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Value Added Analysis and its Potential
Impact on Canadian Military Procurements

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Capstone Executive Summary

The Canadian Federal government is currently at a crossroads when it comes to managing its procurement projects for the Canadian Armed Forces (CAF). The first choice involves using current practices which are resulting in procurement projects chronically running over budget and behind schedule. This can be attributed to prioritizing domestic economic and manufacturing development by demanding would-be vendors manufacture their capital assets in Canada along with excessive customizations of capital assets to “Canadianize” them.

The second choice involves streamlining the entire procurement process. This includes taking the tasks assigned to multiple Departments in the Federal government and amalgamating them into one. It also includes choosing the best vendors and capital assets for procurement based on their merit, competency and quality of merchandise as opposed to their willingness to invest in Canada. The strategy that would best underpin and guide these procurement reforms is called, Value Added Analysis (VAA). The objective will be to make capital procurement projects stay within budgets and on schedule for completion and delivery.

Currently, the National Shipbuilding Strategy (NSS), which is an ongoing capital procurement project for both the Royal Canadian Navy (RCN) and the Canadian Coast Guard Service (CCGS) is an excellent case study to show how aspects of VAA are already being implemented into managing capital procurement projects. The NSS also provides examples of how VAA can be further implemented into managing capital procurement projects.

Abbreviations

ACAN(s)- Advanced Contract Award Notice(s)
ADM(s)- Assistant Deputy Minister(s)
AOPS- Arctic Offshore Patrol Ship(s)
CAF- Canadian Armed Forces
CCGS- Canadian Coast Guard Service
CRS- Chief Review Service
CSC- Canadian Surface Combatant Project
DM(s)- Deputy Minister(s)
DND- Department of National Defence
DPC- Defence Procurement Canada
DSS- Department of Supply and Service
FMI- First Marine Industries
GDP- Gross Domestic Production
H+K- Hill+Knowlton
IRB/IRT- Industrial Regional Benefits/ Technologies
ISED- Ministry of Innovation, Science and Economic Development
JSS- Joint Support Ship(s)
KPI- Key Performance Indicators/Index
LSS- Lean Six Sigma
NSS (NSPS)- National Shipbuilding Strategy (National Shipbuilding Procurement Strategy)
OAG- Office of the Auditor General of Canada
OECD- Organization for Economic Co-Operation and Development
PBA- Performance Based Analysis
PBO- Parliamentary Budget Officer
PMB- Project Management Board
PMM- Project Management Methodology
PSPC- Public Services and Procurement Canada
RA- Risk Analysis
RCN- Royal Canadian Navy
SCNDVA- Standing Committee on National Defence and Veterans Affairs
SOIQ: Solicitation of Interest and Qualifications
SOR- Statement of Requirements
SRB- Senior Review Board
TBC- Treasury Board of Canada
TDE- Technical Design Examination
USMC- United States Marine Corps
VAA- Value Added Analysis

Introduction

Historically, when the Canadian Armed Forces (CAF) are committed to a conflict, they initially cannot operationally participate due to their antiquated weapons and equipment. This results in the Department of National Defence (DND), making ad hoc purchases and paying markup prices for rush orders with uncertainty that these equipment and weapons systems (capital procurements) will be of high utility to the CAF during and after the conflict in question. Why does the DND have to resort to such ad hoc procurements? Because the DND's long-term procurement strategy currently in place is underpinned by a Project Management Methodology (PMM) that is ineffective!

Project management for procurements involves every step from inception of the procurement needed to the final deliveries. Choosing the appropriate capital asset to procure as well as a vendor to procure from are a vital step in managing procurement projects. Procurement projects running over budget and behind schedule can be attributed to choosing inferior capital assets and tasking unqualified vendors with unrealistic expectations. Currently, the weakest phase in managing military procurement projects is: the inability to set realistic procurement expectations resulting in choosing unreliable capital assets and unreliable vendors to fulfill orders. Such choices are leading to procurement projects chronically running over budget and behind schedule.

Can a new PMM be implemented for CAF procurements? Is there such a PMM that compliments the CAF's needs and priorities? The answer to both questions is: Yes! The answer is in the form of a strategy, Value Added Analysis (VAA). By using VAA as its primary PMM, the DND, on behalf of the CAF, will be able to simultaneously find solutions to improve the performance of procurement project managers while identifying and eliminating waste-causing

practices. These recommendations will also empower the DND to implement realistic parameters for developing procurement strategies while simultaneously mitigating risk of procurements running over budget and behind schedule thus sustaining viable arsenals.

