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DND's Infrastructure Portfolio Is Becoming Unsustainable

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Exercise Solo Flight

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DND'S INFRASTRUCTURE PORTFOLIO IS BECOMING UNSUSTAINABLE

The Department of National Defence infrastructure portfolio has been subject to decades of under-resourcing, and in some areas is approaching a state of critical failure. The covid-19 pandemic created a need for remote employment within the Department which should be maintained and expanded upon to support divestment and allow for reprioritization of limited resources. The cost of carrying unsustainable infrastructure is high, and with the multiple competing priorities for defence spending, there are opportunities to be realized if the department made divestment and consolidation a priority.

Background

The Department of National Defence is the largest holder of infrastructure of any governmental department. With such a wide range of operational effects to deliver, and the enormous administrative support required to do this, it becomes clear that a massive footprint of office buildings, training areas and maintenance bays are a necessity¹. The reality of such an expansive portfolio is that it requires significant resources with which to maintain, and historically these resources are scarce and prioritized elsewhere. Near 50% of all non-residential structures in the portfolio are more than 50 years old². The age, coupled with systemic underfunding for maintenance and repair, and the rapid escalation of technical requirements for most functions have created an unstable infrastructure platform with which missions are expected to launch. With recent pandemic conditions giving rise to an adaptive stance on remote employment, there is an opportunity to consolidate those employment areas that are conducive to remote work, and divest of unnecessary, and expensive, infrastructure which is trending to

¹ Canada, Office of the Auditor General, *Report of the Auditor General of Canada to the House of Commons, Chapter 5 Real Property*. 5.

² Ibid., 5.

become unsustainable. Efforts can be made to implement to a wider extent workplace 2.0, which aims to further reduce infrastructure requirements and improve efficiency by optimizing office layout. A shift in leadership culture would need to follow suit, as the apparent desire to “return to the office” in order to better manage subordinates is prevalent and a major point of discussion in private and public industry³.

Infrastructure Management Still Needs Change

As recently as 2016, real property management and corresponding strategies in DND have undergone significant change. It is possible these changes were brought about by the 2012 Office of the Auditor General (OAG) Report on Real Property, which presented a grim case outlining the many problematic areas hindering effective infrastructure management. At the forefront was the Departments lack of real property planning framework⁴, particularly in the areas of long-term planning. The answer appeared to be centralization of infra management under a single authority, the Assistant Deputy Minister of Infrastructure and Environment ADM(IE). The creation and implementation of master real property development plans (MRPDP) which outlined infrastructure objectives at the tactical level for the next 30 years were also recommended by the OAG. The rationale behind these changes was to remove the convoluted and competitive nature of infrastructure management as it was done at the time with nine separate L1’s all acting as custodians and decision makers at the tactical level. With no unified strategy to accommodate the many emerging capabilities that DND would need to remain relevant, and emphasis generally placed on alleviating the most pressing issue impacting current operations for the individual, it was evident that someone needed to take on the challenging task

³ MacLean, Kathryn. *Flexible Work Arrangements: Transforming the Way Canadians Work* (Ottawa: The Conference Board of Canada, 2018). 8.

⁴ Canada, Office of the Auditor General, *Report of the Auditor General of Canada to the House of Commons, Chapter 5 Real Property*. 8.

of coordinating this function more effectively. Thus, centralization took place in 2016, and the Real Property Operations Group as an L2 within ADM(IE) was formed. The formation has been growing in competency and effectiveness ever since, both in a planned manner to address unanticipated staffing deficiencies, and in a reactionary fashion to accommodate the constant change in infrastructure building systems required for modern operations.

