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WHO CALLS THE SHOTS?
EQUIPMENT MANAGEMENT OPTIMIZATION WITHIN CANSOFCOM

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AIM

1. The aim of this paper is to analyze current equipment management practices within the Canadian Special Operations Forces Command (CANSOFCOM), with an emphasis on possible improvements to life cycle management. Current practices, organizational structures and authorities will be assessed, with a view to ensuring technical assets are optimally managed to preserve capabilities. This will be accomplished by examining the interface between capability management within the operational community and technical equipment oversight at the institutional level.

INTRODUCTION

2. Current equipment practices within the Department of National Defence (DND) are designed for large-scale conventional forces. Major capital assets like ships, aircraft and tanks are multi-million dollar systems-of-systems that are spread across the Canadian Armed Forces (CAF), which must be centrally managed in order to ensure activities like configuration management, national sustainment funding, and technical modifications/upgrades are executed properly. Even relatively simple, low-cost items like the C7 rifle are so numerous and wide-spread that centralized control is logical. If technical oversight of these assets was decentralized to individual organizations like Brigades, Wings or Fleets, no two organizations would manage their individual assets exactly the same, platforms would start to diverge and national capabilities would begin to degrade. Not only this, but the magnitude of cost associated with this equipment exposes DND to significant risk if no centralized control of resources exists. This comes

at a cost to how responsive the system can be to evolving operational requirements, however is mitigated by the fact that major platforms are generally multi-decade capabilities.

3. On the other hand, CANSOFCOM is a very unique organization in many regards. At its core, it relies upon a relatively small group of highly trained operators to conduct difficult tactical tasks that have strategic value. As the nature of these tasks often boil down to both significant shaping operations and critical moments of overwhelming combat power and tactics, techniques and procedures (TTPs), a key aspect of mission success is technological overmatch.[1] Furthermore, the shear breadth of disparate tasks for which CANSOFCOM must be prepared to conduct is limited only by what strategic decision-makers deem appropriate, and therefore requires a wide variety of diverse supporting equipment. Finally, the exponential rate of technological advance to maintain overmatch requires almost constant equipment replacement. This reliance on technology, the wide scope of capabilities required and the short life cycle of associated kit creates a chaotic equipment environment that must be managed prudently, which is not effectively accomplished by the current DND model.

DISCUSSION

4. In order to assess where deficiencies exist, it is critical to first examine how formal equipment management is done in DND, along with the *fundamental philosophy* behind the current structure and processes, so that the intent of policies can be understood

[1] Bernd Horn, *The Strategic Utility of Special Operations Forces*. Canadian Military Journal, Vol. 14, No. 4. 2014, 69.

and extrapolated. Within DND, equipment management is the responsibility of the Assistance Deputy Minister (Materiel) (ADM(Mat)), who is the Technical Authority for all DND equipment and is mandated to both "support the pre-eminence of CAF operational requirements, materiel performance and readiness", while "managing materiel in a sustainable and financially responsible manner that supports the cost effective and efficient delivery of DND and CAF programs".[2] In order to accomplish this task, enough centralized control and oversight must exist to ensure standard practices and overall resource management is conducted efficiently, without compromising operational focus and ensuring equipment requirements are effectively met. By pushing authorities, responsibilities and accountabilities (ARAs) down as far as specific conditions will allow, the process can be made less bureaucratic and therefore more reactive to operational realities without losing positive control on critical processes that could result in diminished capabilities and eroded departmental credibility. In other words, a *reasonable balance* must be struck between operational imperatives and institutional oversight.

5. The way that ADM(Mat) accomplishes this is by establishing subordinate organizations that support the Canadian Army, Royal Canadian Navy and Royal Canadian Air Force individually.[3] Each contains technical experts within Equipment Management Teams (EMTs), the core element of which are Life Cycle Materiel Managers (LCMMs). These individuals are a mixture of CAF and civilian DND employees, most of whom are retired CAF members themselves. They act as Technical

[2] Department of National Defence, *DAOD 3000-0: Materiel Acquisition and Support*, Para 3.3
[3] Department of National Defence, *LCMM Activities Handbook*, page 1-3-1, para 3.0.2

