task Force 2.1 (Mtl TBG).

Model of the area of operations during Op LASER

Photo credits: Col (then-LCol) Alain Cohen, Observer Controller for EX RR 20 in March 2020.

To be ready for this challenge, a number of key members took on various roles at the TBG during the 2019-2020 training year. Although the COVID-19 pandemic caused major training changes, TBG staff developed good situational awareness having members who served on Op LASER. Maj (then-Capt) Francis Ménard Guy of R de Hull acted as Ops O during the EX RR 20 OPP. This Level 6 computer-assisted exercise (CAX) was a training vehicle to validate the TBG CP's operational capability (OPCAP).

During FIGHTING WARRIOR 2020, a team from R de Hull was responsible for exercise control (EXCON), including liaising with US personnel and support and organizing the leadership platoon. Photo credit: Maj Pierre-Jean Pilon in January 2020 at Ft Pickett, Virginia.

Photograph taken by a Public Affairs military photographer in June 2020. Members of R de Hull acting as staff and echelon of C Company of Task Force 2.1 (Mtl TBG) during Op LASER 2020.

CORPS UPDATE AND DISCUSSIONS

Unit

Honoraries: A Force Multiplier in Strengthening RCAC Army Reserve Regiments

Col B. Christopher A. Brown

The reality is setting for RCAC Reserve Force command teams that the challenges of growing a unit under the StAR initiative exceed the hours available for a part-time command. Reserve Commanding Officers' command and control capacities are stretched to the limit with the concurrent issues of TAPV introduction, Mission Tasks, recruiting, and junior leader development and retention. Our Regiments Honorary Colonels and Honorary Lieutenant Colonels can provide COs an invaluable force multiplier to support their activities.

The CO who can invest the time in establishing meaningful roles and responsibilities for their Honoraries, can increase their Regiment's ability to conduct effective community engagement, support Recruiting and Retention, while providing invaluable mentoring of the unit Commanding Officer. These roles are well-suited for Honoraries and enable unit officers and senior NCOs to focus their limited Class A time on more critical operational, training and administrative tasks.

Investing the time to plan Honoraries engagement will pay significant dividends for Unit COs. Best practices across the RCAC include the following examples:

1. On appointment, provide the new honorary with a professional unit orientation program to include Regimental History, unit Dress and Deportment, Rank Structures and Ceremonial Customs. The CO, RSM and Adjutant should be directly involved in this activity.

2. Establish a monthly cadence of open communications with the COs to ensure situational awareness related to Regimental operations, training, and personnel issues. The recent proliferation of video-teleconference capabilities makes these touch points very easy to achieve.

3. Maintain a rolling twelve month calendar for the unit Honoraries designed to maximize participation in key Regimental training and ceremonial events (Include: event name, location, time, purpose, priority and order of dress).

The Army Reserve is challenged to maintain a national presence for the Army in our various communities. Key stakeholder engagements with business, education, charity and government leaders are often 'no-filled' as our Regimental COs balance civilian careers, family and the demands of Regimental Life. Honoraries are perfectly suited to be unit ambassadors. They bring expanded access to communities and organizations that may not have regular contact with the Regiment.

The "Regiment" consists of more than just those in uniform. A typical RCAC Reserve Regiment can include bands, cadet corps, associations, museums, historical/cavalry troops, Allied Regiments, Regimental Trusts and Senates. COs are time constrained to maintain an effective presence with all these critical affiliate groups for their Regiments. When effectively mobilized, unit Honoraries can help the CO sustain these relationships and convey key messages. The wise CO will invest in this force multiplier to achieve more coverage across all aspects of Regimental life.

HLCol Farid Rohani, British Columbia Regiment, Vancouver BC

Fostering

One Army Team within the Royal Canadian Armoured Corps (RCAC)

LCol C.W. Hunt

The RCAC requires a practical long-term plan integrated within the Canadian Army Modernization Strategy (CAMS) that delivers credible, relevant, mounted capabilities in direct fire, security, and reconnaissance to the Canadian Army. That plan must ensure the "Regular and Reserve components are [integrated and] mutually supporting [as] together they provide sustained land power in sufficient mass to successfully conduct concurrency of operations, including, when required, to fight and win."[1] Fostering One Army Team within the RCAC will provide the Corps with more depth to manage tasks and sustainably generate more mounted close combat capability. This paper will argue that in order to foster One Army Team within the RCAC, the Corps must leverage recent successes and further integrate culture, operational tasks, and training.

The RCAC's shift back to a consolidated armoured (armd) philosophy, trade, and culture over the last five years provides a solid foundation for further integration between the Regular and Reserve components. The Regular component brings tremendous professional knowledge, experience, and can be maintained at much higher readiness than the Reserve component; however, there is also substantial personnel turnover in units annually, particularly amongst NCOs and officers that disrupts continuity. Regular NCOs and officers are also often heavily tasked to support a variety of individual training (IT) and collective training (CT) activities outside of their unit training, which further adds to their operational tempo, stressing both those units and the individuals and their families. The Reserve component is maintained at lower readiness, but also has lower turnover of non-commissioned officers (NCO) and officers, and investments in training can maintain skilled crews and specialists, as well as cohesive troops, when tasked. Conversely, it takes longer to build readiness in Reserve units, most soldiers have limited availability and require longer periods of notice to secure their availability. Full-Time Summer Employment (FTSE) introduced over the last three years has improved this dynamic significantly, as many reservists (mostly junior ranks) are now available for up to 120 days to conduct IT (as students or staff), support domestic operations (DOMOPs), and conduct CT and fill other tasks. FTSE has improved the production of qualified soldiers, NCOs, and officers in most Army Reserve (ARes) units and will pay dividends in improving readiness in the years ahead.

Recent proposals that would standardize armd troops (of all platforms) at four armoured fighting vehicles (AFVs), and armd squadrons (sqn) with a squadron headquarters (SHQ), four armd troops, and an admin troop would further facilitate integration.[2] With RCAC training for both Regular and Reserve components anchored on a common foundation of vital armd skills and tactics, techniques, and procedures (TTPs), NCOs and officers trained in armd tactics with a standardized 4x AFV troop can easily adjust to tank, cavalry, or light cavalry roles. This common foundation simplifies the RCAC's generation of sustained land power and mass sought by CCA and facilitates Regular and Reserve integration.

With that common armd foundation, the integration of Reserve sub-sub-units with Regular units should primarily be at the armd sqn level, not as separate RHQ support troops. The sqn is the basic manoeuvre element for armour and is more likely to be included in the structure of sustained battle group rotations than separate RHQ support troops. Integration at sqn level provide depth, sustainability, and flexibility to the force generation of armd sqns for sustained deployment cycles. Integration at sqn level also supports building IT and CT capacity in those core armd roles, instead of it being diffused across siloed specialist mission tasks. Integration will also be more effective at sub-unit level because this is where most NCOs and junior officers spend the bulk of their careers. Relationships developed earlier in their careers, will continue to pay-off as both Regular and Reserve leaders move into more senior positions. Finally, integration at the sub-unit will create relationships that will facilitate better integration of individual augmentees when needed.

An additional benefit of aligning and integrating mission tasks between Regular and Reserve components is that it would allow skills and experience to better transfer between components. For soldiers, NCOs, and officers who choose to leave the Regular component, it enhances the opportunity for the Army to retain (and transfer) their technical skills, capacity and knowledge through the Reserve component. It is a tremendous loss of talent when an experienced tank crew commander, gunnery instructor, or surveillance operator releases from the Regular component, and there are minimal opportunities to leverage their technical experience, even if they transfer to the Reserve component. Integration of mission tasks would also allow Reserve soldiers to augment a wider variety of IT (as instructors and students) and for more integrated serials to be run. Perhaps 'Reserve Summer Training' just becomes 'Summer Individual Training Season'. Integration of mission tasks between Regular and Reserve components better supports strengthening a culture of 'One Army Team' and aligns with 'The Journey' the Canadian Armed Forces is implementing.

Recent operational experiences of the Canadian and allied armies are worth noting. The Army Lessons Learned Centre concluded "the Reserves were vital in sustaining armour capability"[3] in Afghanistan, and that "operations on a mission of this length could not have been sustained without augmentation from Primary Reserve Units."[4] Nevertheless, although many Reserve RCAC units had each generated dozens of soldiers over the course of the mission in Afghanistan, these were individual augmentees due to Army's force generation approach at the time. The Commander Canadian Army's (CCA) force generation approach shifted under the initial Strengthening the Army Reserve order directing Reserve Canadian Brigade Groups (CBGs) "will aggregate formed and trained sub-sub-unit and sub-unit capabilities from their Units, in order to integrate them with assigned CMBGs for specific training opportunities and for operations of any type."[5] This vision has been further refined by LGen Eyre to emphasize specific capabilities from mission tasked and accountable units in order to integrate them in a predictable manner with assigned CMBGs or identified units for specific training opportunities and for operations of any type. As with the Regular component, the [Army Reserve] ARes will train for integration in Full

Spectrum Operations (FSO) such that they are ready for any mission, domestic or expeditionary.[6]

While it remains to be seen exactly how this vision will be implemented through the Army's new Adapted Managed Readiness Plan, it should mean that CBGs and Reserve units will increasingly receive specific force generation tasks for formed sub-sub units and eventually sub-units as part of the multi-year plan. The concept was already piloted through the deployment of the 41 CBG mortar platoon to Latvia in early 2020. 41 CBG received warning of the task to generate the mortar platoon (52 soldiers) in late 2017, and proceeded to build the capability from scratch over the next 2 years,[7] first through the required qualification IT courses, then followed by CT. The mortar platoon successfully deployed to Latvia during the first half of 2020. This pilot project ran concurrently to the development of other Tranche 1 mission tasks, who were tasked to achieve Full Operational Capability (FOC) in 2022.[8]

The US Army maintains 28 cavalry squadrons (Bn/Regt size in Cdn terms) in the Army National Guard (ARNG) Infantry, Stryker, and Armored Brigade Combat Teams (BCT).[9] The ARNG made major contributions to Operations Iraqi Freedom (OIF) and Enduring Freedom (OEF). As early as December 2008, over 300,000 Troop-Years of just over 1,000,000 Troop-Years of total US Army deployments to OIF and OEF were from the Reserve Component.[10] "At one point in 2005, half of combat brigades in Iraq were Army National Guard."[11] More recently, the ARNG's 30th Armored Brigade Combat Team deployed Bradley fighting vehicles into eastern Syria in October 2019 to guard oil infrastructure from Islamic State militants,[12] and ARNG units continue to contribute to Operation Spartan Shield throughout the Middle East.[13] Also in 2019, 3/278th Armored Cavalry Regiment from the Pennsylvania and Tennessee ARNGs deployed to Poland as part of the NATO enhance forward presence (eFP) BG POL.[14]

The British Army has also expanded use of armd reserve units for operational tasks. In 2020, the Royal Yeomanry provided the light cavalry troops for a light cavalry sqn deployed for six months to Poland as part of the NATO eFP BG POL. The [regular component] Queen's Dragoon Guards rounded out the sqn providing much of the SHQ and admin troop.[15] The Royal Wessex Yeomanry (RWxY) has five squadrons spread across southwestern England. The Regiment is "heavily focussed on building and maintaining competency and currency on the Challenger 2, the RWxY training programme includes annual live firing packages and field training," in order to provide individual augmentees, formed crews, and even formed tank troops to augment the Regular regiments.[16] "Each year, the Armoured Reinforcement Regiment is tasked to provide 8 crews fit for role, this year [2019], the RWxY provided 11 crews fit for mobilisation and 36 crews trained and competent."[17]

Generation of a sub-sub unit for the core missions task of armd troop is sustainable for RCAC ARes units from a sub-unit that has qualified personnel. They just require predictability. An ARes unit should be able to generate that sub-sub unit for one or two 1-2 week Regular/Reserve FTXs annually, and should be able to generate a sub-sub unit complete for expeditionary operations once every six years (every second Div mounting cycle or 50% of Regular commitments). Drawing from multiple units in a CBG or Div to provide crews provides even more depth. Predictability does require that units be specifically tasked in division collective training plans. For operations, Reserve units need to be specifically identified in the Army Adapted Managed Readiness Plan (2-3 years out, same as Regular units), with the task and period clearly identified. Reserve soldiers will commit to operations or employment but they expect the Army to commit to them for designated periods so they have certainty when they take leave or quit their civilian employment to serve. Reserve soldiers still need to support their family. For specialist mission tasks [CBRN, Influence Activities, Assault Troop, etc.], generation of section level elements is far more realistic and sustainable. Career progression for NCOs is still based on core armd skills tested during qualification courses, and it would be unreasonable to expect a majority of reserve armd NCOs to take additional courses for specialist career progression that are not required by their Regular peers.

Mission tasks identified for the ARes should have a corresponding Regular component element. Regular component institutional support and interest is required for mission tasks to be efficiently implemented. Implementation of core tasks, ie. armd troop, is straightforward in this respect because all of the courses, tactics techniques and procedures (TTP), equipment programs, etc., have the existing institutional supports. However, for a specialist mission task, ie. CBRN Recce, Influence Activities, or Assault Troop, it becomes far more difficult to implement unless there are institutional resources at RCACS, DLR, etc., that are available to advocate with commanders to ensure national courses get scheduled, equipment procurement needs are addressed, and specialist skills sets get integrated with core armoured TTPs, and do not become a sideshow. The individual training requirements, sustainability of continuation training, and levels of readiness (NTMs) required for core and specialist skill sets should be the key considerations in determining the appropriate mix of Regular and Reserve elements for various core and specialist mission tasks.

