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PREPARING FOR SUSTAINING OPERATIONS IN A DISPERSED ENVIRONMENT

Major J. Benjamin Stewart

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Service Paper

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By Major J. Benjamin Stewart

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PREPARING FOR SUSTAINING OPERATIONS IN A DISPERSED ENVIRONMENT

AIM

1. The purpose of this service paper will be to outline several areas for further study and analysis that could potentially better prepare or enable the sustainment of dispersed operations in the future. This paper will briefly touch on the essential communications requirement needed to visualize the dispersed battle space as it is also critical to sustainment but will largely focus on what could potentially be done ensure dispersed operations are sustainable in the future. The end goal of this document will be to provide a recommended approach to be taken to analyze and potentially shape tactical sustainment within the future land operational concept.

INTRODUCTION

2. Canada's Defence Policy: Strong, Secure, Engaged (SSE), set the stage for the Canadian Armed Forces (CAF) of the future and places a large emphasis on equipping the force with the requisite kit to enable mission success. The policy specifically outlines the numerous investments that are planned for the modernization of force generating elements of the CAF. In particular, SSE identifies that the current focus for investment in the Canadian Army (CA) is to improve its ability to operate in a joint environment within remote regions.¹ Also, capstone doctrine outlining Adaptive Dispersed Operations (ADO) identifies that "the force needs to be adaptive and agile, may be dispersed in time, space and purpose, and yet must be able to concentrate to meet local near-peer or conventional threats."² The deduction that should be taken from ADO and the future operating environment is that the sustainment system should be able to match the adaptability and agility requirements to meet the demand of a dispersed force in multiple theatres. Additionally, the number of concurrent operations outlined in SSE and the requirement to operate in remote locations implies that sustainment will pose a greater challenge on both the strategic and operational-levels with numerous forces in multiple locations and limited resources to project sustainment into the tactical-level.

3. The concept of ADO inherently requires that land forces will be more autonomous from a sustainment perspective therefore requiring enhanced capability to support itself within a theatre of operations. Dispersed operations will also likely require a greater involvement of joint capabilities in sustainment efforts as ground lines of communication become stretched between supported elements and in-theatre support nodes. This will require additional skill sets and versatility from Combat Service Support (CSS) soldiers in order to carry out sustainment tasks in support of dependencies. The modernization of land force logistics fleets are a good start for enabling dispersed sustainment. However, the Modernization and Integration of Sustainment and Logistics

¹ Canada. Department of National Defence. *Strong Secure Engaged: Canada's Defence Policy*. Ottawa: DND Canada, 36.

² Canada. Canadian Army Land Warfare Centre. B-GL-300-000/AG-003. *Waypoint 2018: The Canadian Army Advancing Toward Land Operations 2021*. Kingston: Army Publishing Office, 7.

(MISL) is in the process of integrating numerous stand alone Warehouse and Management (W&M) systems into the Defense Resource Management Information System (DRMIS) which will provide all trades, one sole platform to conduct their technical data work that is required in the completion of their daily tasks. This effort will bring together a number of systems into one platform which will greatly enable and improve sustainment efforts from a Material Management and Distribution System (MMDS) perspective. The following paragraphs will seek to provide some suggestions to build upon MISL in an effort to ensure ADO are sustainable moving forward.

DISCUSSION

4. The majority of the discussion that will be presented will focus on areas of potential exploration in the pursuit of improving and evolving the delivery of supplies on the battlefield. However, the first item that will be essential to the successful land sustainment effort within a dispersed environment will be improved communications systems. Without a reliable and protected ability to communicate and transmit data, CSS within ADO will not be feasible. In order to achieve material visibility and track consumption, DRMIS must be available down to the unit level at a minimum (sub-unit preferable). In garrison or in the field, DRMIS requires the ability to transfer data within its platform in order to conduct sustainment of effective material and maintenance support. This has proven time and time again as a difficult task each year during the Canadian Army's (CA) collective training exercise, Exercise MAPLE RESOLVE. DRMIS use constantly appears as a point to improve in each iteration's after action review in spite of countless efforts to "make it work" in the face of the platform's limitations.