Authorities on behalf of ADM(Mat),[4] and are able to provide the interface between the operational community and the resource/process managers of DND due to several factors:

a. Technical expertise of the equipment. At the core of their function is a detailed knowledge of the equipment within their portfolio. For example, a Weapon Technician that has demonstrated technical expertise of items like the C7 rifle and variants of pistols throughout many years of field experience would be selected to act as the Small Arms LCMM. This enables the LCMM to understand technical issues arising from the field force with respect to a particular piece of equipment, determine a solution in conjunction with industry and other technical experts within DND, and provide technical direction nationally;

b. Operational experience pertaining to the capability. In addition to technical knowledge of the equipment, the operational functionality of the system is critical as well. Throughout their careers, LCMMs have established extensive experience alongside the operator community in order to understand how the equipment is employed in the battlespace, so that they can be more effective technicians and link technical solutions to user requirements; and

[4] *Ibid*., page 1-4-1, para 4.0.1

c. Knowledge of equipment management functions. Upon their posting to ADM(Mat), equipment management training is a mandatory requirement. This has nothing to do with the types of equipment they will be managing and their technical specifications, but rather focuses on processes and administrative functions they are expected to use to complete their responsibilities. This ensures that the governance aspect of their function as Technical Authority is done properly.

6. Based on these factors, ADM(Mat) then feels confident enough in the EMTs and LCMMs' ability to support his/her mandate to formally delegate ARAs to their level in the form of Technical Authority. This accomplishes two primary goals, as it empowers individuals with the right level of technical experience to make decisions about equipment they understand, while increasing institutional oversight by expanding ADM(Mat)'s reach and capacity through proxies that are accountable to him/her. The problem arises when this is contrasted against the complex nature of CANOSFCOM equipment as previously identified. Based on the importance of technological overmatch, scope of unique equipment and its extremely short life-cycle, retaining technical and operational expertise that far removed from the operator community is impossible and does not satisfy the mandate of maintaining operational readiness.

7. In order to address this unique environment, an integral EMT within CANSOFCOM Headquarters (HQ) was created. This provides a dedicated technical organization that reports to the Commander of CANSOFCOM, which is fully immersed in the culture and particular challenges of the Command. Although this is part of the

solution and provides a certain degree of flexibility, significant gaps still exist. Not only is the Command fundamentally different than conventional forces, but each individual CANSOFCOM unit contains vastly different capabilities and corresponding equipment. This means that the integral EMT manages portfolios that are "a mile wide and an inch deep", containing equipment with which they regularly have no experience and that changes long before they can become even rudimentarily knowledgeable. This creates a significant gap in the current technical chain within CANSOFCOM.

8. To provide context and scope to this issue, the groups of equipment that exist within CANSOFCOM must be identified. They can broadly be defined as three over-arching categories:

a. CAF-Wide Equipment. The portion that is part of a broader "green" fleet used by at least one other service (e.g. the Canadian Army), for which CANSOFCOM is neither the operational nor technical subject matter expert (SME). This is the least numerous equipment by both type and volume, and is the most easily addressed as EMTs already exist within ADM(Mat) to provide the necessary support. There are currently no obvious gaps in equipment management pertaining to this category;

b. Pan-Command Equipment. This equipment is used by at least two separate CANSOFCOM units, and therefore should be managed at the next highest level of the technical chain, which in this case is the CANSOFCOM EMT. This is the current practice, and although significant challenges exist at this level due to lack of human resources,

the framework is in place and is improving over time. Balance between technical/operational experience and institutional oversight is generally achieved within the EMT for pan-command equipment, and is therefore not the primary source of technical deficiencies within CANSOFCOM; and

c. Unit-Specific Equipment. This is the most substantial portion of CANSOFCOM equipment, both in terms of shear volume of items and diversity. These items are tied to very unique tactical capabilities and are arguably the most critical operational assets, as they create niche capabilities that can be used to tailor Special Operations Task Forces (SOTFs) to a vast array of mission profiles and threat assessments. However, *significant* gaps currently exist in the management of this dynamic portfolio and must be addressed, particularly if CANSOFCOM wishes to retain its capability agility in the increasingly risk averse resource management environment of DND.

9. When considering the challenge of managing unit-specific equipment, the primary deficiency is that the previously discussed factors required for Technical Authorities to be successful do not reside within a single organization, and therefore ARAs are not properly aligned:

a. Technical expertise of the equipment. Personnel that manage unit-specific equipment are competitively selected and then rigorously trained within the associated unit. Since none of the unit-specific items are

present anywhere else in the CAF, it takes years to develop technical expertise. These individuals only exist within that particular unit, and even if they were to be posted into the EMT, they would have no familiarity with the equipment of the other units. Therefore, the necessary level of technical expertise of the equipment exists at unit level only;