Given the need for integration described above, several additions and changes should be made for Tranche 3 mission tasks assigned to RCAC Reserve units in Force 2025. First, update Tranche 1 (IA) and 2 (CBRN Recce Troop and Armd Recce Troop) tasks to reflect 4 car troops. Armd Recce Troop should be renamed to Armd Troop.[18] The Armd Troop would consist of four TAPV crews trained in generic armd BTS, with the TAPV being used as a generic AFV trainer, much like the Cougar was, so the troop is able to integrate with armd sqns of any type, and easily convert to other platforms with appropriate technical training. The interim IA task (until IA MID is updated) should reflect an Armd Troop to provide security and battlefield mobility for specialist IA Teams (generated from multiple units), and an SHQ task to provide ISTAR/IO/IACC integration. Other possible Tranche 3 mission tasks could include Assault Section, Unmanned Aerial Systems (UAS) Section, and Armd Troop (Tank). Tank troop as a reserve mission task is certainly feasible as demonstrated by The Royal Wessex Yeomanry and US Army National Guard. Tasking ARes units in close proximity to the Leopard 2 fleet, would promote more retention of experienced Regular crewmen and officers in those Reserve units, facilitate those units sending Reservists (as staff and students) on courses being run by the Regular units, and allow them to provide crews during select exercises and individual augmentees as needed. In practical terms, it would likely mean prioritizing units with the Armd Troop (Tank) mission tasks over other ARes RCAC units with respect to Tank PCFs and simulator access, and integrating Reserve soldiers and crews on select Regular unit exercises.

With the reduction in ARes armd troop size to 4 AFV crewed by 16 pers, the simplest equivalent solution for ARes RCAC mission tasks is set a new baseline per unit of 1 x Armd Troop and 1 x specialist mission task section. Structurally, this would require ARes RCAC units to maintain a qualified, effective Light Cavalry Sqn (TAPV and LUV qualified) focused on collective and continuation training to generate a higher readiness (HR) armd troop for core mission task assignments. Most ARes units have at least a second sqn(-) on establishment. With the reduction in troop size, reinvestment of those PYs within the unit should allow for creation of an additional troop within the second sqn(-). The second sqn often is focused on individual training of new soldiers, but could also hold the specialist sub-sub unit needed to generate a specialist mission task section-sized element. Actual organization will still vary from unit to unit based on geography (ie. separated sub-units), personnel, and current tasks and status, but current establishments can be readily adjusted within units to accommodate mission task changes. ARes units will continue to require a sqn(+) worth of LUVs to support local training and DOMOPs, and frequent access or ownership of a troop of TAPVs to conduct armd IT and CT.

On annual basis, ARes RCAC units should be expected to achieve Level 2 live and Level 3 dry assigned BTS locally. BTS should be rotated through emphasis on offensive, defensive, and stability BTS annually. Annual Brigade/Division Training Events (BTE/DTE) held towards the end of summer should require the mission tasked HR armd troops from each unit to achieve level 3 live and level 4 dry assigned BTS, ideally with some participation from a Regular RCAC unit as well. Most units should be able to generate at least a sqn to participate in support of annual

BTE/DTE. Finally, mission tasked HR armd troops from each unit should participate in an annual 'integration' FTX of approximately one week with their affiliated Regular component sqn focused on Level 4 (dry) BTS. This would be the annual training baseline, with the Army's Adapted Managed Readiness Plan also potentially tasking select units to deploy their HR armd troop to support larger exercises such as MAPLE RESOLVE as COEFOR or in other support roles, support RCACS or Division Training Centre summer training, participate in international exercises such as GOLDEN COYOTE, or deploy on international operations. Having a larger pool of armd troops to draw from for predictable tasks, reduces the tasking load for Regular units and their officers and NCOs, allowing them to focus more resources on higher readiness tasks. Soldiers prefer to serve with their friends and their home unit. Shifting to more use of predictable collective tasks assigned to Reserve units (or formations) is likely to yield better force generation results than the traditional reliance on CFTPO to fill the majority of tasks individually, often with limited notice that discourages Reserve availability. Employment of ARes HR armd troops could provide an equivalent of up to 18 armd troops to help fulfill a variety of short-term meaningful tasks. With over half of the RCAC's effective strength residing within the Reserve component, tapping this personnel pool to fulfill predictable relevant tasks would reduce the tasking burden on the over-stretched Regular component.

This paper has argued that in order to foster One Army Team within the RCAC, the Corps must leverage recent successes and further integrate culture, operational tasks, and training. A consolidated armd philosophy, trade, and culture provides a solid foundation for further integration between the Regular and Reserve components. Common armd TTPs and training allows the RCAC to generate greater depth and flexibility in both the Regular and Reserve components and allows further operationalization of the ARes as our allies have done. Reserve mission tasked armd troops should be primarily integrated with Regular armd sqns, not used as RHQ troops, except when providing specialist sections to integrate with a Regular specialist troop. The ARes can provide a solid 3rd and 4th line for the RCAC team, it just means recognizing that it needs to be managed with more predictability and with longer notices to move. These recommendations are not new and are basically calling for a return to lessons-learned from the 1980s and 1990s when the RCAC had common platforms and shared purpose across both Regular and Reserve components.[19] Together the One RCAC Team can "provide sustained land power in sufficient mass to successfully conduct concurrency of operations, including, when required, to fight and win."[20]

About the Author: LCol C.W. Hunt has served in the Canadian Army for over 27 years with time spent evenly between Regular and Reserve components. He has served in a variety of command and staff positions in both Tank and Recce squadrons, and at unit and formation level. LCol Hunt served on Operation Kinetic Roto 0 in Kosovo, TF 1-06 in Afghanistan, and several domestic operations. LCol Hunt commanded The King's Own Calgary Regiment, and was Deputy Commander 41 CBG. He is currently attending the Joint Command and Staff Programme (Reserve).

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Active

Protection Systems: what are we doing?

LCol F. Laroche

When funding is prioritize elsewhere and new and emerging capabilities such as Active Protection Systems are explicitly listed in our defense policy (Strong, Secure and Engaged), how do we keep up with these emerging technologies and of course, the evolving threats to armoured vehicle? Crew protection is an essential priority when investing in all of our equipment. The business of balancing the ability to leverage and procure emerging technologies, keep up with the evolving threat and maintain the priority of crew protection that challenges the reality of making acquisition and capability development business decisions. The procurement of a safe and effective Active Protection System (APS) for the Canadian Army's armour fleets is but one of the key technologies that fall into the category of a seemingly tumbling dynamic of an evolving threat verse protection requirements. What is Director Land Requirements (DLR) doing to resolve this challenge?

For those who are less familiar with those systems, what is an APS? It is define as either semi-autonomous or autonomous systems that when integrated on land vehicles are capable of detecting, classifying and providing effective warning/cueing and countermeasures for defined imminent or incoming threats. Bottom line, a vehicle with an APS protects itself against threats by disabling them before they hit the platform. They can be classified in two major categories based on their countermeasure response. Hard kill APS will use of energetic material to inhibit the lethal mechanisms of susceptible threats causing it to be ineffective against the protected vehicle. Soft kill APS will employ countermeasure to interfere with the guidance mechanisms or the operator of susceptible threats causing it to miss the protected vehicle. There is no doubt that APS enhanced survivability and adds an additional layer of defense over specific threats against armoured vehicle.

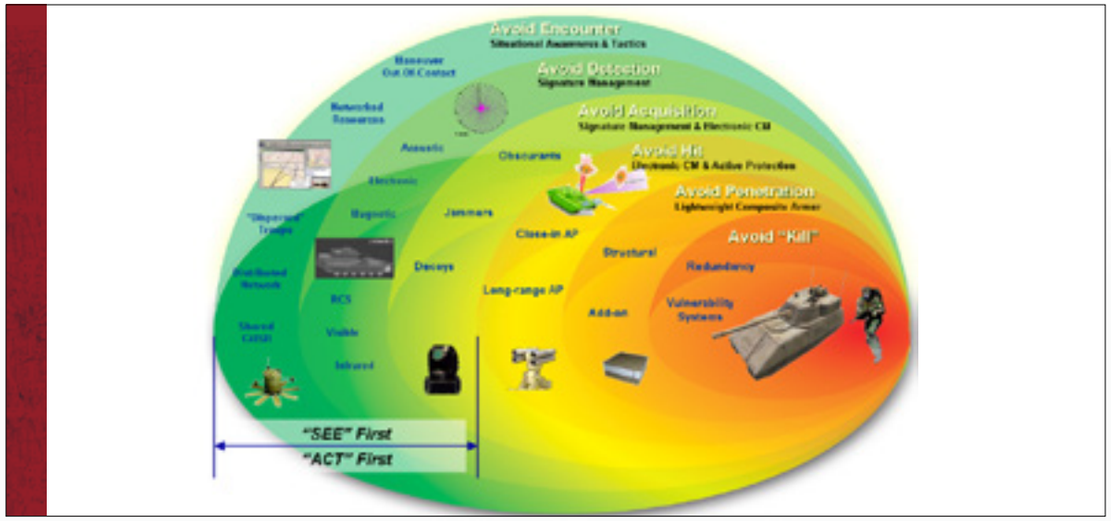


Photo 1: The Active Protection System avoid your platform to be hit in the Survivability onions concept.

With growing proliferation of anti-tank guided missile (ATGM) and rocket propelled grenade (RPG) in recent conflicts around the globe, the requirement for APS is more relevant than ever. APS technologies are evolving quickly and most armies now strive to incorporate growth potential for APS capabilities in their new platforms. Defence markets trends are reporting that the global APS market is entering its growth phase with evidence of successful use in combat operations. Our team in DLR have been monitoring and are actively engaged in APS development initiatives both nationally and internationally for the past twenty years. We have been directly involved in the conduct of numerous tests and integration activities to better understand those systems and their limitations especially for those 'military off the shelf (MOTS)' APS.

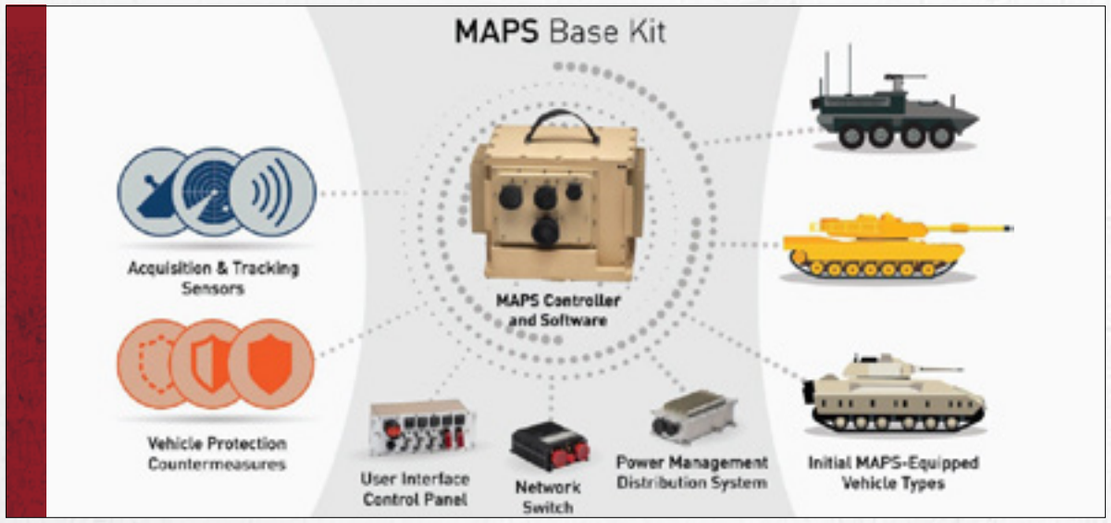
The Canadian Army (CA) initiated work on APS in the early 2000s and since then, a placeholder for a formal project is in the project line up was superseded by other project capabilities priorities deemed by the CA leadership. The APS project remains in identification phase, the first phase in the procurement process. In the past ten years, substantial work to include tests and trials have been conducted to include the testing of Israeli made Rafael's Trophy APS on the Canadian Light Armoured Vehicle (LAV) fleet. Due to the sensitivity and nature of the work, much of it is classified and not well advertise. Canada has conducted national testing with various APS vendors and continues to do so. As well, Canada is actively involved with many of its allies in this field of research and testing. A reasonable amount of research & development investment have been made over the last decade. Our expertise come from our Subject Matter Expert in Defence Research and Development Canada (DRDC) - Valcartier and the close cooperation of the Land Engineering Support Centre. The output of the APS work is serving to inform the operational requirements to facilitate an expedited procurement should it be required.

Arguably, with the amount of time that we have invested in trials and work with our allies, we should have already funded a project to equip our operational LAV 6 and Leopard 2 fleets. However, this is not the case. The Canadian effort, has yet to verify a safe and effective APS that could be integrated onto our fleets. That said, the German Army are integrating the Israeli Trophy on their Leopards, we are working closely with the Germans on this initiative. Likewise the US Army is now employing Israeli systems, and again the Canadian Army is working closely with the US Army on that initiative. So what is the next step?

There's is two potential scenarios for the procurement of APS. The first one could be named the reactive situation. This scenario is directly link to a specific theater of operation with a known ATGM/RPG threat to our forces. This new mission will most likely generate urgent operational requirements. With known capabilities and limitations of many MOTS APS, due to previous testing and allies' cooperation, we could procure and integrate an APS on our platform fairly quickly using this path. For example, this is what our US counterpart are doing at this time by equipping three brigades worth with Trophy APS.

On the other hand, the second scenario for procuring an APS, probably the most likely course of action, is our partnership with the US. They have been involved for many year in the development of the government controlled modular active protection system (MAPS). Based on an open architecture and modularity, you can adapt your sensor and countermeasure suites with pre-qualified products based on the most likely threats (or emerging one). With this system, each vehicle is equipped with the MAPS base kit that come with the controller & software box, user interface control panel, power management distribution system and network switches. After that you scale your sensors & countermeasures sub-systems to adapt rapidly to ever-evolving threats on the battlefield. For more information regarding the MAPS, you can visit Lockheed Martin website. In parallel, the British Defense Science and Technology laboratory is also developing a similar open architecture concept for a modular integrated protection system. Their goal is to make this electronic architecture more open to industry in order to get a wider selection of off the shelf APS sensors and countermeasures.

The US Modular Active Protection System overview. Credit: Open source, Lockheed Martin website.



The US Modular Active Protection System Base kit overview. Credit: Open source, Lockheed Martin website.

In the near term, DRDC is currently working with General Dynamics Land System-Canada through a collaborative research and development agreement. One of the aim is to demonstrate on a LAV-6 the MAPS architecture against 2nd generation ATGMs using Electronic Warfare (EW) based Soft-kill technology. At the same time, this upcoming trial will validate ongoing work with NATO to support the validation of the EW and obscurant-based test procedures from the STANAG 4686. As well, in the upcoming years, we will need the user community to get involved in the development of new tactics, techniques and procedures (TTP) to integrate this new capability. We will need to refine our evasive TTPs, conduct human factors integration assessment and conduct user trials. At the same time, we will require advice from the legal community with regard to collateral damage implications using an autonomous/semi-autonomous systems. As always, still lots of challenges and work in front of us but on the positive side we are working hard to bring this new capability to our armoured fighting vehicles fleet.