To illustrate why VAA is the best PMM for the DND, this Capstone will investigate and analyze: the current procurement PMM used by the DND, explaining what VAA is and existing PMM tactics inspired by VAA, review a PMM report written for the Federal government in 2019, highlight major contentions within Canada's procurement policy that need to be addressed and provide four policy recommendations to implement VAA as a strategy into the DND's procurement practices.

How Procurement Projects are Currently Managed in Canada

Presently, the Federal government uses a single procurement process for all military assets. This process involves public servants who are assigned to: the Defence Acquisitions Department of Public Services and Procurement Canada (PSPC), the Defence Production Department of the Ministry of Innovation, Science and Economic Development (ISED) and the Materiel Department of the DND are responsible for collaborating on procurements (Collins, 2019a, p. 1; Ho, 2014, p. 9-10; Public Service and Procurement Canada [PSPC], 2021a, 2013). However, ad hoc procurement committees have frequently been established in the Post-Second World era to manage major capital procurement projects (Ho, 2014, p. 14-16; PSPC, 2021). Recommendations are submitted separately from each Ministry to these procurement committees who then draft a Statement of Requirements (SOR) (Ho, 2014, p. 18-19; PSPC, 2021). All SORs have both a list of mandatory/required attributes that are needed in the capital asset to be

procured as well as a list of optional attributes that, while desirable, are not as crucially needed (Department of National Defence [DND], 2018; Ho, 2014, p. 16, 21).

When an SOR is drafted (usually including a recommendation of a specific capital asset to procure or a vendor to grant the contract to) it is passed onto the Senior Review Board (SRB) of the Treasury Board of Canada (TBC), for approval of the would-be contracts with terms and conditions including funding required and delivery timelines (DND, 2018; Ho, 2014, p. 9-10; PSPC, 2021). The SOR is then passed onto the Federal Cabinet who approve an Advanced Contract Award Notice (ACAN) to a vendor to begin the actual procurement (DND, 2018; Ho, 2014, p. 9-10; PSPC, 2021, 2013). The Cabinet may choose to hold an Open-Bidding process to determine a vendor to award an ACAN to. In Open-Bidding, any vendor can make a proposal for the contract and the Cabinet determines which vendor has the best offer and awards said vendor the ACAN. The whole process is designed to be conducted publicly with all proposals and the government's rationale for a winner being open-sourced information (PSPC, 2021; Treasury Board of Canada [TBC], 2021a). The Cabinet also has the discretion to choose a single vendor for an ACAN without immediately disclosing the details to the public (Ho, 2014, p. 8, PSPC, 2021).

Simultaneously, vendors are expected by the Federal government to either have existing infrastructure in Canada to manufacture the capital merchandise or licence a Canadian firm to manufacture the capital asset or that the vendor invest in creating new infrastructure in Canada for manufacturing, especially in poor areas of Canada to increase employment ratios proportionate to peoples' level of skilled labour. This process of economic offsets or "Canadianization" are referred to as Industrial Regional Technologies (IRTs) (Collins, 2019a, p. 8-9; Nossal, 2016, p. 97-98; TBC, 2021).

What is Value Added Analysis?

Value Added Analysis is a strategy that is explicitly applicable to the manufacturing industry, not being applicable to service-based industries (Digital E-Learning, 2021; Loerch, et al, 1998; p. 234; Quantum Lean, 2020). “Value”, or “Added Value”, is when an action or a task physically improves to or adds to an existing item in part or whole (Acero, et al, 2019, p. 4; Digital E-Learning, 2021; Loerch, et al, 1998, p. 234; Quantum Lean, 2020). However, as a caveat, it is only considered added value to a manufactured item if it progresses the initial construction of the item or adds an accessory that provides a high degree of utility (Digital E-Learning, 2021; Loerch et al, 1998, p. 237-239; Quantum Lean, 2020). Furthermore, value is explicitly measured in how any given action in the manufacturing process is essential or non-essential (Digital E-Learning, 2021; Loerch et al, 1998, p. 246; Quantum Lean, 2020). Therefore, any delays, procrastinations, redundancies, or inefficiencies are not considered added value to a project as they are non-essential (Acero et al, 2019, p. 3-4; Digital E-Learning, 2021; Loerch et al, 1998, p. 248; Quantum Lean, 2020).

Repairs, for example, are not considered added value as repairs are intended to fix damage or improve underperforming functions of the manufactured item (Digital E-Learning, 2021; Quantum Lean, 2020). While repairs are not considered added value to a manufactured product, the upgrading of existing accessories or the addition of new accessories can be considered added value to a project (Digital E-Learning, 2021; Quantum Lean, 2020). For example, in the context of military procurements, added value to fighter jets can be the addition of targeting computers with improved features or a new accessory such as the procurement of brand new, state-of-the-art missiles that the fighter jets can be armed with.