b. Operational experience pertaining to the capability. For unit-specific capabilities, operational focus and relevancy are assured by assigning the responsibility for a capability to a specific capability manager, and by aligning them as close to the operator community as possible. As an example, dive operations are a critical capability within CANSOFCOM. This capability is developed, TTPs are established, and operators are taught to apply this capability to mission sets by an extremely experienced Unit Master Diver, who is dedicated to ensuring the capability remains world-class. This model can only be accomplished through direct involvement in collective and individual training, during domestic and deployed operations, and through cooperative capability development, where interactions between the capability managers and end users of the capabilities work together to improve them in real time. Therefore, the necessary level of operational experience pertaining to the capability exists at unit level only; and

c. Knowledge of equipment management functions. The capability managers that have the technical and operational expertise do not have the

bandwidth to also handle the burden of these functions, as any dilution of their focus on maintaining the capability will cause it to suffer. Not only this, but the current structure of Force Sustainment functions within the units is designed for operational support rather than high-level institutional oversight. On the other hand, the EMT focuses strictly on equipment management functions, trains their individuals in these areas, and has strong relationships with the ADM(Mat) community. Therefore, the necessary level of knowledge of equipment management functions exists within the CANSOFCOM EMT only.

10. Essentially what this means is that the operational and technical knowledge of the capabilities are found only at unit level, while the knowledge of the necessary institutional functions is found only within the EMT. Since ADM(Mat) will only delegate formal Technical Authority as low as the level that can reasonable ensure institutional oversight is maintained, it resides within the Command HQ for both pan-Command and unit-specific equipment, the latter of which they possess virtually no operational/technical knowledge. This is depicted in Figure 1 below:

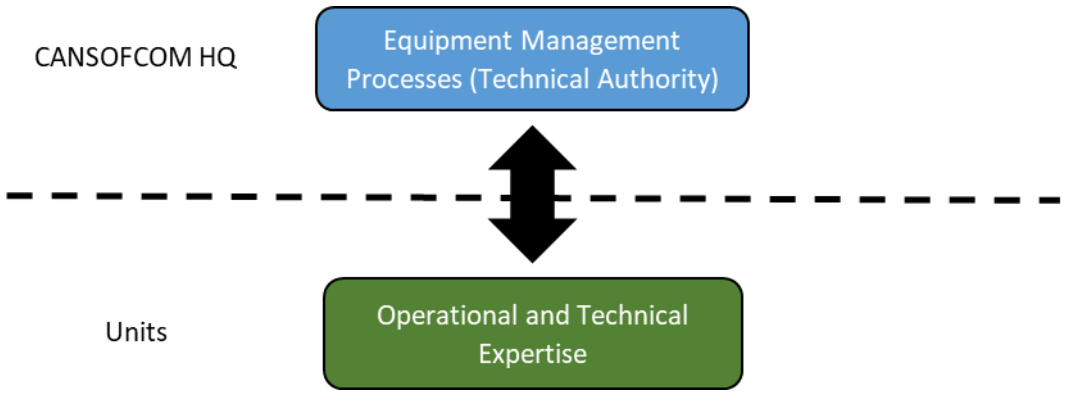

Figure 1: Process Knowledge vs.
Equipment Knowledge in CANSOFCOM

Upon first examination it does not appear to be an overly complicated divide, which creates the impression that the Technical Authority can be informed by the experts at unit level to make informed decisions and manage the equipment properly. However, when even a few of the multiple bespoke capabilities within a unit are represented, along with the fact that there are multiple units, a more accurate depiction can be seen in Figure 2:

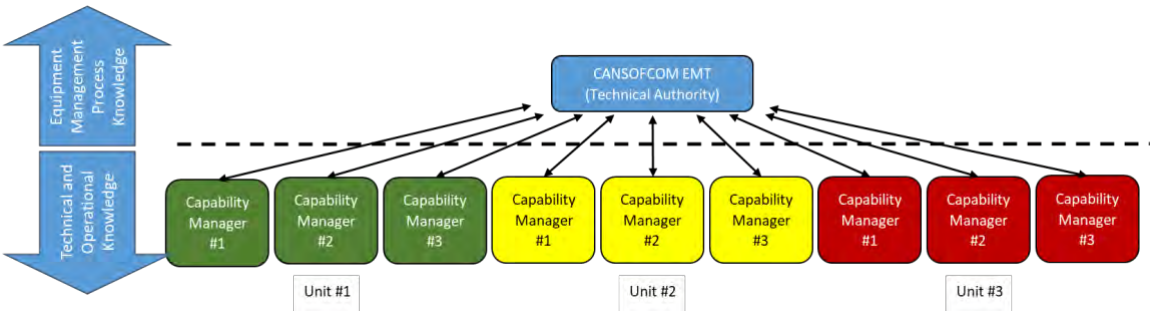

Figure 2: Detailed Expansion of Process Knowledge vs.
Equipment Knowledge in CANSOFCOM