Armoured

Doctrine Update for Armour Bulletin

(Caveat: the following is a summation of work completed by the RCAC Advisory Committee, spanning almost two years. This group is comprised of senior officers from all three Regular Force Regiments, the School, Tactics, Army Doctrine, Director General Personnel Requirements (DGPR) and the Director's Office. The mandate is the creation of the new Armoured Regiment in Battle and related doctrine and assistance with Force 2025 initiatives.)

2020 was a big year for the RCAC in two large ways: one was the beginning of the rewrite for the supporting level publication *The Armoured Regiment in Battle* (ARiB). While written in 1992 it survived the test of time, including the disappearance and reappearance of tanks in the early 2000s and mid-2000s. This extant document is not without some glaring errors and omissions, so these areas will be corrected. While the ARiB is platform neutral it has been widely interpreted as being wholly tank-centric, but does form the nucleus of broader armoured doctrine and is certainly the manual for mounted close combat (MCC) from a purely armoured perspective. The other and closely related document was the study draft 2 (SD2) of the Canadian Army Doctrine Note (CADN): Combat Arms Tactical Sustainment (The Echelon System) which seeks to address inefficiencies, and correct misunderstandings in unit-level sustainment. While not RCAC specific, there were corrections made to armoured echelon command and control (C2), regimental administrative responsibilities and overall terminology. Annex A is as a preview of the new book.

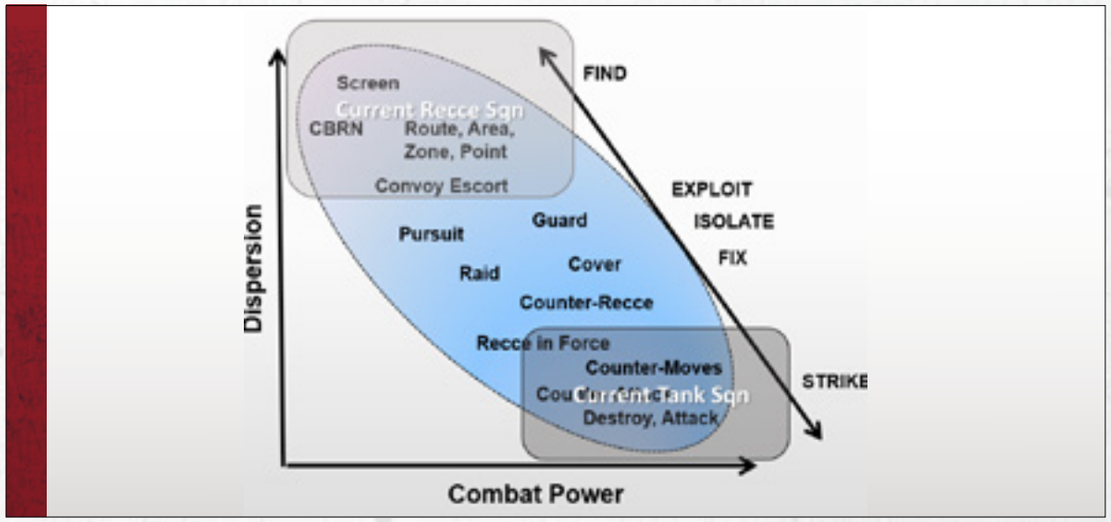
What Happened to Reconnaissance?

ReconnaissanceThe underlying theme within the "new" doctrine is acceptance that the combat support focussed recce doctrine and structures were not helping the Corps achieve its end-state of being the masters of MCC within the Canadian Army (CA). The "so-what" to this was that 2/3 of the Corps could not contribute to the Commander Canadian Army's (Comd CA) vital ground of level 5 live fire[1]. This was because recce squadrons were not organized or designed to fight outside of self-defence. Although, doctrine within *Ground Manoeuvre Reconnaissance* alluded to the possibility, it was never fully actualized and remained nebulous. Close combat (regardless of platform) laid outside the recce skillset[2]. After much research by various sources (including the author), came to the conclusion that these recce squadrons were built for a different, policy-related purpose than general combat. The continued two-streamed armoured occupation (tank and recce) was causing the Corps to become at best, combat support to the infantry and not viewed as an equally important as the second (and only other) manoeuvre element. The choice to move to an armoured common doctrine with focus on mounted combat is not an easy one, but will set up the Corps for success and maintain relevancy in the future. Simply, this means a "return" to a common structure of four troops of four vehicles within an armoured squadron. This proven-in-war organization allows for mutually supporting fire and movement. The core tasks remain grounded in providing the CA a force than can fight from its vehicles regardless of what task be given to them. Thus, an armoured unit could conduct the entire range of potential armoured tasks instead of just the arc markers. See the figure below.

The core competency remains MCC (offense and defensive activities) and is the bread and butter of the RCAC. Complementary to that are other tasks that were in the middle of the two extremes that were left to wither (including the skills to fulfil them) due to myriad policy and doctrinal reasons. The end-state will consist of an armoured element that is able to conduct the full breadth of potential tasks with a minimum of reorganization and reorientation. This first-principles approach to doctrine in turn fulfills the policy requirement that Canada needs an agile, multi-purpose, combat-ready military[3].

The return to the standard "4 x 4" structure will allow for a more familiar integration with the infantry than the current reconnaissance squadron. This will allow for a more dynamic grouping and regrouping capability when both arms are organized for combat vice one organized for combat support. These armoured teams will offer the commander a more flexible element than can conduct mounted and dismounted close combat when allowed by the Commander's estimate.

At the regimental level, recce troop will remain a combat support group available to the Commanding Officer (CO) and will be based on a 10 to 12 vehicle organization. Its tasks and structure will remain unchanged from what it is now. The other regimental troops (surveillance and assault troop/pioneers) can be held at the unit level or decentralized to the squadrons as the tactical situation warrants. This mirrors proposed UK structures with medium armour and armoured cavalry regiments.



What Happened to Reconnaissance?

Reconnaissance tasks have not gone away, however the focus (read organizational effort) on these enabling activities will be secondary behind MCC. Organizations that can conduct both combat support (enabling) and offensive/defensive tasks offer the formation commander greater flexibility. It must be kept in mind that pure recce tasks occupied less than 10% of a named recce organization's tasks in WW2.[4] In addition, during that conflict, a reconnaissance regiment was based on a tank battalion with some enablers (intercommunications and anti-aircraft troops are examples) and routinely fought for information[5]. This model more closely resembles what is needed for the RCAC in order to move forward. While enabling activities are important, the manner in which these tasks are conducted needs to evolve[6]. The classic "sneak and peak" label was important during the atomic-era using small platforms (read Ferret) operating as patrols made sense as any significant aggregation could trigger a nuclear/massed indirect fires response[7]. Current platforms do not lend themselves to hiding or approaching a named area of interest (NAI) with any pretense of stealth. In that vein, the adoption of more "proactive" approaches to conducting recce are required, in the spirit an American Cavalry Squadron and the proposed UK STRIKE brigade and battle group concepts[8]. While Canada cannot "cut-and-paste" all of the capabilities found in Allied armies, the understanding of the more "aggressive" mindset and doctrine used, can allow Canada to more easily integrate into these more resourced elements during training and operations. "Combat reconnaissance"[9] organizations, are manoeuvre-focused, using mobility, flexibility (this includes communications), integral and on-call firepower to seek and maintain contact with the enemy, with the goal of seizing the initiative and allowing the commander the freedom of action to achieve their mission. If needed, a brigade commander can still have an armoured subunit seconded to the formation for enabling tasks (solely recce as in the past) but can and if needed, utilize this subunit as another manoeuvre element.

Security tasks are similar to and complement reconnaissance activities. Security tasks are screens, guards, covers, and area security. The main difference between security tasks and reconnaissance operations is that security tasks orient on the protected force or facility, while reconnaissance is enemy and terrain oriented. Both are conducted in a similar manner, in that contact with the enemy is expected and if possible the security force attempts to defeat the enemy allowing the main force to remain intact and preserve combat power.

A Question of Platforms: Why Doctrine and Terminology Makes Policy Liveable

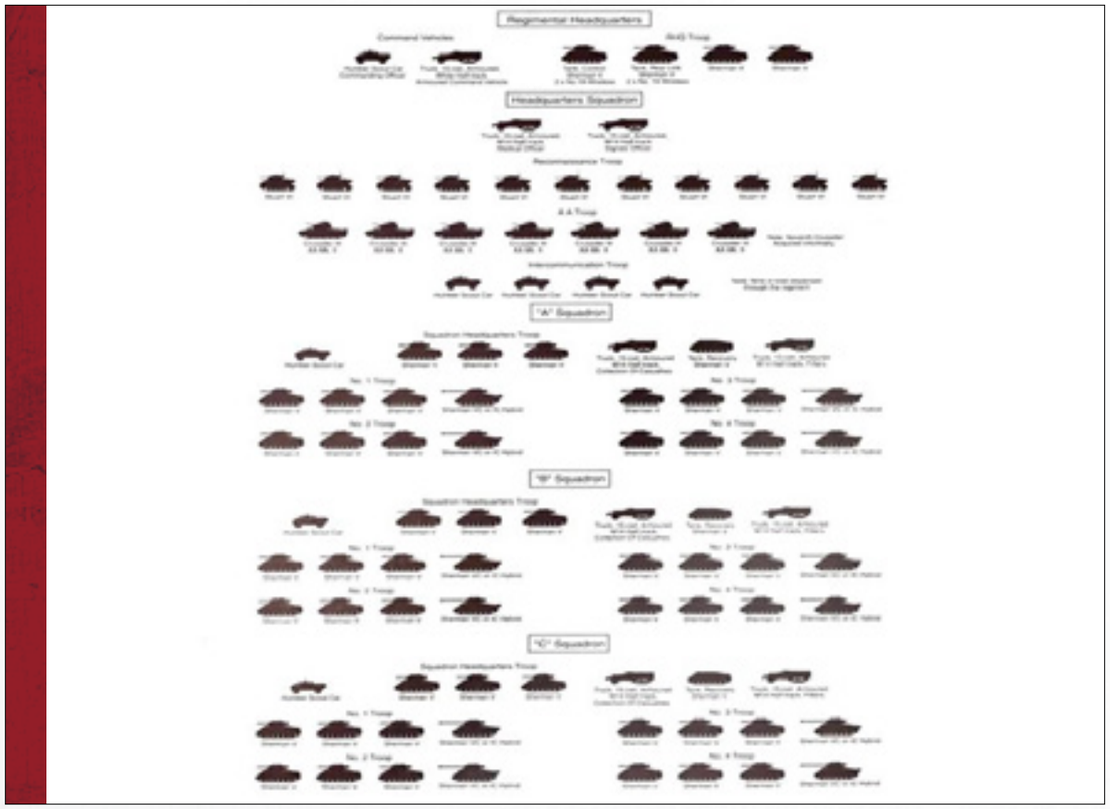
Supporting level doctrine *should be* written from the standpoint of platform neutrality. However, it is perfectly fine to talk about a *capability*. For example, in, B*attle Group in Operations*, the text mentions ground based air defence (GBAD) but does not identify a particular system. A critical flaw in the current manual is that it talks exclusively about tanks. This was the result of a mutually exclusive, two-streamed approach: tanks and recce. We have updated the ARiB to show that an armoured regiment consists of armoured fighting vehicles (AFVs), which traditionally means they have protection, mobility, firepower and a *turret* (despite the DTB and NATOTerm definitions). They are designed for close combat that are deliberate actions intended to destroy an enemy, seize ground or both.[10] For the RCAC, this means we fight the vehicle itself and do not use it as a mode of transportation to the battle. The emphasis on which vertex in the firepower/protection/mobility trinity determines what kind of AFV platform it is. Therefore, a tank emphasizes firepower and protection at the expense of mobility. A light armoured vehicle (LAV) favours mobility over firepower and protection. In the Commander's estimate, they will determine what the mix of capabilities is required to achieve the mission. If the mission requires the seizing of ground amidst an enemy with dug-in positions and considerable antitank (AT) capability (including protective obstacles), one needs a tank. If the enemy is lightly armed (little or no AT capability), poor or no protective obstacles and at the end of an extended road march, the LAV is an economy of effort course of action (compared to a tank). Armour common as the unifying link means the tactics, techniques and procedures (TTPs) and organizational structure are the same in *both* missions. This applies to enabling tasks as well. An armoured squadron using a LAV platform to do a screen, could, if allowed by the Commander's Reconnaissance Guidance[11], conduct counter- reconnaissance integrally (or with attached and on-call assets) as it is organized (four troops of four AFVs each) to fight (fire and movement).

For the procurement process and future capabilities work, having current doctrine harmonized with terminology advantages staff officers working these projects to make informed recommendations to policymakers. This is to help ensure that procurement of new equipment fits within the Army's war-fighting framework with a minimum of disruption. Ideally, supporting level doctrine does not change (the capability articulated within doctrine already exists and is meshed with other systems) while at the TTP level, there are only minor changes as that level of doctrine refers to how that capability functions (technical aspects like ranges and drills). Problems arise when there is capability divestment and/or subsequent reinvestment (read GBAD). It was fortunate for the RCAC that when tanks were divested in 2003, the doctrine was never stripped with it and remained extant, as the skill set was still prevalent within Cougar squadrons operating in a non-recce role. The Cougar (as a tank trainer and AFV) still had a turret and main armament. This is important for the retention of fighting as a crew, a skillset that is perishable quite quickly[12]. The ability to fight the vehicle is one of the most important abilities the RCAC brings to the combined-arms team.

So how did we get the Tactical Armoured Patrol Vehicle (TAPV)?