Waste is identified in VAA as anything that is non-essential and does not add any value to merchandise being manufactured. Waste can include delays in scheduling, over-budget costs, impediments, and redundancies in the manufacturing process (Acero, et al, 2019, p. 3-4; Digital E-Learning, 2021; Lean Smarts, 2020; Lee, 2012, p. 34; Loerch, et al, 1998, p. 234, 243, 246; Quantum Lean, 2020; Simplilearn, 2020b, 2020a). Waste and added value have a zero-sum relation. If you're creating added value, you're diminishing waste and vice versa (Acero, et al, 2019, p. 3-4; Digital E-Learning, 2021; Lean Smarts, 2020; Lee, 2012, p. 34; Loerch, et al, 1998, p. 234, 243, 246; Quantum Lean, 2020). The initial focus in the Federal government's current procurement process should be to eliminate waste to begin adding value to procurement projects.

Another form of waste are the human resources associated with clerical tasks. For this Capstone, the clerical and beaurcratic services provided by public servants and elected officials alike, no matter how helpful they may be, are considered waste and provide little to no added value (Digital E-Learning, 2021; Lean Smarts, 2020; Lee, 2012, p. 34-35; Loerch et al, 1998, p. 248-249; Quantum Lean, 2020; Simplilearn, 2020b, 2020a). This is because clerical work, not matter how beneficial, has no operational utility in practice (Digital E-Learning, 2021; Lean Smarts, 2020; Lee, 2012, p. 34-35; Quantum Lean, 2020; Simplilearn, 2020b, 2020a). The objective of VAA acknowledges that there will always be a degree of clerical work involved in manufacturing, but to maximize the output of such workers for the necessary tasks while reducing the number of inputs that do not contribute directly to the manufacturing process (Digital E-Learning, 2021; Lean Smarts, 2020; Quantum Lean, 2020; Simplilearn, 2020b, 2020a). Waste further applies to the workers involved in the skilled labour components of the manufacturing. All employees are ultimately an expense for a manufacturer. Every manufacturer wants to keep such expenses at an optimal level where they maximize output with the lowest

necessary input (Digital E-Learning, 2021; Klein et al, 2017, p. 7-8; Lean Smarts, 2020; Quantum Lean, 2020; Simplilearn, 2020b, 2020a).

Service industries are not considered to provide any added value as service industries do not physically create or produce anything (Digital E-Learning, 2021; Quantum Lean, 2020).

While all essential components and tasks contribute to the completion of a manufactured good can be considered added value, not all essential components and tasks provide the same degree of added value. Practitioners primarily measure added value as tasks that both provide the quickest and most efficient means to finishing a manufactured product while simultaneously adding maximum utility to the final product (Acero, et al, 2019, p. 3-5; Digital E-Learning, 2021; Loerch et al, 1998, p. 236-237; Quantum Lean, 2020). Therefore, the objective of VAA is to manufacture merchandise with minimum essential inputs while achieving maximum, desired outputs. Part of this analysis considers factors such as maintenance (both scheduled and unscheduled), additional costs versus utility rendered, service life of the manufactured good for the customer and the sustainability to manufacture the merchandise by the vendor (Acero, et al, 2019, p. 5; Digital E-Learning, 2021; Loerch, et al, 1998, p. 246; Quantum Lean, 2020). There are a variety of indexes and tactics that are inspired by VAA created by and for customers and vendors alike as to communicate an assets' monetary value and operational quality/dependability (Acero, et al, 2019, p. 4-5, 8; Digital E-Learning, 2021, Loerch, et al, 1998, p. 237-239; Quantum Lean, 2020).

VAA, as a strategy, is very appropriate for managing procurement projects as it can facilitate tracking and monitoring of merchandise being manufactured while allowing for proactive solutions to, and better alleviate, unexpected problems. VAA is therefore a strategy of how to increase productivity by using only essential actions to reduce costs and timelines without

compromising on quality. As a strategy, VAA has influenced the creation of tactical guidelines such as: Lean Six Sigma, Key Performance Indicators/Indexes, Risk Analysis, Technical Design Examinations, Performance Based Analysis, Industrial Regional Technologies and Solicitations of Interest and Qualifications. Whereas VAA is a strategy, these tactics exist to provide analysis and implementation in capital procurement projects to remain within budget and on schedule. VAA-inspired tactics are based on the situational and specific needs of the various manufacturing vendors and customers that utilize them (Klein, et al, 2017, p. 7; Lean Smarts, 2020; Lee, 2012, p. 34-35; Quantum Lean, 2020; Simplilearn, 2020b, 2020a).