Alongside the changes to the organization, there have been many revisions of the technical governance for management of DND infrastructure. The Realty Asset Management Manual (RAMM), developed in the early 2000s, was the guide on effective real property construction and maintenance⁵. With the movement to centralize real property management through ADM(IE), the supporting guidelines, directives and technical standards of construction and maintenance should all have a refresh. Such review has been slow in its realization, and has left the maintainers and operators at the local level responsible to ensure compliance in an ad-hoc fashion. The need for L1 governance of regulatory compliance, and dedicated resources assigned to remaining relevant in this functional area should be prioritized to address the trend of deteriorating facilities. Funding deficiencies have been identified in the 2020-21 Departmental Plan for infrastructure maintenance and have also fell short of targeted values in every year that they were recorded⁶. This continuous funding shortfall can be traced back as far as the 1990s and has been a significant factor in the Departments inability to keep pace with the need to modernize and maintain the operational bases and wings across Canada. If additional funding to catch up is not an option, as history suggests it is not, then alternative solutions to how DND uses existing infrastructure need to be explored.

⁵ Canada, Department of National Defence. *Infrastructure and Environment Focus*. 2016 Spring Edition. 6.

⁶ Canada, Department of National Defence. *Department of National Defence and the Canadian Armed Forces 2020-2021 Departmental Plan*. 60.

Implementing Workplace 2.0

Workplace 2.0 bases itself on three pillars of change, namely The Workplace, The Back Office and The Way We Work⁷. The low hanging fruit amongst these pillars is first adjusting the workplace, which would either assist in changing the other two or force them to change in order to maintain operations. Changes are seemingly justified based on functional requirements as well as time spent in the office, further delineated into four worker profiles. These inputs are fed into a formula, and the corresponding space allocation for that employee or function is given out. These office space standards are considered mandatory by the Government of Canada. This process is all rolled up into the over-arching goal of reducing the office space requirements across the portfolio. It sounds great from a strategic viewpoint, but the buy-in at the tactical level from existing office occupants has been extremely low. Culturally, there is an expectation of larger office space entitlements based on rank and seniority. Granted there are situations which necessitate a large, personal conference room for secure discussions, and such considerations have been built into the allocation of office space for Directors, Directors General and higher⁸. However, making this type of office resource communal and subject to a booking system as opposed to a personal sitting area attached to an oversized office creates efficiency in the floorplan. It's a small example but when stretched across the approximate 20,000 buildings the effect begins to accumulate.

Understanding the cultural divide on entitlements of office space as an impediment, the approach from an infrastructure management side has shifted somewhat into implementing Workplace 2.0 into new construction only as targets of opportunity, while leaving the existing office layouts as they are. Current infrastructure funding does not allow for significant

⁷ Treasury Board of Canada Secretariat. *Workplace 2.0 Fit Up Standards*. 2.

⁸ Ibid. 45.

investment in office revitalization or renovation for functionality or aesthetics alone. As infrastructure footprints are to be maintained or minimized across the portfolio, the general approach is then to recapitalize and repurpose⁹. This brings many challenges as well, including but not limited to introducing floor space dedicated to supporting new capabilities while concurrently maintaining existing operational mandates. Greening initiatives and greenhouse gas emission reductions are also now a mandatory planning requirement, as outlined in the Greening Defence initiative¹⁰. Given the low expenditure initiation authority levels granted to the respective L2s responsible to deliver these infrastructure requirements, projects can become further mired in the bureaucracy of project approval delays, thus diminishing their respective utility upon delivery as occupant requirements continue to change in an attempt to keep pace with the future operating environment. This trend can be seen on many DND large-scale capital procurements and is not specific to capital infrastructure projects.

A very recent example of a large-scale refit project was the consolidation of DND/CAF strategic functions at Carling Campus in Ottawa. Carling Campus was purchased in 2010 and presented a significant opportunity to refresh the workplace, incorporating GC Workplace 2.0 into the consolidation plan. The intent was to reduce the distribution of these functions across the National Capital Region (NCR) and divest of many costly and inefficient leased facilities in the process. Namely, moving from 47 separate offices and locations to seven major locations in the NCR. The expected net savings was projected at \$750M over a 25-year period, with an additional \$160M in cost avoidance based on reducing higher-cost leased facilities in the Ottawa

⁹ Canada, Department of National Defence. *Department of National Defence and the Canadian Armed Forces 2020-2021 Departmental Plan*. 60.

¹⁰ Greening Defence. Government of Canada website. Last Accessed 20 May 2022.