The TAPV is one of the latest platforms introduced to the RCAC and is considered a protected mobility vehicle (PMV). Other PMVs from around the world include the United Kingdom's Jackal, the German/Dutch Fennek and the Australian Hawkei. Its primary purpose in an armoured regiment is a source of much debate as it is not purpose-built for any particular requirement that the RCAC had for it. If it is not an AFV, what is it? Is it a recce vehicle? Is it a fire support vehicle? Is it a C2 vehicle? Is it a patrol vehicle? It is a general-purpose[13] vehicle bought pan-army and we struggle to find a real role (or in fact, multiple roles as it replaces several platforms) for it until a proper AFV (wheeled or tracked) can be identified and sourced. The TAPV is intended to replace the LAV II Coyote (partially), the Armoured Patrol Vehicle (APV) RG-31 (completely) and to compliment the Light Utility Vehicle Wheeled (LUVW) fleet[14]. It offers mobility and increased protection as compared to the some of the fleets it replaces, but lacks a turret and a weapons system capable of defeating proper AFVs (within its weight class, approx 17 metric tonnes). At this time, there is no intent of outfitting it with any other weapon system. Doctrinally, a TAPV squadron could be formed but it could not be considered an *armoured* squadron as the vehicle is designed to carry soldiers to where they can dismount and then complete the mission. In a low-intensity conflict (LIC), peace-support operation (PSO) or domestic operation, the TAPV has a real operational role. In major combat, its use within formed units and subunits would be better suited to area security and tasks where enemy contact is less likely.

The acquisition of the TAPV exposed some downsides with the current doctrinal model of armoured regiments. During the research phase, it was found that post-WW2 armoured regiments consist of AFVs within the F echelons (at a minimum)[15]. The "generic" aspect should refer to AFVs and not generic equipment in general such as a TAPV. By clearly stating that armoured regiments consist of AFVs, (whether wheeled or tracked) this steers policymakers into courses of action where we state that we need a platform that is capable of MCC. This would be a turret, main armament and not the same platform as would be used by the infantry (read Cougar vs Grizzly). If one looks at an armoured reconnaissance regt from WW2, all vehicles F echelon are tracked[16]. This included recce troop, all in Stuart light tanks.



To translate this into a modern example, all F echelon, Command Troop and Squadron Headquarters vehicles would be LEO 2, recce troop would be AJAX, and the other regimental troops a tracked variant of AJAX. Understanding that scenario would be a fiscal impossibility, doctrinally that remains "a" gold standard. Having a watered down version that builds in fiscal and other resource limitation is self-defeating. Since any doctrinal concept will be diluted at the onset, the goal would be to minimize that as much as possible. This could manifest itself such as one tank sqn, one medium armoured squadron (AJAX), and two, wheeled sqns (LAV 6). By getting our "ducks in a row," we insulate ourselves, to a certain extent, on being given equipment that does not fit our "modus operandi."

Conclusion

This was intended as a brief doctrinal state of play with respect to the new supporting level armoured doctrine and the role that it and terminology play at the policy level. Key takeaways are:

- Return to armoured common structure with emphasis on mounted close combat;
- Updated and fully detailed regimental structure, roles and responsibilities (based on CADN 20-01 Combat Arms Tactical Sustainment (The Echelon System);
- Aggressive mindset with respect to reconnaissance and security tasks;
- Little to no change to former "tank" only doctrine;
- Links between doctrine, terminology and policy; and
- Practical considerations concerning TAPV use other than in support/transport roles.

Refocussing on the core-armoured skills of shoot, move and communicate, will intellectually push the Corps to be seen as more than just an infantry enabler but an equal partner in the close combat fight. This will assist in providing the Army with enhanced flexibility on operations and support to foundation training. By ensuring out doctrine and terminology are properly managed will help ensure that policy-level initiatives are done in conjunction with the way we fight rather than at odds with it.

1. Canadian Army Operating Plane 2021-2022, ver 1, para 14.
2. For a fulsome background, see Captain Matthew McInnis' *First Principles and The Generation of Armoured Fighting Power*, Canadian Army Journal, Volume 17.3. This paper assumes that the reader is familiar with this material.
3. *Strong, Secure, Engaged: Canada's Defense Policy*, page 14.
4. Italy: mounted recce 2% of the time. 9% in NW Europe.70% in NW was static (not manoeuvring). *Dragoon: Centennial History of the Royal Canadian Dragoons 1883 - 1983)*, page 372.
5. *Century of Service: The History of the South Alberta Light Horse*, Donald E. Graves (May 15, 2005)
6. "The clear implication is that the nature of reconnaissance has changed since the days of the horse from a specialized function done by units with unique capabilities to merely one of several functions any combat unit is expected to be able to accomplish. The retention of units designed and organized to perform such missions no longer reflects operational realities." *Scouts OUT! The Development of Reconnaissance Units in Modern Armies:* John C. McGrath, Combat Studies Institute Press US Army Combined Arms Center Fort Leavenworth, Kansas
7. It can be argued that the current practice of using massed fires cued by UAS anytime a force begins to mass is a similar playing field, but a Ferret is not a LAV 6. Notwithstanding that, dispersion is important in terms of force protection, armour is best used when massed at the appropriate time and place, but there are times when some risk must be accepted.
8. Doctrine Note 21/04, Strike Handbook Part 4: Battlegroup Tactics, ver 2.1, 21 Oct 2020.
9. NATO parlance. See MCLSB Standardization Proposal Inquiry - Combat Reconnaissance (CBTREC). 21 Jan 2021.
10. DTB record 33768
11. Describing focus, tempo of reconnaissance, engagement/disengagement and displacement criteria are the methods commander's use to guide and control subordinate units. The commander's reconnaissance guidance is how the commander communicates the way to conduct the directed form of reconnaissance. ATP 3-20.96, para 3-5
12. This was witnessed first-hand on multiple occasions by the author once the Cougar was replaced with the G-Wagon in 2006. In a few short years, the ability to acquire, track, and neutralize a target quickly as a crew had all but vanished. The absence of a turret, where both the commander and the gunner had the same situational awareness and ability to control the main armament made mounted engagements folly, short of self-defence.
13. Based on the Textron M1117 Armoured Security Vehicle, there is a variant specifically for Reconnaissance Surveillance & Target Acquisition (RSTA) and FiST (fire support team vehicle) called the M1200 Knight. There is also an available over-pressure system, which may have been suitable for Chemical, Biological, Radiological and Nuclear (CBRN) reconnaissance.
14. Annex F, para 2, Master Implementation Directive (MID) TAPV22 June 2016
15. McInnes, pg 87,
16. The diagram shown is from the book *South Albertas: A Canadian Regiment at War* by Donald E. Graves, 2004

F2025:

An Analysis of the Canadian Army (CA) Structure and its Impact on the Royal Canadian Armoured Corps (RCAC)

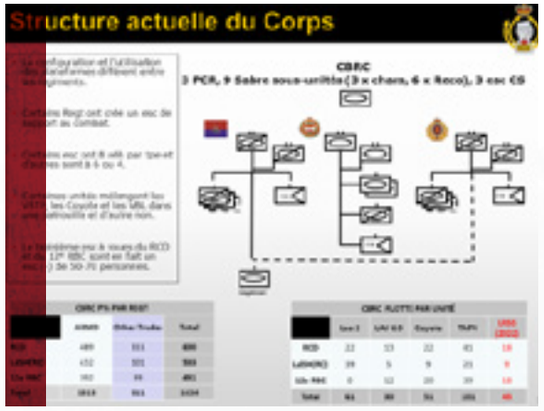
Major P. Croteau

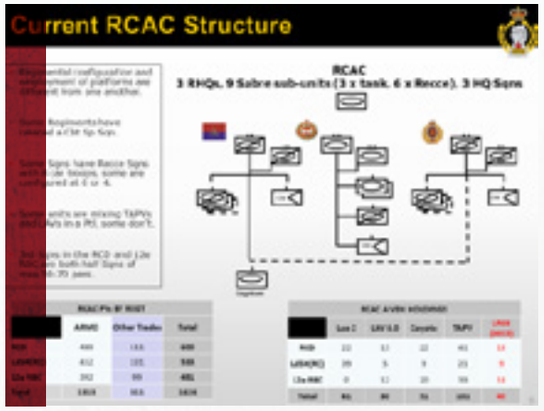
In September 2020, as part of the CA modernization strategy, the Commander of the Canadian Army (CCA) initiated a process to analyze the structure of the CA. The process is commonly referred to as Force 2025 (F2025). The current CA structure is based on the F2013 model, which was adopted at the end of our engagement in Afghanistan. Since then, some structural updates were made as part of F2018 and F2021, but those updates did not really change the structures. This time, with a rather short and ambitious agenda, the CCA plans to complete the modernization by 2025. The Director of Land Force Development *(DLFD)* is leading the analysis with the collaboration of other divisions, corps/branches and CA directorates.

Why modernize the CA? There are a number of reasons, but the main one is that the Canadian government adopted a new defence policy in 2017 (Strong, Secure, Engaged *[SSE]*), which resulted in a series of projects to review and analyze Canadian Armed Forces (CAF) staff. A review of the CAF structure (the Force Mix and Structure Design *[FMSD]*), a review of the Force Capability Plan by integrating NATO defence plans, and a review of the Force Posture and Readiness *(FP&R)* cycle all have a direct effect on the CA, and that is why the modernization plan must take this into account. All of these review processes aim to align the Force structures, mandates, generation and employment with government priorities and the various military alliances to which Canada contributes. Basically, to remain relevant to the government and the CAF, the CA needs to modernize and provide adaptable land capabilities that can be rapidly deployed to the entire spectrum of operations. An extensive assessment of the future land operating environment, commonly referred to as *"Close engagement,"* serves as a framework to guide staff officers involved in the structural analysis process to ensure that the CA remains a credible, modern fighting strength prepared for all contingencies.

In his planning guide, the CCA very clearly stated that the CA would remain a medium fighting strength supported by heavy and light capabilities and that any structural change would include the Regular Force, the Army Reserve, civilian personnel and the Canadian Rangers. The vision of a single, unified army is fundamental for the CCA. He also said that the structures would be thoroughly analyzed but that all options presented would take into account current resources and equipment (or those already planned) and, finally, that the modernized CA structure would have to be sustainable in the long term. Representing the Armoured Corps, the Deputy Director Armoured Corps *(DDArmd)* and the Corps Sergeant Major attend every meeting and actively take part in discussions. Our mandate is to explain the realities and capabilities of our units and to ensure that the options presented to the CCA clearly reflect our army's doctrinarian role as *mounted close combat (MMC)* experts.

In this context, for nearly three years, the Armoured Corps has been conducting an in-depth analysis of its doctrine, the role of medium reconnaissance, its assigned tasks, its regimental structures and its individual training. In addition, the specifications of our trade are being reviewed rank by rank and job by job to determine which tasks crew members do and which ones officers do and which training courses they require to advance. This review, commonly referred to as the MES review, is being conducted by the Corps members working on the Director Personnel Generation Requirements *(DPGR)* team. The review will be completed in December 2021 and will guide the Armour School in modernizing training. Participation and collaboration between the units has been excellent, which has allowed us to clearly identify the issues and find solutions to suitably modernize our regimental structures. These various working groups have also enabled the *DDArmd* to effectively represent the Corps at CA council meetings by presenting a shared vision of our regiments. Consensus between the units and the timing of various key messages sent to staff played a critical role and gave the Corps representatives a lot clout during preliminary F2025 meetings. The Corps was ready, united and unwavering in its positions, and that will inevitably have a positive impact on the role our trade will play in the new CA structure.



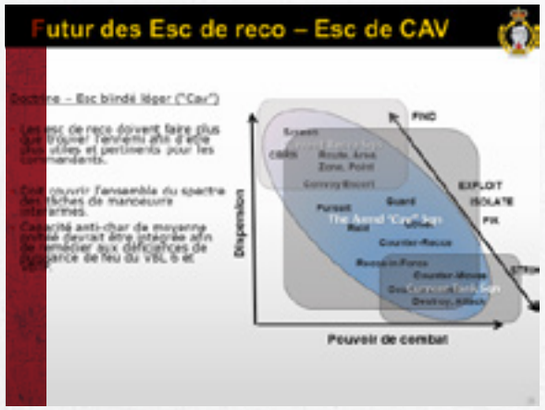


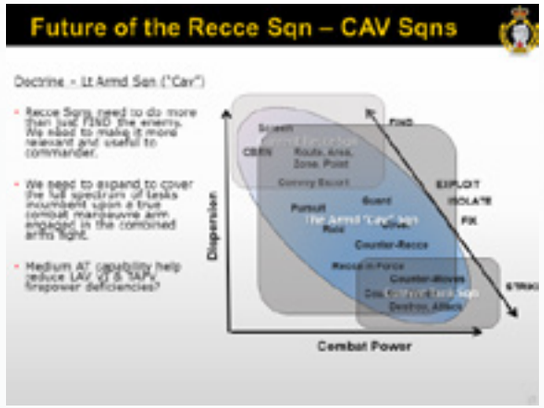
The Corps has made some decisions and presented them to CA leadership and F2025 leadership.

The main decision was to stop using reconnaissance squadrons of three troops of eight vehicles operating in patrols of two and replace them with standardized squadrons of troops of four. That way, nine Corps line squadrons will be configured in a fighter squadron of four troops of four vehicles each. To provide an overall understanding and to illustrate the squadron's *mindset,* the Corps decided to use the term "Cavalry" to refer to the six wheeled squadrons and "Tanks" to refer to the three squadrons of Leopard 2s.