Project Management Tactics Inspired by VAA:

Lean Six Sigma:

“Lean” operations or “operating lean” is where almost every action or decision made leads to added value in the project (Klein et al, 2017, p. 3; Lean Smarts, 2020; Lee, 2012, p. 35; Quantum Lean, 2020; Simplilearn, 2020b, 2020a). Every action and decision in a Lean system is essential as it has purpose with not a single action being redundant, useless, or irrelevant. The prevailing wisdom of Lean tactics is to identify and reduce or eliminate waste in the form of delays, glitches, malfunctions, or failures that happen in the manufacturing process (Klein, et al, 2017, p. 3; Lean Smarts, 2020; Lee, 2012, p. 34-35; Quantum Lean, 2020, Simplilearn, 2020b, 2020a).

Six Sigma are operations tactics that promote innovations that can better identify potential waste within a given manufacturing process. In addition to finding waste, Six Sigma also promotes innovation and creativity to make essential, lean-operating tactics even leaner for cheaper manufacturing costs, faster delivery schedules while not compromising on quality

control (Klein, et al, 2017, p. 4; Lean Smarts, 2020; Lee, 2012, p. 35; Quantum Lean, 2020; Simplilearn, 2020b, 2020a). In fact, Six Sigma also promotes innovation that increases the quality of the manufactured merchandise (Klein et al, 2017, p. 4, 7; Lean Smarts, 2020; Lee, 2012, p. 35; Quantum Lean, 2020; Simplilearn, 2020b, 2020a).

Case Study: The National Shipbuilding Strategy

The National Shipbuilding Strategy (NSS) is a salient example of attempting to apply VAA-inspired tactics to an active, ongoing capital procurement project. Beginning in 2010, the NSS was designed with the dual purpose of modernizing the fleets of the Royal Canadian Navy (RCN) and the Canadian Coast Guard Service (CCGS) while simultaneously providing economic stimulus to Canada's shipbuilding industry (Auger, 2015, p. 1). The last major shipbuilding procurement program for the RCN had occurred in the 1990s (and the 1970s before that), resulting in a boom-and-bust cycle for Canadian shipyards during the absence of contracts with the Federal government (Auger, 2015, p. 1-2; Ring, 2016, p. 1-2). The NSS, with a 30-year construction plan, with an additional 20-30 year maintenance, repair, and refit program devised, is designed to break this boom and bust cycle, stimulating economic growth, job creation and skilled labour education throughout Canada (Auger, 2015, p. 7). Furthermore, the NSS will provide the both the RCN and CCGS with state-of-the-art ships for the 21st Century. This will include ships for a larger and better equipped joint RCN/CCGS Arctic Fleet including Icebreaker Vessels and (Arctic) Offshore Patrol Ships ((A)OPS) (Auger, 2015, p. 3, 10). The RCN will also receive a single class of Frigates that will serve the purpose previously tasked to the Halifax-Class Frigates and the now decommissioned, Iroquois-Class Destroyers (Auger, 2015, p. 7; Ring, 2016, p. 10).

The NSS is divided into three distinct procurement projects (with each project having its own distinct components) (Auger, 2015, p. 2-7). The first part of the NSS is the Large Ship Component, of ships over 1,000 tons in displacement of which two Canadian shipyards were to receive the exclusive ACANs to build the ships and ONLY those ships (Auger, 2015, p. 2-4). One shipyard was to build the combat ships and one shipyard to build the non-combat ships (Auger, 2015, p. 4). The second part of the NSS involves the Small Ship Components of ships under 1,000 tons in displacement, such as: search and rescue lifeboats, small and large tugboats, tenders, and various auxiliary ships (Auger, 2015, p. 6). The third part of the NSS involves the repairs, refits, and upgrades to both existing ships in the RCN and ships built during the NSS (Auger, 2015, p. 7). Any Canadian shipyard, save the two granted the construction of large ships, would be able to bid and receive ACANs for latter two components of the NSS.

While the NSS was designed to both modernize and maintain modern RCN and CCGS fleets while simultaneously supporting a strong Canadian shipbuilding industry for 40-60 years, it is questionable if either goal is being currently being achieved as Canadian Shipyards are proving to be woefully under-equipped, under-employed and inexperienced (Pugliese, 2022; Shoute, 2015, p. 2-4). Since the project was launched in 2010, costs have nearly doubled just for the Large Ship Component, from an estimated \$35 billion in 2012 to an estimated \$70 billion in 2022 and this component is years behind in its building schedule (Pugliese, 2022). As of May 2022, only one ship so far, the HMCS *Harry DeWolf* (AOPS) has been constructed, launched and commissioned as a result of the NSS (Collins, 2019b, p. 6). In the initial delivery schedules released in 2011, at least three classes of non-combat support ships and at least one Icebreaker vessel should have been completed by 2022 (Auger, 2015, p. 11; Mack, 2021, p. 5).