5. In the field, the use of DRMIS is possible at the first line unit level with the current communications systems that the CA possesses. The data systems available are however, large, onerous and require additional signals technician support to set up and operate. These systems are not agile and are not sustainable from a personnel force generation perspective. It also can be noted that DRMIS has been used in the field through Wireless Local Area Network (or WiFi) nodes, but the security and protection of the system are vulnerable to attack if presented with a persistent cyber threat environment. Moving forward in the development of a critical communications infrastructure for the CA, the use and application of DRMIS in the field must be considered as critical for force sustainment capability going forward within a dispersed environment. Stretched lines of communication that will result because of ADO can only be mitigated with a system that provides accurate and reliable material visibility.

6. The MISL initiative mentioned previous will be a new and improved version of DRMIS that will be a single use platform for all technical trades within logistics who work in the area of MMDS. "MISL will integrate functionality of stand-alone logistics systems and enhance current DRMIS functionalities into a robust, integrated SAP ERP

for Warehousing and Distribution (W&D) within the Defence Supply Chain (DSC).”³ The MISL initiative will greatly enhance and streamline material support within deployed operations as the integration of all systems within one platform will bring with it, material and asset visibility that was not achievable in the past with constant follow-up and analog tracking. The platform will impact the trades of Ammunition (Ammo), Material Management (MM) and Traffic (Tfc) technicians (techs) as well as Mobile Support Equipment Operators (MSE Op). The integration of these systems will enable synchronous effort across these trades and will enable enhanced material visibility and readiness. With a common platform used across four trades, greater technical understanding within the system of record could perhaps lead a combination in technician training. A technician that possesses the requisite abilities to perform across all trades within the W&D area, less Ammo tech which will be explained.

7. Combining the technical trades within the W&D area could potentially be a follow-on action to the MISL initiative. The idea would see combining the technical trades of MM tech, Tfc tech and MSE Op to create a new and more versatile CSS soldier involved in W&D (MMD tech perhaps). This combination would produce techs that would be more versatile which would positively impact stresses on force generating the separate trades for deployments. This could also positively affect the sustainment effort in a dispersed environment. Techs that are versed in both material management and distribution expertise would reduce limitations and provide supporting and supported elements with added flexibility in the employment of their sustainment soldiers. Due to the highly technical and safety requirements associated with being an Ammo tech, it would be left alone to carry out its regular function rather than be combined within this possible course of action.

8. In combining the three trades to create a more versatile tech for the field, many things would need to be considered. Qualification levels would need to be baseline to ensure the techs could operate in all three areas. Specialty qualifications would need to be carefully considered or in the case of garrison support, shifted exclusively to DND civilian employees. However, having techs that would be employable in all areas of W&D would provide a level of flexibility and possible efficiency that could reduce establishment numbers within first and second line units. Within a dispersed environment, a versatile tech would be a huge advantage in terms of possessing mobile air movement abilities that usually reside with the Tfc tech trade. In a dispersed environment, air movements will become essential to sustainment activities.

9. In order to sustain dispersed operations, joint support from the Royal Canadian Air Force will be essential. Air sustainment support can be done by both fixed and rotary wing platforms and the ability exists within the CAF to conduct such operations. It is often practiced during Exercise MAPLE RESOLVE; however, joint sustainment by air should be practiced more often by land forces. This will better prepare land force units and sustainment personnel for execution of this method of delivery if deployed to a

³ “The MISL Initiative – How DND/CAF is Modernizing Warehousing and Distribution,” *The Logistician* 9, no. 16 (September 2019): 16. https://www.cfla-alfc.org/wp-content/uploads/2019/10/RCLS_Newsletter_Sept_19_Final.pdf

dispersed environment. This also reinforces the requirement to have Tfc tech expertise at the tactical level in order to support air movements of material to and from theatre sustainment points to tactical entities within an area of operations. Operation SERVAl has provided an excellent case study in which sustainment by air truly enabled dispersed operations where ground lines of communication became stretched.⁴ Without the use of air in sustaining French forces in Mali, the contingent would have not realized the success it had in covering a large distance in order to maintain the momentum of their advance.