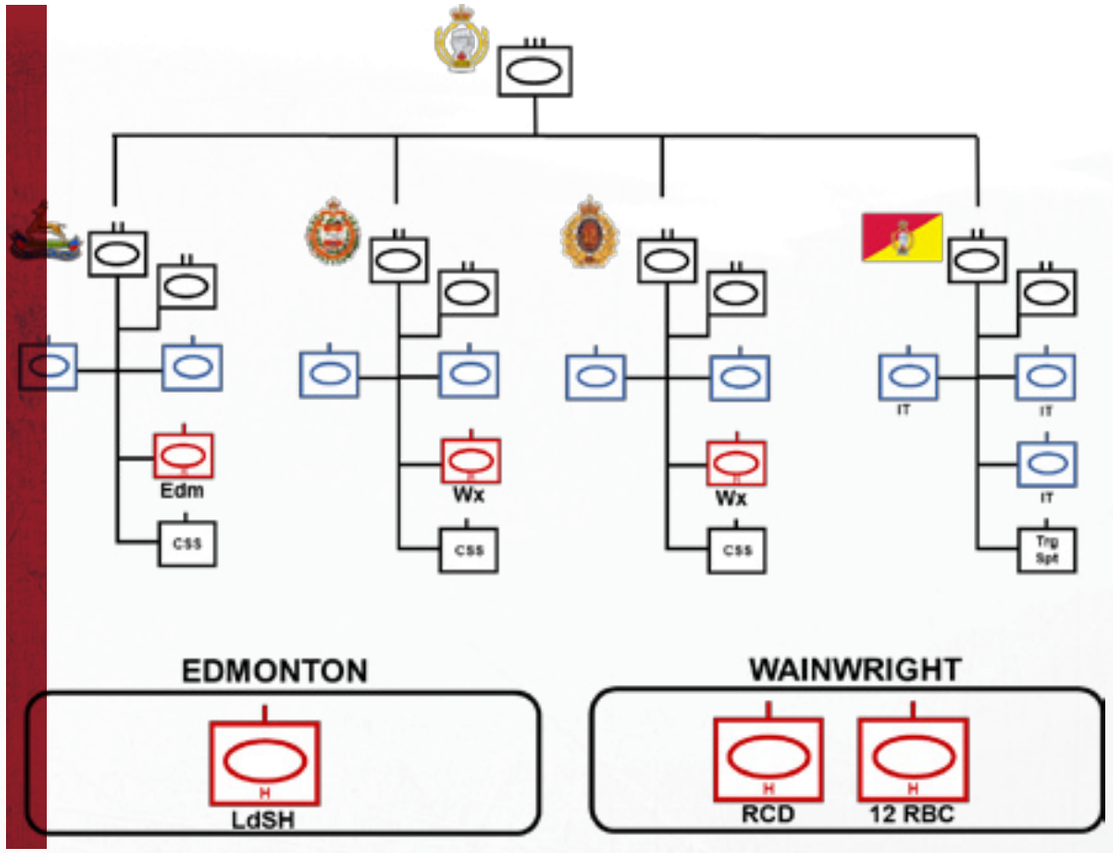
An analysis of the relevance of retaining reconnaissance squadrons revealed that this structure was no longer suitable for combined arms operations and that the deliberate approach with 20-30 tonne vehicles no longer

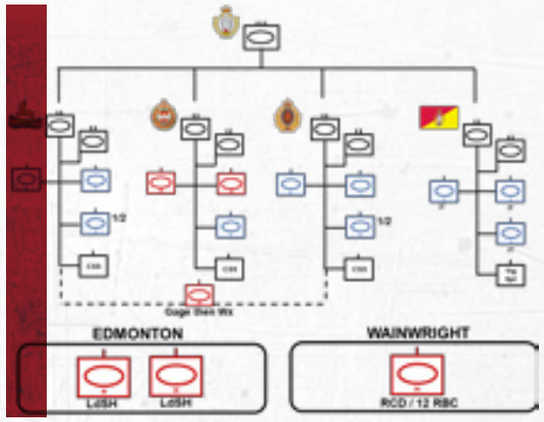
made sense tactically and was no longer used by our allies. Our analysis took into account current enemy capabilities and the recent lessons learned from various theatres of operation, and concluded that since detection capabilities were very diverse and effective, we needed to adopt an extremely dynamic and offensive structure and tactical *mindset.* Configured into cavalry troops, all the Corps squadrons will be able to conduct mounted combined arms combat operations. The Reserve Regiments will also adopt the cavalry squadron structure by 2023. The Armour School is already in the process of updating its courses and will adapt all courses for troops of four. This decision ensures that medium reconnaissance (a task that can also be assigned to mechanized infantry) will also be able to be done by any Corps squadron and will be based on more rapid, aggressive tactics. For example, if the situation permits, we will opt for tactical activities such as reconnaissance in force or advance to contact rather than zone reconnaissance. Now we have to restructure our squadrons, adapt the fighter TTP for all types of platforms, agree on terminology (cavalry and tanks) and, finally, train our personnel to operate in this environment. By synchronizing our schedules with those of F2025, we think that all of these changes will be made in time for 2025.

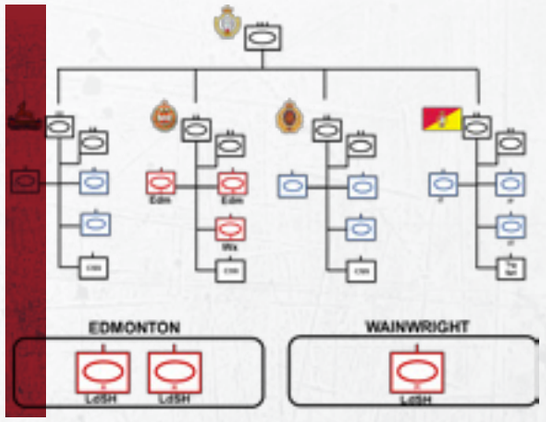




Also in this context, concerns resurfaced about funding and managing the Leopard 2 fleet, and we had to come up with some fleet rationalization options. After numerous analyses, CA HQ decided to centralize Leopard 2s out west and reduce the fleet to 60 tanks (there are currently 74) divided among three squadrons. As of the time of writing, CA HQ (DLFD) was still analyzing the impact of the three options that the Corps proposed. In all cases, the Armour School in Gagetown would lose 13 tanks and focus its individual training on LAV 6s and *TAPVs*. The first option proposed, and the one that the Corps leadership recommends, is symmetrical Regiments with one tank squadron and two cavalry squadrons each. The RCD tank squadrons and 12 RBC would be set up in Wainwright, while the LdSH(RC) squadron would remain in Edmonton. The second option would simply be to transfer the current C squadron RCD in Gagetown to Wainwright. This squadron would still be composed of members from RCD and 12 RBC. The third option would be to consolidate all tanks in the same regiment. LdSH(RC) would therefore have three tank squadrons (but would no longer have recce/CAV squadrons), while the two others would be entirely cavalry on wheels.







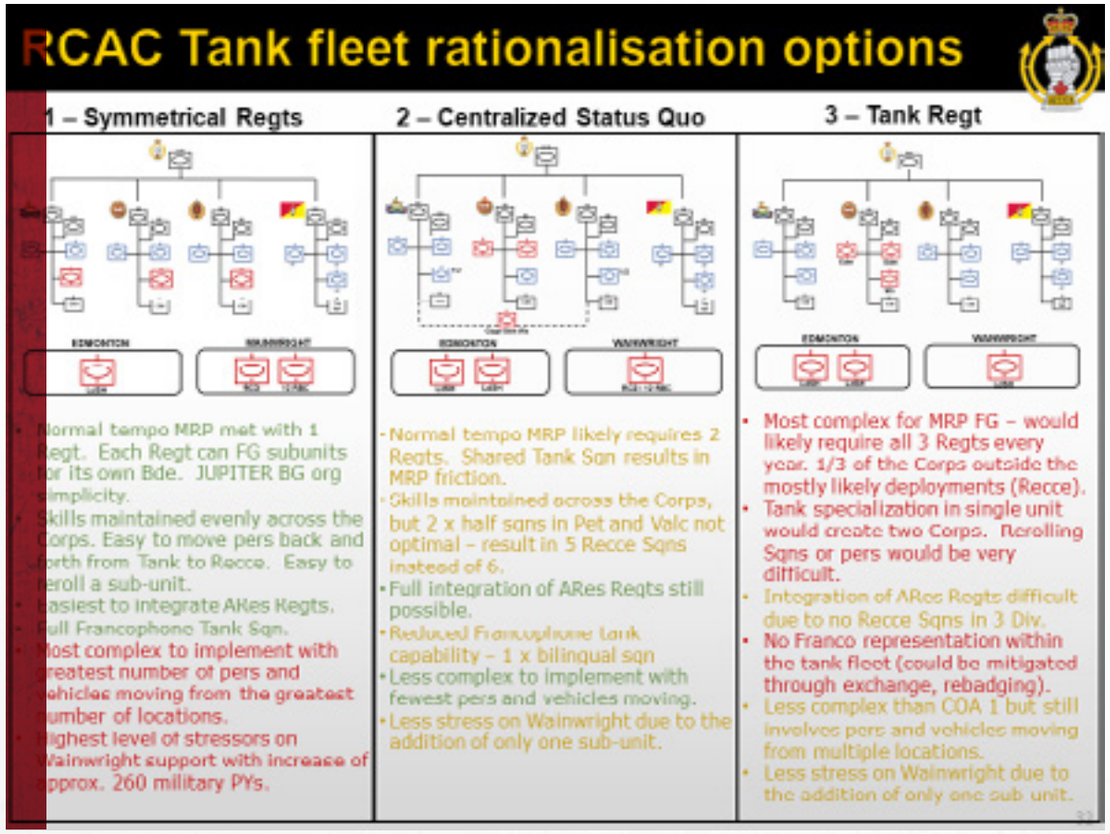
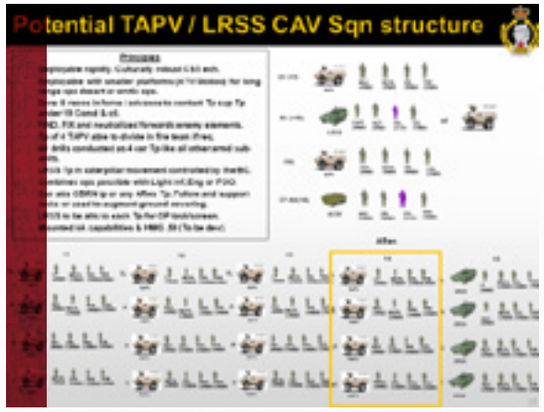


Image 8

The goal is to align these changes with the F2025 CA restructuring to ensure that the new Corps structure fully supports CA divisions and brigades. It is critical that the regiments maintain their role as a manoeuvre unit and that they provide brigade commanders with unique capabilities, regardless of the platform. An offensive, aggressive mindset focused on rapid manoeuvring; small, agile command posts employable in degraded mode; and maintaining momentum and pressure on the enemy by pursuing, counter-attacking and exploiting the enemy's weaknesses are all in the Armoured Corps' DNA, and this restructuring will highlight that again. All of these characteristics are unique to the Armoured Corps, and we believe that going back to troops of four within cavalry squadrons will foster the development of officers and non-commissioned officers, who will have the confidence required to play a critical role on the battlefield.

Another important point for the CCA is the capability to rapidly deploy land forces anywhere in the world. NATO's deployment notice periods are challenging (30 and 45 days); therefore, it is mandatory for the CA to develop a structure based on rapidly deployable troops. The Corps is perceived by CA staff as being heavy, slow and difficult to deploy. We are somewhat responsible for that perception, and it is important for the Corps to dispel that preconceived notion. That is why we presented the option of light cavalry squadrons rapidly deployable by air. A cavalry troop or squadron could be deployed to support light infantry and would provide the direct fire and mobility capabilities that are essential to this type of operation. The Corps units would therefore be indispensable to any type of mission, as the British, French and Australian cavalry units are.



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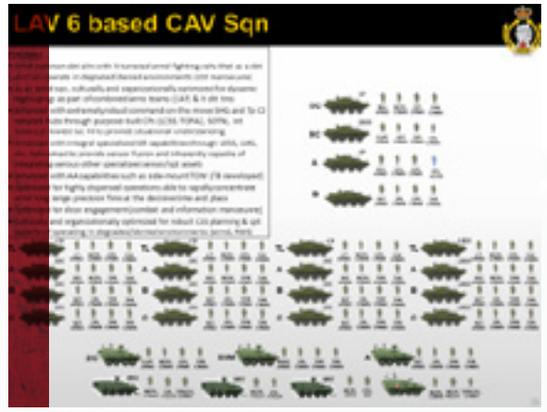


Image 10

In sum, the Corps is in good shape for the rest of the CA restructuring analysis. We have done our homework, and we have successfully come together to discuss issues and find real solutions. There is still a lot to do, but we are quite confident that the Corps will find its place in this modern army that is well aligned with the country's priorities.

Conflicts
in Ukraine and Syria

Capt V. Popenko

My name is Capt Valeri Popenko and I am currently employed as the Technical Adjudant (Tech Adj) at the Royal Canadian Armoured Corps School (RCACS). As part of my job, I was recently tasked to be a trial officer to test the proof of concept of semi-indirect fire with the Leopard 2 tank.

Recent conflicts in Ukraine and Syria have shown the importance of mobility and the engagement of targets at long ranges. The Russian Army has again began training their tank forces in the use of semi-indirect. The inherent advantage of using tanks in the indirect firing role is their ability to move rapidly after firing as well rapid engagements from different angles. Furthermore, indirect and semi-indirect fire has been used by tanks since World War II, however this skill has been lost during the last 20 years due to lack of training, doctrine, and proper ammunition. Finally, the current indirect fire capabilities of the CAF rely on towing their equipment to the firing location. This severely impacts their mobility and the ability to relocate quickly. The tank in the semi-indirect or indirect firing role can partially mitigate this deficiency.

In December 2020, the Royal Canadian Armoured Corps School rediscovered a long lost armoured capability. At a distance of nearly 7.4km, three rounds were located within 20m of the target, out of the five fired. This proved that not only is semi-indirect fire possible when utilizing the Gun Laying Instrument (GLI), the tables provided by the ammo manufacture, and some simple math, but that it is also fairly accurate. It should be noted that tracking the round was only possible with the ATTICA sight found on the Leopard 2 A4M variant. The crew commander (CC) actually developed a technique on how to lay on to the target and track the round as it made its way to the target. Due to the distance involved, trajectory, and flight time the CC focused on the target and counted to 19 in his head. Using this technique, the CC was able to observe the round as it come down in a very steep angle towards the target.

This newly found capability could have a significant impact on what the Armoured Corps is able to do on the modern battlefield. The ability to fix and delay opposing enemy forces at a distance of 6 to 8 kilometers, provide the Armoured Corps and the CAF at large with a new found capability. Furthermore, tanks can do these type of semi-indirect shoots very quickly before moving off without being engage by the enemy counter-battery. Finally, the speed and trajectory of the round could pose difficulty for counter-battery radars to detect the round in flight. This will further be tested this fall, as a follow on trial is scheduled with the NM 253 service ammo, where a counter-battery radar will be present.