Despite the pessimistic outlook of the previous paragraph, there are logical explanations provided thus far for the extra costs and schedule delays. According to Retired Rear Admiral Ian Mack of the RCN (who was the DND's Directorate-General for naval procurements, including the NSS from 2007-2017), shipbuilding is a particularly difficult program to accurately cost and schedule (Mack, 2019, p. 8). According to Admiral Mack, it is not usually until having built four ships in a Class that a shipyard has the institutional experience to accurately cost and schedule ship construction and deliveries (Mack, 2020, p. 10). The NSS is still only in an early stage of constructing ships that it is still in a trial-and-error phase of managing/predicting costs and construction schedules. Furthermore, the initial costs and schedules for the NSS that were stated in the 2011 and 2012 statements were originally created in 2001 (Ring, 2016, p. 1-2; Mack, 2019, p. 8, 10-11). Admiral Mack has conceded that Federal Officials working on the NSS budgets should have been more explicit in their caveats of cost increases and better managed cost increases with quarterly or yearly reports explaining why such increases were occurring (Mack, 2019, p. 4-5).

As of now, it is too early to assess if the NSS will be a successful procurement project and how much of an impact VAA-inspired tactics are having on the project. Currently, there are positive signs that the procurement project is doing things differently leading to improvements, but also signs that some old, wasteful practices are continuing to be used (Auger, 2015, p. 8-11, 13-14; Collins, 2019b, p. 14-15; Stone, 2019, p. 2, 4).

Key Performance Indicators/Index (KPI): Measuring Potential Added Value

As alluded to earlier, different components and tasks can contribute added value to a manufacturing system, but not all components and tasks provide the same amount of added

value. Therefore, a series of indicators are needed. Key Performance Indicators or a Key Performance Index (KPI) are a series of measurements or larger index that are created by manufacturing vendors and customers alike to prioritize how essential various factors are in determining the degree of added value to a manufactured item (Hill+Knowlton Strategies [H+K], 2019, p. 1, 4; PSPC, 2020b). Due to different vendors and customers having different priorities in capital asset procurements, KPIs are almost always customized by nature, with different performance qualities receiving different priorities or weightings to determine added value (H+K, 2019, p. 1, 4; PSPC, 2020b).

Risk Analysis (RA): Measuring Potential Waste

RA reports are nothing new for the DND or CAF and have been used since at least the 1970s through to the Present (Standing Committee for National Defence and Veterans Affairs [SCNDVA], 2005, p. 37-38; TBC, 2015). Unlike KPIs which are more optimistic in how they assess the abilities of potential vendors and merchandise (do this), RA reports are the opposite (don't do that). RA reports are designed by VAA-certified project managers to assess what major impediments or waste causing practices or outcomes could result from a procurement project. By using RA reports, project managers can then better manage their expectations, find solutions or make alternative choices to minimize the potential waste which will simultaneously increase the added value of the procurement. In other words, RA reports are designed to identify unreliable vendors (reliability to fulfill contracts and quality of work) or shoddy assets (technical and operational capabilities) based on past experiences or theoretical concerns.

In April 2005, the Standing Committee for National Defence and Veterans Affairs (SCNDVA) of Parliament, recommended that RA reports be given more credence in

procurement projects. The Committee argued that project managers would be able to provide more accurate and reliable budgets and timetables to the TBC when drafting SORs and awarding ACANs with more rigorous RA reports (SCNDVA, 2005, p. 37). No procurement project is without risk of extra costs and delivery delays. However, an RA report, combined with a KPI can help to determine what vendor/assets to award an ACAN to that will stay on budget and on schedule, minimizing waste and maximizing added value.

Technical Design Examination (TDE): Why It Creates Waste

TDEs are a tactic/methodology used by procurement experts when drafting SORs. TDEs prioritize the technical capabilities and features that are expected in a capital asset that is to be procured. A side effect of relying on TDEs when drafting an SOR is that procurement specialists tend to overly customize the desired capital asset. Ivan Ho has referred to this as, “scope creep” (Ho, 2014, p. 16) when a would-be capital procurement is customized to the point that the whole SOR is a wish list of features not essential for operational needs and require extra time, costs and resources from would be vendors to make such customized merchandise (Ho, 2014, p. 16).