<https://www.canada.ca/en/department-national-defence/services/greening-defence.html>

downtown core¹¹. The total cost of the fit-up is reported near \$540M, with some allowance for changes in scope that inevitably cropped up due to the duration of the construction period. This initiative represented one of the largest office consolidations in Canadian history, and though Workplace 2.0 provided the physical frame for new office standards, the Security Review Initiative and the Defence Renewal Initiative also contributed to the final product. Overall, the consolidation project was considered a success, with efficiencies gained in the day-to-day operations of the functions now residing at a single location. End-user satisfaction from DND/CAF was also deemed very high as the project finished on track and met or exceeded the scope in terms of increasing effectiveness¹². A similar approach to consolidation should be nationally driven down to the individual bases and wings. Not all operational tasks will be conducive to these types of refits, but DND/CAF should seek to eliminate unnecessary redundancy where safety permits. This would allow for limited infrastructure maintenance and repair resources to be prioritized away from generic office space and distributed to those specialized facilities that are necessary to support governmental mandates specific to the respective environmental L1s.

Emerging Requirements vs. Bad Investments

The forecasted demands which will be placed upon DND/CAF are constantly in flux. The geopolitical environment sees a considerable amount of analysis to inform the operational planning and force development cycles and get the forces future-ready¹³. Recommendations derived from this process can come in various forms, supporting infrastructure being one such

¹¹ Canada, Public Works and Government Services Canada. *Lessons Learned from the Consolidation of Department of National Defence and the Canadian Armed Forces Staff through the Carling Campus Initiative*. 3.

¹² Ibid., 26.

¹³ Canada, Department of National Defence, Chief of Force Development. *The Future Security Environment 2013-2040*. 88.

output. The obvious issue here is that bringing a new capability or equipment platform online is expensive, especially where the infrastructure and security requirements associated to the project are highly sophisticated. This ongoing need to modernize to just remain relevant puts significant strain on the limited defence budget. Infrastructure maintenance costs are high on outdated and unsustainable facilities, and act as an unnecessary drag force on money which could be better spent elsewhere¹⁴. The need for increased vigilance and presence in the Canadian North is one such effect that would benefit from additional funding. Current infrastructure in the Arctic is inadequate for the growing mandate of Northern sovereignty and difficult to maintain¹⁵. Further improvements and new construction are required, both on the civilian and military side if the Government of Canada is to remain relevant in the North¹⁶. Due to the highly specialized nature of the facilities, and the difficulty of construction in the harsh and remote environment, the costs will be high¹⁷. If Northern sovereignty is to continue as one of the focal points for DND/CAF, as Strong Secure Engaged suggests it is¹⁸, then resources will need to be reallocated to support this complex requirement.

The Arctic dimension is just one example of the many evolving functional areas that DND may need to invest in if the CAF is to keep pace its peers, both ally and adversary. Space-based capabilities and cyber offense and defence are now a significant consideration for operational planners. Coalition operations have historically been the norm for the CAF, and so

¹⁴ Canada, Chief Review Services. *Evaluation of Real Property Acquisition, Maintenance and Disposal*. 2011. 32.

¹⁵ Peter Olson and David Wessel. *The Case for Spending More on Infrastructure Maintenance*. last accessed 30 March 2022. <https://www.brookings.edu/blog/up-front/2017/01/31/the-case-for-spending-more-on-infrastructure-maintenance/>

¹⁶ Joel Plouffe. Canadian Global Affairs Institute. *Renewing the Arctic Dimension to Canada's National Defence Policy*. 4.

¹⁷ Canada, Office of the Auditor General. *2017 Spring Reports of the Auditor General of Canada to the Parliament of Canada Report 6. Civil Aviation Infrastructure in the North*. Spring 2017. 6.