With the successful execution of the proof of concept, this capability will be further evaluated in the near future with a trial being done with the NM 253 IMHE-T ammunition in a troop shoot concept. This trial will focus on verifying the lethality of the round against dismounted personnel. Furthermore, the school via the Canadian Army Instructor Gunnery Team (CA IG Tm) will be updating the Leopard 2 gunnery courses, with the goal of re-introducing indirect fire into training.

With this capability, heavy armour forces on the battlefield will be able to engage the enemy at ever greater distances, while maintaining their ability to move quickly and maintaining momentum. This rediscovered capability will be further explored with more trials and incorporated into gunnery course training.

About the author: Capt Valeri Popenko is currently employed as the Technical Adjutant (Tech Adjt) at the Royal Canadian Armoured Corps School (RCACS). His job mainly focuses on addressing the Armoured Corps technical needs with the regards to equipment and procurement.

CBRN

and the Royal Canadian Armoured Corps

Capt JF Rancourt CD

Recently the RCACS was tasked by the CA to act as the CBRN Office of collateral interest or OCI. An OCI is appointed for every functional center of excellence (FCoE) resident outside the Army where the CA has operational concerns related to the FCoE tasks and responsibilities. There is other OCI in the CA such has joint targeting or cyber.

With the Afghan war, CBRN capability within CA have slowly but steadily fade away. It reach a point where CBRN is no longer teach in some combat school and the overall depth in CBRN is non-existent. Not only it has been relegate to a third and fourth task, but has been left in the hand of very few individuals creating systemic problem. As soon as a unit CBRN "specialist" is posted, the units CBRN depth deplete drastically, same for formations. The lack of depth is now critical because any little tasked relate to CBRN is now seen as a difficult challenge at many levels. The lack of depth is also palpable within CA command structure as many officers have never been expose to a CBRN environment or task. It reach a point when some of our members, at all rank are in denial of the threat when it is very real.

Of course, the threat evolved and the likely hood of a massive CBRN attack from a foreign governments against the CAF is pretty slime. Our main challenge is that many proxy's or all sort of players have now the capability to disrupt our operation by using CBRN weapon or toxic substance on a very small scale. Establishing an OCI combined with other initiatives from CAF or CA are attempts to mitigate this problem and make sure that the CA is able to meet the requirements, accomplish all our missions and meet our commitment with our partners (NATO).

So what for the Armour corps?

One of the initiative the CA took to revive CBRN capability is that it assign Mission Task to some Reserve Units, all armour.

Slovenian soldiers from the enhanced Forward Presence Battle Group Latvia demonstrate the necessary steps to decontaminate a vehicle during a chemical, biological, radiological, and nuclear (CBRN) training exercise at Camp Ādaži, Latvia during Operation REASSURANCE, February 12, 2018. Photo: Cpl Jean-Roch Chabot, eFP BG LATVIA PUBLIC AFFAIRS

Sherbrooke Hussar, The Queen's York Rangers and the South Alberta Light Horse have been the task to generate CBRN recce troop. Those troops will eventually be embedded within a REG force formation or unit in the event of mission in a theatre with a credible CBRN threat. The concept of employment is still to be define, but those MT will allow those unit to perform CBRN Recce above the minimum standard expected from BTS and IBTS references but mostly, be ready to work as team, be confident in there SOP and equipment's. That said, it does not mean that reg force member don't need to know about CBRN… force protection is every one responsibility.

Traditionally, armour personal always practice CBRN and maintain a certain depth. Knowing how to operate a head of the brigade, isolated in a CBRN environment was a matter of survivability for recce troops. The mobility of armour pers make them the "weapon of choice" when it comes to locate a CBRN contamination, furthermore: generate plan and manage the consequences. Considering our background, the number of armour pers involve in CBRN through the years and our platform, with was natural to appoint the RCACS as the CBRN OCI.

An Opportunity

That could be seen as a burden but in fact it's an opportunity as long as we institutionalise that role and it do not depend on one individual knowledge or interest. So far, the way it has been "structure" was define by the RCACS CI and Std SQN OC. At the moment, the CA CBRN OCI reside under the umbrella of the STD SQN. A Capt, in a LO position with acceptable understanding of CBRN issue, can track development of new program and initiatives. It should be seen as a PD opportunity because it expose a Capt to the strategic and operational level. Of course, if there is decision to be made, or direct recommendation to the CA it has to go true the normal CoC, not because RCACS CoC is rigid but to make sure there is minimum of cohesiveness.

We rapidly noticed that the priority of the CBRN School in Borden, the priority of D CBRN and those of the CA are not always aligned. There is a challenge just to make sure that the places on different course are assigned to appropriate DIV in accordance with the MRP. Also, new equipment means new training. In the case of the new auto injector the medical branch has the lead on training, but some CA unit still use the old one for training. Finally, any new equipment required minimal training which is not always available for field unit.

At the Corps level, this will give the armour a new credibility within the CBRN community and a view on what's coming a head. At a time when the Armour Corps is rethinking his structure, doctrine and mind-set, that will allow to plan ahead. Recently, one CA army organisation got cut by surprise with a CBRN task because there was not capacity or depth what so ever within that organisation. This should not be seen as fail for the leadership: it is a systemic issue that exist across CAF. Of course that organisation did not stand still and rapidly found a way to achieve the task and is now ready for the mission, but it did cause a Friday after noon panic…

The culture of mobility and the aggressiveness[1] of the armour corps will certainly influence how CBRN is perceive within the CA. At the moment, to often CBRN is synonym of a burden and seem to stop everything in the field and within the staff. It should not! CBRN SOP, TTP doctrine and equipment are not designed to stop a battle formation from moving but in fact quite the opposite. If applied, the principle of *AVOIDANCE* allowed unit and formation to keep the momentum. Even if the response to a CBRN incident is hilly locals and tactical, Armour personal a much more suit to understand the big picture. The fact that we play on a map and not a grid scare allow us to better understand the ramification of a CBRN attack. In the last the decades, CAF operator totally elude the fact that behind a CBRN attack, there will be an intent and a scheme of manoeuver like any other enemy actions: *Delay, disrupt, denied, fixe* etc. etc. It almost seem like the word CBRN bring to a halt the decision/action cycle. Again, armoured have some cultural advantage on this because we are train early in our career to review constantly our estimate, look far away and plan 2 step ahead. It could also be that the writer is idealizing his trade and that CA HQ just decide to give that responsibility to the school "just because"… but I doubt it.

Actions On…

The RCACS CI and Std SQN OC already took some actions. The intent is that we adopt a proactive posture and find **simple** and **viable** solution to systemic issue that affected the CA on the CBRN aspect. The RCACS staff already reviewed some component of the Mission Task directives for CBRN Recce specially the equipment list. The original equipment list was too complicated and include equipment that did not match the actual doctrines and was not delivering the expected effect. As an example, the RAZOR X system which is some kind of a portable lab, required way too much knowledge to be used efficiently in the field. Also it defeat the purpose of the avoidance principle as one must get into the contamination to get sample. This is not the role of integral CBRN element and this would also slow down a combat formation progression in the field. We also provide advice to some units and 2 DIV in regards on how to perceived CBRN task. Finally, we attend some CBRN D meeting with CA G34 in order to better understand their constrain and eventually improve communication flow between the Strategic level and field unit, in respect of all the CoC.

Finally, the RCACS has recommend that some CBRN course to be exported from Borden in order to increase the output of the CBRN School and regain some depth and expertise. The RCACS proposal would reduce the cost of training drastically and could have a significant impact on the numbers of members (NCO and Officer) that could gain some CBRN knowledge.

In conclusion, it is the armour culture that will impact the effect of this task that was given to us. The RCACS could have just tracked email, make a few call and complain to CA G34 that there is not enough CBRN equipment… but the armour corps don't do that. We are looking at this as a mission. We keep our heads up, constantly tracking what's going on, communicate and move forward. Even when accomplishing the most admin, staffing, institutional task… we stay 2 step ahead.

1. It is interesting to note that *Aggressiveness* in our context is well define in Armour doctrines: *Tank operations must be executed with speed, resolution and boldness. It is only when the firepower, protection, mobility and flexibility of tanks are exploited aggressively that the full fighting potential is realized. Tanks should not be tied to static positions.*

Analysis

of CORPS SNR NCO (SGT's and WO's)

MWO Shawn Rheaume
DRILL SERGEANT MAJOR RCACS

It is in my professional opinion I have observed some ignorance to leadership from many of the Sgt's and Warrant Officers within the Amoured Corps. Leadership principles have been ignored and I cannot put my finger on the exact reasons why however when I joined the Corps the Snr NCO's that stood in front of me, they mentored and trained me, disciplined me when required, were knowledgeable and were simply put...tough and very proud! As a reflection of today's society it could be perceived that newer generations of NCO's to be more compassionate, more understanding and more accepting? I believe that we can still have all these qualities whilst instilling and exercising the leadership principles but should not be mistaken for being soft.

Basic skill sets and fundamentals have often taken a back seat due to the amount of tasking's, deployments and CT events pre COVID-19 however we have an opportunity to hone in on some of our basic skills right now due to the Pandemic. This is also an opportunity to realign our leadership skills at the NCO level to strengthen our junior NCM's and Officers to ground their feet on the road map to leadership success.

What is leadership? A simple definition is that leadership is the art of motivating a group of people to act towards achieving a common goal. I think we can all agree on this as the definition. In order for our leaders to lead they need to be invested in the institution and their people. Remember, joining the Armoured Corps is not just a career choice, it is a lifestyle.

Let's review the principles of Leadership:

Achieve professional competence and pursue self-improvement

- Leader competence is critical to mission accomplishment and the preservation of lives. Very early on, jnr leaders must master technical and tactical skills of their military specialty, maintaining and improving proficiency through self-study, experiential learning, formal training, and education.

Clarify objectives and intent

- To provide subordinates with maximum freedom of action and the capability to operate independently if necessary, leaders must communicate a clear picture of the outcome or outcomes they wish to achieve.

Solve problems; make timely decisions

- The whole purpose of small-unit leadership is to accomplish missions and tasks. This means solving mission problems and making appropriate considered decisions. Some decision situations will allow for little or no analysis, but where time and circumstances allow, leaders should gather as much pertinent information as possible, involve others who possess relevant experience or have a stake in the decision, and consider the advantages and risks of each option before making a decision.

Direct; motivate by persuasion and example and by sharing risks and hardships

- Leadership is about exercising influence. Leaders have to know when to direct, when to motivate, and when to enable performance through the conspicuous sharing of risks and hardships.

Train individuals and teams under demanding and realistic conditions

- Being operationally ready means being able to deal effectively with normal and worst case scenarios, handle the unexpected, and recover from setbacks. Demanding and realistic training provides these capabilities.

Build teamwork and cohesion

- Training and other formative activities that reinforce mutual dependence and support will pay off in enhanced performance and greater resistance to stress.

Keep subordinates informed; explain events and decisions

- The routine and prompt passage of information contributes to subordinate's' situational awareness and their ability to respond appropriately to a changing situation. Candidly explaining events and decisions often reduces tensions created by uncertainty and is critical to maintaining the trust relationship between leaders and the led.

Mentor, educate, and develop subordinates

- Leaders must train and develop subordinates to master the unit's operational functions, provide strength in depth, and ensure a broadly distributed leadership capability.

Treat subordinates fairly; respond to their concerns; represent their interests

- Leaders have a moral and practical obligations to know their subordinates' needs, take care of them, treat them fairly, and provide essential support for their families. Such actions help to establish and maintain trust, while also enhancing subordinates' service commitment.

The principles of leadership today are often confused with likership. Leaders today want to gain popularity amongst their subordinates. Being likeable is OK, however leaders should strive to be respected rather than liked. In the words of Walter Swinson, US Command Sergeant Major (Ret'd), [1]"Taking care of Soldiers is not about being the mother hen. It is not about giving them the softest bed, or the best food, or an A/C unit when it is hot. It is not about keeping

them from experiencing harsh environments or not allowing them to fail in training exercises that could possibly save lives while on the battle field. I am a firm believer that taking care of Soldiers is about tough and realistic training that will ensure success on today's modern battle field." As leaders it is important to experience the hardships you place upon your subordinates. To dawn the appropriate PPE regardless of weight or weather, as we must educate soldiers to train as you would fight. You the "leader" and the NCO are the example for your subordinates to emulate. This would not only mitigate physical risks associated to training and combat but will build upon a system of trust, preparation and would foster a warrior spirit amongst your team which when observed by other professionals "looking in" should become contagious and should create some jealousy.

It is also the Snr NCO that enforces the policies and regulations that are in place. Simple things like haircuts, how you wear the uniform, placing hands in pockets, chewing gum in uniform, subordinates not accepting responsibility for their actions or inactions or not being truthful are all part of a soldiers dress and deportment. When an NCO ignores infractions against policy, this in turn would be the "standard" they accept and will erode the foundation built by our predecessors'. Without a strong foundation the walls and roof will start to collapse and will weaken our combat capable forces which will have implications when you train and fight. Enforcing policy as an NCO is our "raison d'etre".

In closing Snr NCO's need to become invested in leadership. They need to respect the dignity of all people, show integrity and excellence, and be loyal and courageous. They need to share the risks and hardships and celebrate achievements with their soldiers. They need to be firm in enforcing policy and fair in the process. Remember, your greatest asset are your soldiers!

1. Article by Walter Swinson, US Command Sergeant Major (Retired)

Modernizing

Individual Training in the Royal Canadian Armoured Corps

LCOL Sylvain Gagnon,
CD CMDT RCACS

There has been a significant amount of changes within our beloved Royal Canadian Armoured Corps (RCAC) over the last year; whether it be the delivery of Individual Training (IT) at the Royal Canadian Armoured Corps School (RCACS) or the introduction of the CAVALRY concept in all units, both RegF and ARes, of the RCAC. Some have noted how the ongoing pandemic created many opportunities and forced us to rethink how we conduct and protect our critical enterprise. Having had theprivilege of a unique vantage point at the RCACS over the past decade, first as an OC, then as Chief Instructor and more recently as the Cmdt; I can confirm that although the pandemic did create a few opportunities, in fact, many of the recent changes were in the making well before the fall-out of COVID-19 and are the results of a multi-year deliberate process.