Unless customizations of capital procurements are justifiable for strictly operational purposes, customizations are waste and impede a lean operating procurement system. An example of a TDE-approach leading to a flawed procurement project involved the CH-147 Chinook helicopter acquisition. Excessive customization of the Chinooks, advocated for through the TDE analysis used, was very time and cost intensive (Ho, 2014, p. 15). The project was paradoxical as the DND required an expedited delivery schedule while demanding customizations that were so time intensive, that the helicopters arrived only months before the end for combat operations in Afghanistan and significantly over budget due to excessive research

and development costs (which resulted in waste) (Ho, 2014, p. 12-13). Even then, the helicopters procured were surplus United States Marine Corps (USMC) Chinooks and not the customized ones desired by the DND (Ho, 2014, p. 13).

In practice, TDE's create waste when drafting SORs. TDE's place an unnecessary burden on procurement projects managers within the Civil Service to serve as architects and engineers designing customized capital assets (Ho, 2014, p. 14-16; Loerch, et al, 1998, p. 248-249). While the technical information can be useful for project managers to know, it is more prudent for the vendors who manufacture the actual assets to have a better understanding of the technical abilities and limitations of the assets they manufacture. Waste is created for the vendors who may have to create parts and supply chains from scratch. Once a procurement is fulfilled (pending another contract) are stuck with surplus they cannot use, which is a form of waste for the vendor. This waste causes vendors to raise prices to compensate for their overhead.

Performance Based Analysis (PBA): Why It Creates Added Value

PBAs are a tactic/methodology used by procurement experts when drafting SORs. Unlike TDE's, which emphasize technical capabilities needed within a capital procurement, PBAs emphasize what operational requirements the CAF will need to use the capital asset for. By using a PBA analysis instead of a TDE analysis, the burden of determining what technical capabilities is needed for capital procurements will be identified by vendors and justified to the Cabinet.

A PBA analysis would refocus federal project managers to identify what operational capabilities the CAF needs from their capital assets in drafting an SOR. Vendors would then use their knowledge and merchandise catalogues to identify the best capital assets to meet the PBA-designed SORs. As these capital assets are already being manufactured by vendors for other

customers, this will contribute to lower and accurate cost estimates and speedier delivery schedules for the CAF which create added value. Excellent examples of PBA analysis resulting in speedy procurements were the M777 Howitzers, CC-17 Globemaster II and CC-130J Hercules Aircraft case studies as the SORs for these projects emphasized the CAF's operational needs over technical functions/features (Ho, 2014, p. 14-16; Nossal, 2016, p. 84-85, 101). Therefore, when drafting SORs, emphasizing operational needs over technical functions creates less waste while increasing added value.

Applying TDEs and PBAs When Forming NSS SORs:

As part of the Large Ship Component, a ship design was needed to complete the single-class Canadian Surface Combatant (CSC) project (Mack, 2020, p. 4-5). In 2019, a joint ACAN was awarded to BAE and Lockheed Martin for their ship design. The design will be based on the British Royal Navy's (RN) Type 26 Frigate with modifications for the needs of the RCN, primarily for Arctic warfare (Mack, 2020, p. 5).

While it is still much too early in the CSC project to determine its success, there appears to have been a PBA approach taken when writing the SOR for the ship design. The NSS' working groups chose to focus on what the operational demands would be on the Combatant ships and the types of missions and operations that are currently being undertaken and expected to be undertaken by the RCN when forming the SOR (Mack, 2020, p. 4). While officials involved in the CSC project have stated that the ship design has been modified for Canadian needs (specific details are classified), these also appear to be both minimal and only for essential purposes (i.e. Arctic Warfare) (Mack, 2020, p. 6, 9). Furthermore, the CSC project managers

ultimately choose a model based on the RN's Type 26 Frigate, a proven ship design in terms of reliability and dependability (Collins, 2019b, p. 5, 8).

These are promising developments in terms of managing both the NSS and future capital procurements when it comes to developing SORs. Instead of focusing on designing a unique, one-of-a-kind "Canadian" vessel from scratch, NSS/CSC project managers have chosen a pre-existing design with some modifications and will be able to consult with both the BAE and Lockheed Martin as construction begins based on their past experiences building Type 26 ships (Collins, 2019b, p. 5). This should, in theory, maximize the added value of the CSC as timely construction and effective weapons systems can be chosen and installed on the ships based on experience with predictable/accurate budgeting.