¹⁸ Canada. Department of National Defence. *Strong, Secure, Engaged: Canada's Defence Policy*. Ottawa: Department of National Defence, 2017.

interoperability and modernization are an ongoing and expensive overhead cost¹⁹. Divestment and consolidation of aging infrastructure as a vector to shed unnecessary budgetary bloat should be fully examined across the DND portfolio. Payment in lieu of taxes (PILT) would also reduce in a linear fashion with a decrease in footprint. Values associated with PILT payments vary based on location of the hosting municipality, however the trend would always be towards reducing DND overhead costs. As outlined in the Carling Campus consolidation, successes in this area of divestment can free up significant balances for use elsewhere in a strained fiscal environment. The cultural divide on entitlement and maintenance of status quo to how the CAF does business has been a significant barrier to widespread implementation of consolidation. If any gains of significance can be made in this area, it would require engagement by the proper authorities to push it through the multiple layers of resistance being felt at the base and wing level.

Remote Employment to Reduce Office Space Requirements

With the recent CANFORGEN published outlining the application of remote postings, DND is making moves towards embracing a difference in attitude on remote work²⁰. This shows a small but significant stride towards culture change in the federal public service. How it will realize is yet to be seen, as the first applicable posting season will be fiscal year 2022/2023 and is specific to military personnel. There are similar flexible work arrangements for civilian public servants available²¹, however the employer is not compelled to approve them. This is a great

¹⁹ Canada, Department of National Defence, Chief of Force Development. *The Future Security Environment 2013-2040*. 85.

²⁰ CANFORGEN 038/22 CMP 022/22. *Changing a Place of Duty and the use of Posting to Enable Remote Work Options*.

²¹ ADM(HR-Civ) Directive to Managers on Managing a modern, flexible and varied civilian workforce. Last Accessed 22 May 2022. <https://www.canada.ca/en/department-national-defence/campaigns/covid-19/working-remotely/adm-hr-civ-directive.html>

move towards modernizing DND personnel management practices, but it also presents a small but tangible possibility to further reduce infrastructure requirements if some employees no longer need an office or cubicle. In areas such as the NCR which have a high density of administrative positions, larger gains may be possible by allowing for remote work. Remote work will not be as conducive to those positions that require a physical presence, such as equipment maintainers or those public servants in the operational services classification.

Teleworking or remote work is not a new concept and has garnered research into its viability dating back to the 1970s²². With the implementation of digital workspaces, and the advances in communication and network software, the tools are in place for the CAF to refresh certain aspect of its employment model. There are possible benefits to be realized both for the employer/employee and the public, such as reduced commuting times and a reduction of traffic density, decreased energy consumption at the office as well as decreased office footprint requirement. What appears to be one of the major roadblocks to widespread utilization of remote work is the assumption of risk by leadership. Management resistance was noted to be the primary obstacle to implementation in the Canadian Public Service, followed closely by concern over productivity loss²³. Similarly, the perception of inequity caused by non-uniform application of remote work, and organizational culture are also noted as key impediments to widespread adoption of a remote model²⁴. Movement by DND/CAF leadership to adopt such a distributed employment approach is a positive change and could realize cost reductions in office overhead and relocation benefits by eliminating the need for CAF members to geographically relocate.

²² Yehuda Baruch. *The Status of Research on Teleworking and an Agenda for Future Research*. International Journal of Management Reviews 3, no. 2 (2001). 114.

²³ Kathryn MacLean. *Flexible Work Arrangements: Transforming the Way Canadians Work*. (Ottawa: The Conference Board of Canada, 2018). 9.

²⁴ *Ibid.*, 10.

Conclusions

The infrastructure portfolio currently managed by DND is trending to become unsustainable given the current distribution of resources. Historical under-funding in infrastructure maintenance and repair has manifested a widespread facility condition that is poor and further degrading. With the multiple competing priorities vying for defence spending, such as Arctic development, it would be fiscally responsible to divest of infrastructure that is beyond life-cycle and consolidate in compliance with Workplace 2.0 fit up standards. This would reduce infrastructure overhead costs significantly over the long term and free up scarce resources to be prioritized towards more pressing operational mandates. A more accepting approach to remote employment should be targeted within the public service to reduce unnecessary office space requirements. The methods in which DND/CAF employs its personnel has undergone some change due to the covid-19 pandemic, and further opportunities to modernize and adopt available technology with an aim to shed unnecessary infrastructure and associated costs should be implemented.

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