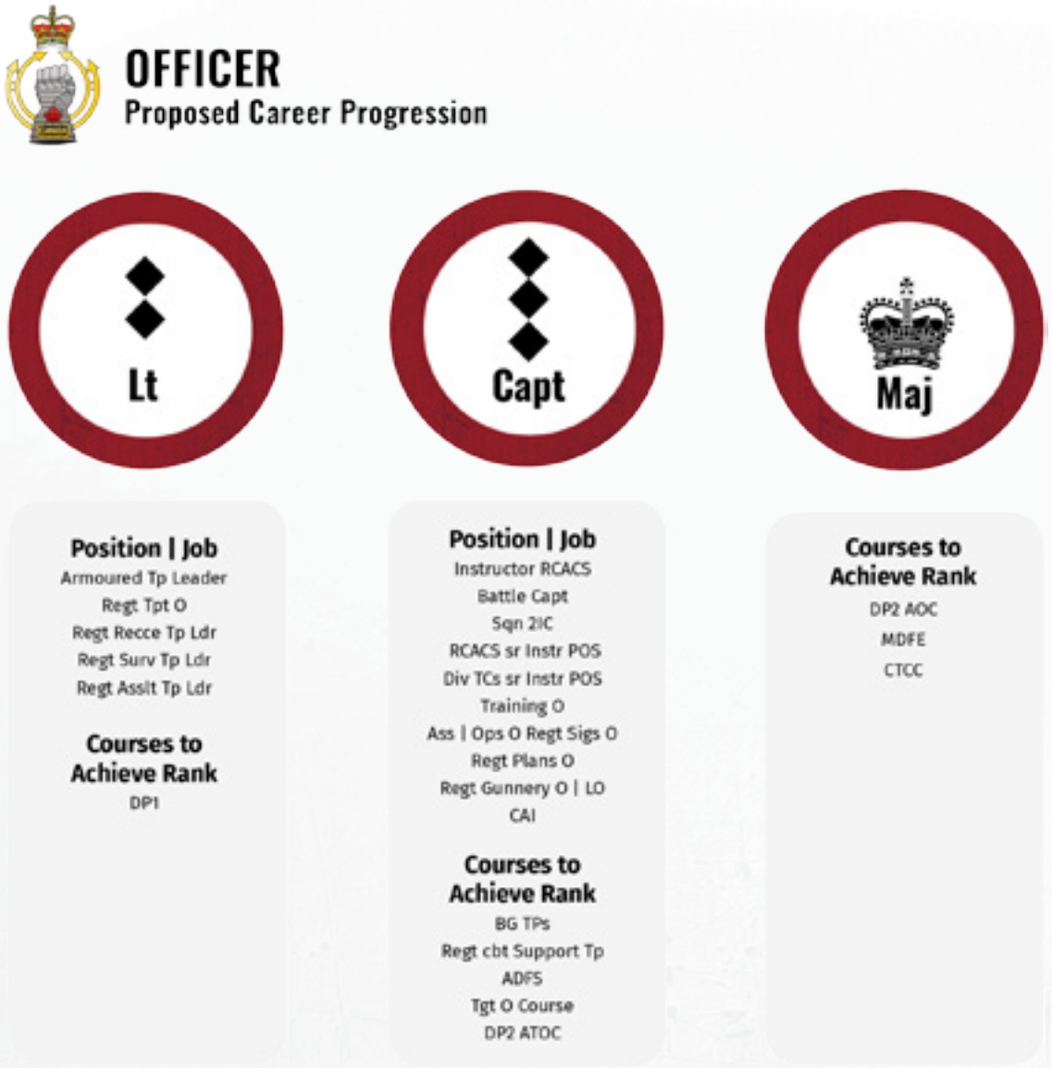
The genesis of this process dates back to the decade following the closure of the combat mission in Afghanistan. At that time, the RCACS was delivering the majority of its IT based on Recce Sqn tactics and TTPs as its baseline, while we still offered some tank based training specifically for personnel designated to serve in Tank Sqn. Even though the specifications of our occupations still dated back to late 1990s and our "official" occupational structure still had us as a single occupation for both officers and NCMs; the Afghanistan years and the re-introduction of the Main Battle Tank had effectively created two separate "streams" in our IT system and the School kept adapting the NCMs progression model thru several iteration to meet the Field Force's (FF) demand with mitigated success. It was quickly realized that this solution was unsustainable namely due to the small size of our occupations and the complications for our IT system to reconcile the intricacies for members crossing from one "stream" to the other. Essentially, we tried to adapt and modify our specifications in order to address immediate shortfalls and roadblocks, which resulted in the development of unorthodox progress streams, as shown below.

what was it that we would we need to fix to address these issues? And more importantly, how would we achieve this goal? Here's how:

For the Armoured officers, the introduction of complete IT, entirely based on Coyotes platforms and based Recce tactics as well as TTPs following the retirement of the tanks in the early 2000s, resulted in a much higher attrition and failure rate for officers prior to reaching OFPs; reaching over 66% failure rates pre-OFP. Unlike many generations of Canadian Armoured officers before them, they were now learning to crew command mainly on roads (based on the nature of many recce tasks), therefore beginning their formation on a weaker foundation. They carried this into their Armoured Reconnaissance Troop Leader (ARTL) module 2, where they learned to troop lead with the most complex tasks – Armoured Reconnaissance; many candidates weren't able to reconcile the demands of patrol commanding, and troop leading based on a weaker crew commanding foundation. This specific recce based training and the follow-on employment of that generation of ARMD officers, resulted in what I like to refer to as the "lost generation". For no fault of their own, we had ARMD officers attending either ATOC or AOC with no true understanding of the employment of tank squadron, let alone how it fit within a combat team and how it is supposed to be the epitome of manoeuvre warfare. With the deteriorating state of the officer's occupation in terms of manning, notably at the ranks of captain and major; our first challenge was set: we needed

It is not until I was posted to Chief Military Personnel (CMP) within the Directorate of Personnel Generation Requirements (DPGR) as Section Head for Military Employment Structure analysis teams that I realized that bringing both our occupations for analysis at DPGR to confirm the right structure and to update our specifications through a deliberate and scientifically based process would be critical to our future success; rather than continue making ad hoc changes as we had been doing up to that point, always trying to fix an issue and unconsciously creating another one further down the line. This was going to be the first step in the ongoing complete revision of all Qualification Standards (QS) and Training Plan (TP) for all courseware owned by RCACS. The DArmd at the time, Bgen Cross agreed to make a request to have both ARMD and CRMN occupations undergo and complete MES studies; thru a deliberate process both our occupations were structurally analyzed to ensure their future long sustainability in terms of personnel management. The output of the MES review is an updated occupational specifications and a validated Master Tasks List (MTL) which are the building block for the training institution to build training matching specific Eos and POs to be match to all critical tasks. We have since completed both analyses and confirmed we are single stream occupations; not Armoured Reconnaissance; not Tankers but rather Armoured soldiers and officers.

With a clear mandate to modernize and realign IT events within both occupations' progression models, the School had a tall order to undertake; but



to reintroduce manoeuvre warfare to pre-OFP officers training while we increased our failure rate all while building a system that could double our officer intake from 24 to 48, annually.

For the NCMs, the problem set was different, although we did face some production challenges, these are mostly due to a backlog largely caused by the COVID-19 pause in IT. However, the consequential metamorphosis that resulted from many changes to CRMN progression model, the lack of equivalencies at Sgt rank level between what was then the "Recce stream" and the "Tank stream", and more than a decade of training and fighting a counter-insurgency, has resulted in a loss of technical expertise at various levels and the degradation of certain field craft skills within our troops; but more importantly and based on trends observe through different iterations of Ex WORTHING CHALLENGE, we needed to do some significant improvement to our training to increase our AFVs crews' lethality.

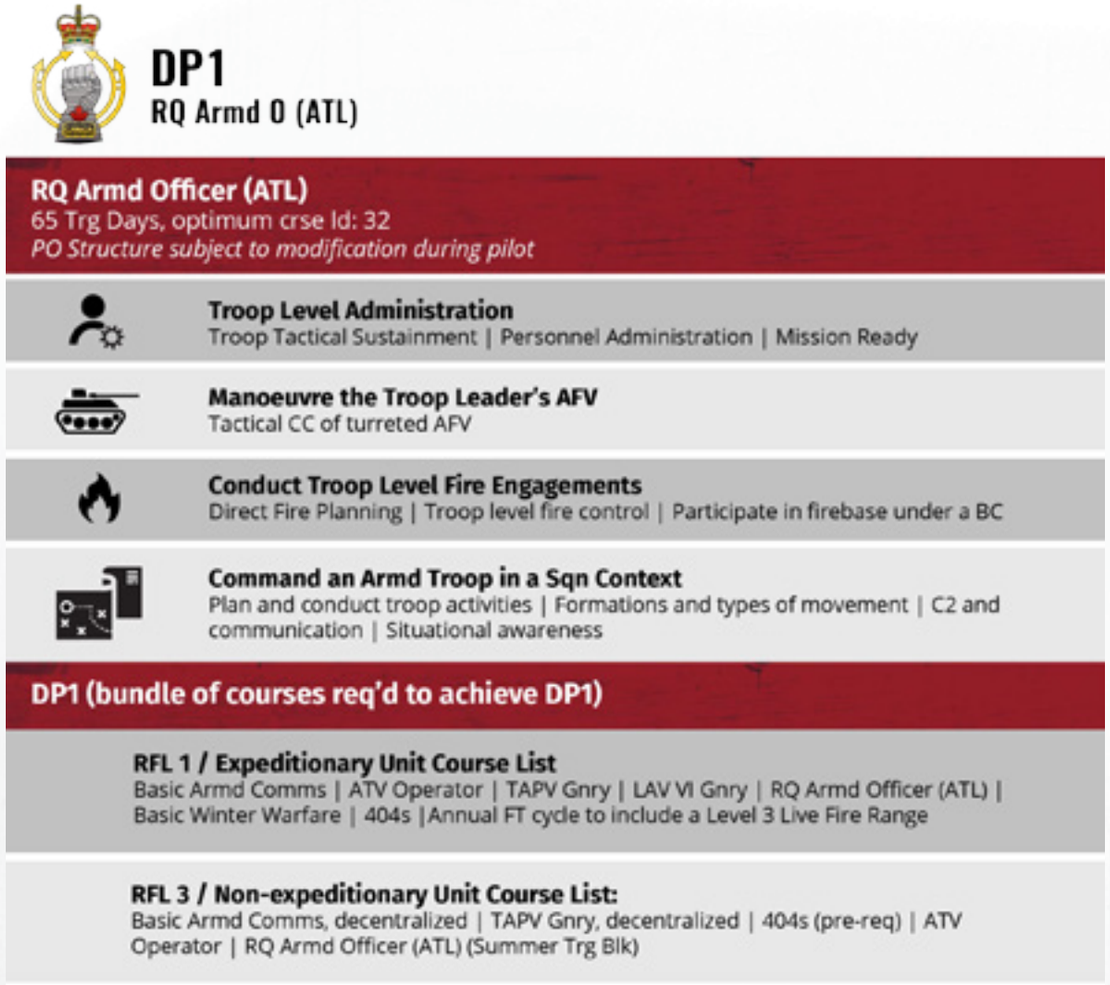
- This is of course a generalization and I'm sure many can quote plenty of examples of NCMs that recently spent their career entirely on tanks or within a Recce Sqn; but you will have to admit it is becoming challenging to find a Sr NCOs that are as knowledgeable on their platforms than our Sr NCOs were, say 20 years ago.

Now that we understood what needed to be addressed in the development of future courseware, it was clear that we needed to embark on a methodical and sequential review of all our QS/TP at RCACS. However, considering the critical state of the ARMD officer occupations, we started by focusing all the Training development efforts on the DP1 officer model as many of the work done in these boards would be re-usable for the NCMs crew commander and troop leading (read Tp WO) future courses. Although it is clear we cannot train the Sr NCOs in the exact same way we train officer candidates, as the latter comes with a much smaller experiential background to fall back on. In developing the new officer training model we emphasized on the necessity to have a more progressive way of introducing mounted warfare to our young officers. Up to this point, our training philosophy at the school had mostly focused on selection rather than true mentoring. There were many efforts with recent School Cmdts to reverse the trend of the DS "hiding" behind his clipboard syndrome and I believe we have come a long way from the years since we ourselves came through the School and the coaching mentality has since been ingrained, but our assessment guides were all still geared towards a certain selection. Put simply, we were basically taking a bunch of brand new officers that had just completed a dismounted infantry section commander course and throwing them in a tank going cross-country at over 50km/h while they had to sort out how to navigate while moving, what an actual troop of tank does and how it moves, and how they fitted in that greater scheme– OVERWHELMING most would agree. Essentially, those that got it, got to join our great brother/sisterhood and the others were recycled elsewhere. Some will surely state that we've all been there and that is

	D.P. 1.1	D.P. 1.2
Duration	35 days (21 in field)	58 days (45 in field)
Serials | Year	2	1
Max. Students | CRSE	24	24
Student	- instructor ratio 6:1 garrison - 2:1 field	- instructor ratio 6:1 garrison - 2:1 field
Pre-Course	Leo 2 CC gnry (26 days) + basic comms	25mm CC Gnry (19 days)
Course	- AFV1 - C6 - Crew Commanding (Off, Def)	- AFV2 - Battle Procedure - Tp Ld Recce Task - Tp Lead Screen Ops
Recurring Feedback	Hasty Attack has far too much focus, particularly when performed dry. Limited training value	Increase engagement of SMEs from other combat arms.

* With gunnery courses, it takes 160 training days to bring an Armd officer to OFP.

Old DP1 ATL Courses Snap Shots



how we've always done it; I would argue that this is not the most progressive way of doing things and our current way/old way is no longer working judging by failure rates of the last decade. Therefore the new Armoured Troop Leader (ATL) course will now initiate officer candidates to mounted warfare not in AFVs, but rather in ATVs. Through a series of inquisitive and progressive exercises, these new officers will develops there navigation skills while themselves manoeuvring their ATVs on the ground. The ATVs will also be used to initiate them to mounted warfare concept and demonstrate how an Armd Troop operates in the field; this is meant to increase their level of understanding and experience as they don't have the luxury to learn through osmosis by serving in Armd Tp like most NCMs have the opportunity to do before arriving on their crew commander course.