Industrial Regional Technologies (IRT): A Policy Causing Waste

IRTs are a tactic used in finding a vendor(s) to award an ACAN(s) to. The objective of IRTs (referred to as Industrial Regional Benefits or IRBs before 2014) is to offset all government spending involved in the procurement contract by having the vendor invest the funds into utilizing Canadian-sourced facilities, Canadian-sourced raw and finished materials, and hiring a Canadian-based labour force to complete the procurement, thus injecting capital into Canada's GDP through employment, industrial output and even exports (Collins, 2019a, p. 6, 8-9; Nossal, 2016, p. 97-99; TBC, 2021). For the purpose of Economic Development policies, IRTs are added value, for the purpose of National Defence policies, IRTs are added waste.

A major reason why the costs and delivery schedules of procurements projects keep inflating has to do with the unrealistic expectations and demands imposed on vendors by the Federal government. Currently, the offsets that IRTs account for in SORs add little to no added

value to military capital procurement projects as these domestic returns are nullified by the waste they create in the form of redundancies, unnecessary duplication of production facilities, and uncompetitive economic measures upon vendors.

By prioritizing IRTs, vendors must invest extra capital to create facilities or recalibrate existing facilities as well as training a whole new set of staff who have little to no familiarity nor experience with the merchandise, they are building compared to the primary builders in the vendor's home country and primary facilities (Collins, 2019a, p. 5, 9; Loerch, et al, 1998, p. 243-248). Accounting for repairs and maintenance of capital assets, most facilities are either forced to scale down after the procurement is complete or they are shut down by the vendor as the facility requires too many expensive and time-intensive upgrades to remain competitive as a production facility (if they can obtain a contract). Upgrades and repairs to facilities and merchandise themselves provide little added value for either vendors or the Federal government as a customer as actual manufactured goods are not being produced, this making these facilities surplus and therefore, waste. Furthermore, as it is an entirely new labour-force that has to be trained to manufacture the capital assets, no matter how qualified they are, they will lack the experience and familiarity of the original labour force which can lead to extra production time but can also lead to quality control issues due to such unfamiliarity and inexperience. Therefore, IRTs add redundancies and diminish the skilled labour involved in the project management phases that, while might be great for Canada's GDP, are not essential for procuring capital assets for the CAF in a cost effective and timely manner and therefore do not create any added value to procurements as it is nullified by the waste it creates economically and the delays, they create in military supply chains.

All the time it takes to establish new facilities in Canada and train a Canadian-based labour force will add extra time to most capital procurement projects. Due to the uncompetitive nature of the Canadian economy compared to other member-states of the Organization for Economic Co-Operation and Development (OECD), vendors who choose to manufacture capital merchandise in Canada do so with more overhead costs which will always drive up the procurement prices (Organization for Economic Co-Operation and Development [OECD], 2022). As already stated, it will cost extra money to establish new facilities in Canada and train a Canadian-based labour force if there is not a readily available one in Canada. Furthermore, Canada ranks fourth of forty one OECD states in terms of income taxes per capita (meaning workers and managers alike will keep less of their income made) (OECD, 2022), ranks fifth of forty five for labour compensation per hour worked (mandatory benefits from employers combined with minimum wage) (OECD, 2022), and ranks twelfth of forty five for unit labour costs (it costs more per employee for output in Canada compared to most other member states) (OECD, 2022). These are not great numbers when it comes to attracting foreign investment in the Canadian economy, let alone for trying to keep procurement projects within a reasonable budget (or within budget).

Simply put, vendors can manufacture the exact same capital assets for the CAF in their home countries of operations for cheaper and quicker than forcing them to manufacture within Canada and endure additional time and overhead costs. Costs which get passed onto the Federal government as a customer.

Solicitations of Interest and Qualifications: A Value Adding Tactic

Instead of focusing on IRTs derived from vendors in capital procurement projects, the Federal government should concern itself more with SOIQ consultations with vendors. SOIQs, like IRTs, are a tactic used to identify a vendor(s) to award an ACAN(s) to. Even though capital investments in the Canadian economy as well as job creation and skills development programs would be lost by ending IRTs, SOIQs significantly reduce risks of capital procurement projects running excessively over budget and excessively behind schedule which is a chronic side effect of IRTs.