11. Now the complexity of the situation starts to become evident, however several other factors must be considered. Capability managers work constantly with the operators during training and operations, and are therefore not readily available to the EMT when required. To further complicate this, the units are dispersed geographically away from the HQ. Finally, it is difficult to build trust between capability managers that have worked tirelessly for many years within their very specific domain but that have no formal equipment management experience, and those that have formal training and authority to conduct the management functions but no perceived emotional investment or

understanding of the actual equipment. The inefficiency between the two levels and lack of coordination at unit level are the fundamental obstacles that must be overcome.

12. To remedy this, an Equipment Management Cell should be created within those CANSOFCOM units that hold a significant amount of specific equipment. Their focus should not be to duplicate the efforts of the capability managers, but rather provide a bridge to the EMT. They should be specifically selected individuals that have knowledge of the unit's capabilities and strong relationships with their managers, and should be given similar ADM(Mat) functional training to act as a conduit to the EMT. This will provide a synchronizing function at unit level and ease the burden of dealing with the EMT on already over-worked technical experts, while providing a static "one stop shop" for the EMT to access at unit level.

13. Once this model is established and has proven capable of synchronizing equipment management activities between the capability managers and Technical Authorities within the EMT, it should be properly empowered to conduct technical functions on its own. When confidence in the processes and oversight has been achieved, the Director of Force Sustainment (DFS) for CANSOFCOM should request to ADM(Mat) that Technical Authority for unit-specific equipment be delegated to unit level. The end result is represented in Figure 3:

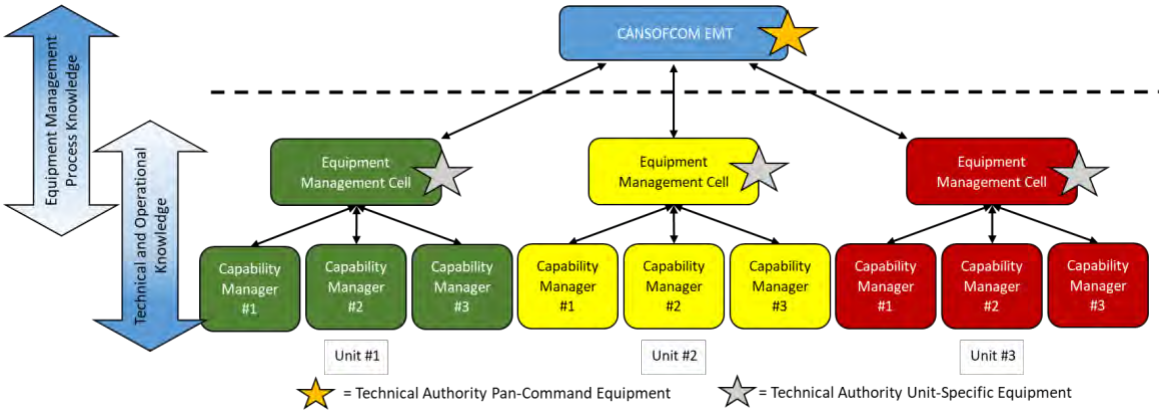

Figure 3: Proposed Technical Chain for CANSOFCOM Equipment

CONCLUSION

14. The current difficulties relating to equipment management in CANSOFCOM stem from the highly specialized and ever-changing capabilities that are required to maintain technological overmatch, particularly those that are unit-specific. These capabilities are extremely niche and expertise is only available proximate to the operators at unit level, however due to the requirement to retain oversight at a sufficiently high level for ADM(Mat) to delegate authorities, Technical Authority is held within the CANSOFCOM EMT. This current separation between technical expertise and Technical Authority across organizations creates a very unsynchronized technical chain, which can be drastically improved by generating equipment management cells at unit level. These can initially serve as coordinating elements between the true technical capability managers and the Command, and eventually assume the formal role of Technical Authority for unit-specific equipment once institutional oversight is demonstrated.

RECOMMENDATIONS

15. Based on the factors outlined in this paper, the following actions are recommended:

a. Each of the primary CANSOFCOM units with sufficient holdings of unit-specific equipment should create an Equipment Management Cell;

b. Each unit should invest in institutional training for these cells in coordination with the CANSOFCOM EMT and ADM(Mat); and

c. Once validated, the CANSOFCOM DFS should request formal Technical Authority be delegated to these cells for unit-specific equipment.

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