We've looked at how our closest allies train their armoured officer in search of further inspiration and it is arguably the French Army model in which we found the most the attributes that we were looking for and was yielding the highest success rates at the end of the initial formation; but crucial precept would need to be challenged to enable this new approach. Another change in the approach we needed to introduce was more flexibility in the amount of time required to attain THE standard for each students. We've all seen students requiring a few more attempts to put a successful trace together; in the past when time ran out the students were normally re-coursed to the next available course. We argued that instead of re-coursing these students that understand but need more practice, we could keep them on course, offer further opportunities to improve, as long as they did not impede on the remainder of the students' progress and we could work with them diligently developing a more personalized mentoring approach early on ensuring more students meet THE standard by the end of the formation. This new cohort of officer training at the school will feel a lot more like an academic years where they are followed by the same instructors throughout the year that will provide constant and valuable feedback and adapt mentoring techniques based on the individual needs of the each students. In the complete redesign of the ATL, we wanted to better prepare the new Tp Ldr to the rigours of Day 1 in their respective regiments. We had been doing a decent job at preparing our students to be competent Tp Ldr in the field but little attention was given to the development of the other crucial skills that makes up good leaders, namely how to take care of your subordinates. Again, with the new ATL, new candidates will be exposed and coached through realistic and challenging fictitious administrative cases and will leave the School with a full baggage of skills ranging from professional conduct, to nutritional

knowledge, to counselling skills to more martial skills with the introduction of mandatory grappling training for all officer candidates, these are just a few examples of the new pilot course that will start in September 2021 and we are convince that this new 11 months long program will yield much higher success rates and ensure flexibility in our production requirements.

However, the COVID-19 did create some opportunities, mostly on the NCMs career progression model. By pausing the entire CA IT system for a few months created an immense amount of backlog in qualifications required across the Army. We are still living this effect, every other Army occupation is living it and will continue to do so for the foreseeable future. Thousands of qualifications that were expected, were not delivered in this short window between March and July 2020. This has created immense pressures on the CA to find solutions as more taskings to the FF to run more courses were not an option. Also, the inability for CMP to train all the new recruits since the start of the pandemic the requirement for the CA to assist in this effort further compounded the Army Training Authority to review the generic CA NCMs progression model and question some of its assumptions. From this exercise came the decision to authorize each combat arms occupation to merge current Basic Military Qualification-Army (BMQ-A) with their respective DP1 training and to do the same with the Primary Leadership Qualification module 4 with their respective DP2; both of which the RCAC is at the forefront of the initiative and will be running in 2021 the first new Rank Qualification

(RQ) Trooper which will replace the old BMQ-A and DP1 CRMN. 2022 will see the new RQ MCpl replacing the old PLQ mod 4.

It is my opinion that we need to reintroduce more technical knowledge and stronger skills base for our NCMs. I would like to break it down into the three essential skills we must all achieve and perform as Armoured soldiers. MOVE. SHOOT. COMMUNICATE. There is no doubt in my mind that we are still masters of mounted warfare and we excel at the art of manoeuvring, therefore, the MOVE function is probably the one requiring the least amount of work to ensure our NCMs master those skills; but as I have mentioned before, we have lost some ground in terms of our ability to maintain our fleet from a user perspective and we can definitely improve on our fleet husbandry – so it is in this area that we are looking to further develop the courseware for future NCMs at both RQ/DP levels. In terms of the SHOOT, we certainly need to increase our crew lethality if we want to stand a chance on the battlefields of the future. In order to do so, we must reverse the trends of recent years and allocate appropriate time and resources to conduct CONTINUOUS crew gunnery training throughout the year, not solely before annual gun camps. Efforts are already on the way to reversing this trend with initiatives such as the Armoured Fighting Vehicles Operational Shooting Program (AFVOSP), the reinvigoration of Instructors in the Gunnery programs within the Corps and allocating more ammunitions annually for crew-level specific training. Finally, but not the least, I believe it is on the COMMUNICATE function that we need further development to ensure our relevance and survivability on the battlefields of tomorrow. This is more than communicating on the radios, it requires us to become masters of information management – information warfare expert. We can find the enemy no problem, now we must learn to master and exploit all the incoming battlefield information systems that will be fielded in the CA in the coming decades and interject ourselves as key stakeholders in battle for information where our soldiers would not only locate the enemy, interpret the information but most importantly disseminate this key information for commanders to take action at all levels thru technologically advanced means or in degraded modes.

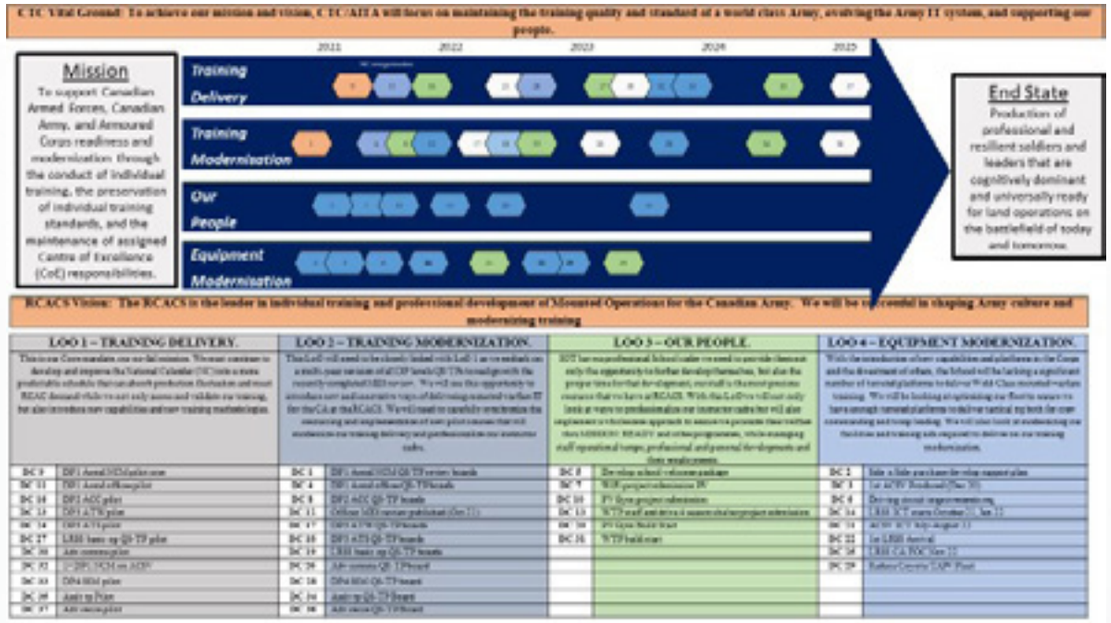
With all these new concepts in mind, significant investment in time and personnel had to be initially made to ensure we conducted a thorough analysis of our current courseware and left no stone unturned. That is why Standards (Stds) Sqn of the RCACS was given a rejuvenation cure through an efficient re-structure and re-assignment of more SMEs to assists in their work; as they lead the effort to collect, interrogate and design new QS/TPs for each course that would result in new courseware and innovative ways of teaching mounted warfare. A lot of work has been done by our Stds Sqn Training Optimization Troop and our Training Development Officer towards setting the conditions to modernize the school training methodology and courseware. We are not looking simply at WHAT to teach as we review our process but more importantly HOW we are going to introduce new concepts in an innovative and captivating way following the principles of adult learning methodologies.

With all the ongoing changes, not only at the School but also within the Corps, I felt it was important that we establish a multi-year plan to guide the School through all these efforts. That is how I conceived the 5-year campaign plan that will set conditions to enable the change in our structure, equipment, IT, CT, doctrine, and TTPs. We then took this design and further developed it into a robust campaign plan for the RCACS through various strategic planning sessions, to ensure we established a timeline for the School to review systematically and chronologically each DP level QS/TP to modernize the content, but chiefly, the training delivery methodology.

RCACS Campaign Plan.

In order to accomplish the mandate that we are setting about, the RCACS has developed a multi-year Campaign Plan with the following Line of Operations (LoO) to ensure that we modernize our training delivery and remain relevant for the second-half of the 21st century:

1. LoO 1 – Training Delivery. This is our Core mandate, our no-fail mission. We must continue to develop a National Calendar (NC) that meets the Field Force demands while we not only assess and validate our training, but also introduce new capabilities and new training methodologies.



2. LoO 2 – Training Modernization. This LoO will need to be closely linked with LoO 1 as we embark on a multi-year revision of all DP levels QS/TPs to realign with the recently completed MES review. We will use this opportunity to introduce new and innovative ways of delivering mounted warfare IT for the CA at the RCACS. We will need to carefully synchronize the resourcing and implementation of new pilot courses that will modernize our training delivery and professionalize our instructor cadre.

3. LoO 3 – Our People. In order to achieve our goals, the Corps needs to invest massively in terms of manning for the School. Concurrently, we need to further develop a professional School cadre where we need to provide candidates/students not only the opportunity to further develop themselves, but also the proper time for that development; our staff is the most precious resource that we have at RCACS. With this LoO we will not only look at ways to professionalize our instructor cadre but will also implement a wholesome approach to ensure we promote their welfare through MISSION: READY and other programs, while managing staff operational tempo, opportunities for professional and personal development and current employments.

4. LoO 4 – Equipment Modernization. With the introduction of new capabilities and platforms in the Corps and the divestment of others, the School will be lacking a significant number of turreted platforms to deliver wold-class mounted warfare training. We will be looking at optimizing our fleet to ensure we have enough turreted platforms to deliver tactical training both for crew commanding and troop leading. We will also look at modernizing our facilities and training aids required to deliver on our training modernization.

Conclusion

If there is one thing that COVID-19 has taught us is that we need to have a more redundant IT system that doesn't depend solely on the RCACS to deliver key RQ/DP level courses and those must be easily exportable/decentralized in order to continue to meet key FF demands. We have made some significant advancement with this over the course of the last year where we've put together a workable plan for most units with the assistance of the School's Stds Sqn Training Support Tp to export/decentralize not only Crew Commanding courses but also Tp Leading courses. In fact, the School supported an exported

ATL Exp
Course Overview

Key Skillsets in the Course

Grappling (Aggressive/Adaptive physical mindset)

Mission Ready Principles

RCAC focus on Admin training

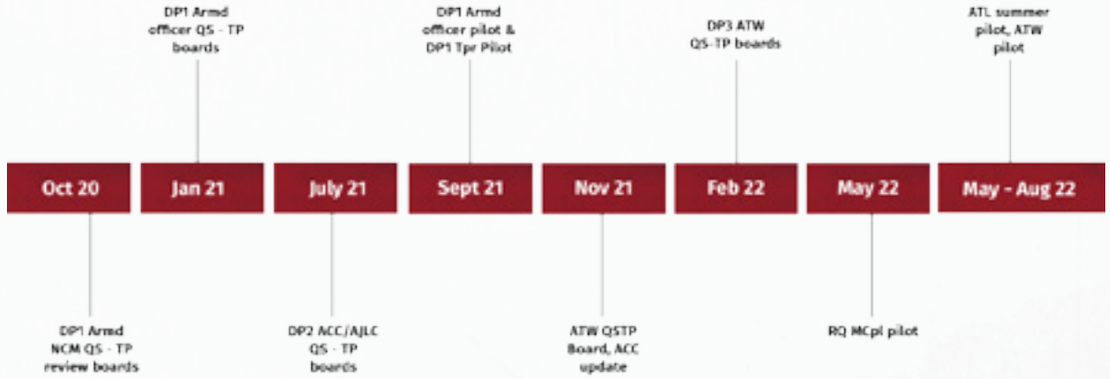
Day 1 Employment Preparedness

ACC (Common) serial to each RegF regiments and 4 ARCC serials ran through various Div/Bde/Unit efforts. These local initiatives demonstrated the ability to further develop this model and the next step will be the further elaboration of experiential learning to assist FF units to grant key qualifications through the execution of those functions by selected individuals that are on Road to High Readiness and can't be spared by key career courses. These mechanisms remain to be developed but are the next logical step in the evolution of IT in the CA.

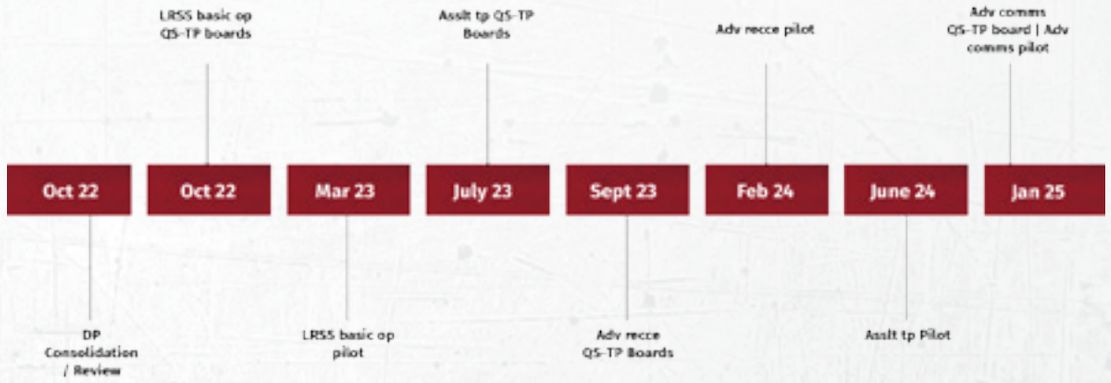
As you can see, our Corps is truly innovating in terms of developing and delivering innovative IT for mounted warfare. Whether it is through the completely revamped ATL course that will leverage modern adult learning methodologies, or the delivery of the first merge BMQ-A and DP1 for our ARMD NCMs, the first Corps to do so; our School remains at the leading edge of training modernization within the Combat Training Centre which is perfectly nested within the Canadian Army Modernization Strategy.

Training
Modernization Timeline Updated

2 yrs for DP 1-4



2 yrs + for Technical/Adv Crse



* Ongoing: Sqn Concept Course Integration Review (Total Force)
FEB 22: DP3 Off QS/TP boards (RCACS)


ALSC
Army
Learning
Support Centre
Centre de Soutien
à l'Apprentissage de
l'Armée de Terre
CSAAT