10. Containerization of the CA's medium fleet of logistics vehicles has provided a new capability to tactical units. They now have gained the ability to carry sea cans with their integral fleet of logistics vehicles which will increase capacity which enhances self-sustainability. This will be essential within a dispersed environment. Additionally, tactical delivery of sea containers can be executed through fixed (CC-130) and rotary wing (CH-147) platforms. This provides an additional layer of flexibility in the delivery of material on the battlefield. Although previously possible without sea containers, the carrying capacity of first line units has significantly increased with this new capability. The lack of this capability was another observations from Operation SERVAl where tactical units could not take delivery of sea containers due to the capability not existing at the tactical unit level.

11. Metrics and data analytics are a key component that will be important to not only the use and efficiency of DRMIS but also containerization. Metrics within DRMIS are severely lacking which should be an area that the W&D community should place focus. Commodities should have requisite weights and volumes within the systems to allow planners to coordinate loads for movements. Although the new medium logistics vehicle has the capacity to carry sea containers, the payload is limited to nine tons which presents a restraint to the amount of supplies that can be carried within each sea container. Load planning capability that takes weight and volume into consideration would be tool that would greatly enhance sustainment planning.

12. Contracting will continue to play a large role in supporting operations which will be no different for dispersed environments. The CA has done well in recent years to develop this capability within the land force which has seen deployed experience gained on numerous missions. As contracting is normally executed and managed at the operational level (TF HQ/NSE), we may see a shift to contracting being completed by tactical units through Quartermasters (QMs). With that said, unit QMs should be equipped with the deployed procurement qualification and should be included in CJOC specific contracts training, if selected to deploy. If CANSOFCOM can empower their S4 with the ability to contract support, QMs should just as empowered to do the same to support their units.

⁴ "Serval – A Brigade in Combat," YouTube video, 53:03, posted by "Ministères des Armées," 9 July 2015 <https://www.youtube.com/watch?v=QO3iXNtLkug>

CONCLUSION

13. In summary, sustainment will be critical to enabling units operating within a dispersed environment. SSE has made the necessary commitments to provide the CA with the necessary logistics vehicles to provide effective support when deployed. The logistics community is also in the process of integrating system platforms within DRMIS through the MISL initiative which is a long overdue and enabling change that will provide the right tool to techs that are involved in the W&D function of sustainment. However, further changes or initiatives will likely be required to fully prepare the CSS community to support dispersed operations. The current slate of CA deployments have brought stress upon almost all CSS trades which is not sustainable. If the CA was to deploy into multiple theatres that were dispersed in nature, force generation of logistics techs would likely become untenable. With that, the best way to attempt to prepare the CA for such deployments is to continue to look to improve the tools that are used and the manner in which the techs are employed. The previous paragraphs attempted to provide some suggestions of areas of which could be explored to further streamline logistics functions. With respect to personnel, perhaps combining three of the W&D trades could provide a more versatile technician. Further to that, training personnel in aerial delivery of sustainment will ensure the requisite skill set is in place to support ADO. In terms of systems, DRMIS can continue to improve to provide logisticians with appropriate data to effectively plan and coordinate material sustainment activities. All of these areas have the potential to shape logistic support for the future of the CA; however, this will not be possible without effective communications infrastructure in place.

RECOMMENDATION

14. First, it is recommended a study or analysis of creating a tech trade that would combine the MM, Tfc tech and MSE Ops competencies under one trade to support W&D activities. Second, land forces should continue to focus on aerial delivery through fixed and rotary wing platforms as potentially a battle task standard as it will be an essential method of distribution in a dispersed environment. Finally, as DRMIS continues to be developed as a workable tool for the logistics community, metrics and data analytics must be at the forefront to ensure logistics planners can leverage the platform as an effective sustainment planning tool.

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