SOIQs would also allow the Federal government to assess, through KPIs, if a vendor has the capacity, competency and skill set to deliver quality capital assets on time and on budget. SOIQs will allow vendors to utilize their extensive knowledge of military capital assets that can be procured as well as their lean-operating manufacturing practices to identify the most cost-effective capital assets that can be delivered in a timely manner providing maximum added value to the CAF. Unless ordered to for a specific procurement project, SOIQs do not oblige vendors to factor in IRTs, instead asking vendors how, using their existing manufacturing practices, they can create quality and cost-effective capital assets that can be delivered in a reasonable amount of time. Instead of granting ACANs based on who the DND believes is qualified, based on arbitrary factors, SOIQs will allow the DND to not only to identify vendors who are interested in receiving ACANs, but to keep procurement projects on time, on budget and without compromising on quality. Finding the right vendor(s) for ACANs will minimize waste thus maximizing added value.

Applying SOIQs and IRTs When Considering NSS ACANs:

As a whole, the NSS, by design, is prioritizing IRTs in the process of choosing vendors for ACANs. Since the NSS was first announced in 2010, the Federal government has been explicit that this program prioritizes benefiting the Canadian shipbuilding industry as much as it prioritizes modernizing the fleets of the RCN and CCGS, respectively (Auger, 2015, p. 1-3). This meant that IRTs were going to play a major role in determining which Shipyards and auxiliary vendors would receive ACANs.

Because of this prioritization of Canadian Shipyards, when SOIQs were initially undertaken in 2010 and 2011 for shipyards for the Large Ship Component ACAN, foreign shipyards and shipbuilding companies were excluded from participation and consideration (Auger, 2015, p. 3). There has been constant questioning and critiquing of the NSS regarding this exclusion of foreign shipyards from participation. Critics have argued that had foreign shipyard been allowed to participate in the SOIQs and had one been chosen as a vendor, especially an experienced and proven shipyard in building naval and coast guard vessels, then there would not be such large cost and schedule overruns as currently happening (Collins, 2019b, p. 12, 14; Mack, 2019, p. 3-4). Proponents of the NSS have argued that this is categorically false as almost every shipbuilding project conducted by shipyards in OECD Countries experience cost overruns and scheduling delays due to the time intensive, labour intensive and supply-chain intensive nature of shipbuilding (Ring, 2016, p. 10; Mack, 2021, p. 7). However, in 2019, retired Admiral Ian Mack, who had been involved in the SOIQs for the NSS, publicly expressed regret that foreign shipyards and foreign vendors had not been included in the SOIQs or given a chance to bid for the ACANs (Mack, 2019, p. 3-4). Mack argues that a more experienced vendor might have very well been able to meet the scheduling expectations set by the Federal government

while being able to provide accurate costing of the Large Ship Component (Mack, 2019, p. 3-4, 7-8).

The ACAN selection process undertaken for the NSS was not a genuine form of a SOIQ due to the ineligibility of foreign shipyards to participate. Instead, the NSS is very much IRT-driven. It is still too early in the Large Ship Component to determine if the exclusion of foreign shipyards will become a liability to the procurement project and it is also difficult to prove such a hypothetical “what if” scenario. As a final thought, Jeffrey Collins has pointed out the hypocrisy of the Federal government to excessively prioritize IRTs for the NSS compared to other major capital procurement projects (Collins, 2019b, p. 14). Collins argues aircraft and military vehicle procurements, which, while some are manufactured in Canada, have constantly been procured from foreign vendors and manufactured in part or wholly outside of Canada (Collins, 2019b, p. 14).

Hill + Knowlton’s Consultations on Vendor Performance Management (2019)

Presently, the DND, in conjunction with ISED, PSPC and the TBC, have undertaken investigating a series of experimental PMMs to determine which methodology would best serve the CAF in speeding up the procurement process, ensuring the CAF receives the quality capital merchandise on time and on budget (H+K, 2019, p. 2). This investigation began in 2019 and is still in progress (PSPC, 2020a; 2020b). The objectives of this policy investigation are to find a PMM that will best streamline and speed up deliveries while improving cost estimates regarding capital procurements (H+K, 2019, p. 2-4).

In 2019, the strategic communications firm, Hill + Knowlton (H+K), were commissioned by the Federal government to carry out consultations with project managers in both the civil

service of all levels of governments in Canada, along with project managers employed in the private sector. H+K identified several policy problems in the Federal government's procurement strategies while simultaneously proposing several policy solutions. These problems involved: choosing a reliable vendor, increased transparency from the vendor on the project's progression, changes to projects mid-progression and excessive costs and delays in delivery schedule (H+K, 2019, p. 5-7, 9). H+K further stressed that all these problems are contributory factors to capital procurement projects running over budget and behind schedule (H+K, 2019, p. 5-7, 9).

As solutions, H+K emphasized that when managing procurement projects, there are two distinct yet equally important phases: choosing a product/vendor for procurement and monitoring the projects progression through to delivery (H+K, 2019, p. 8-10). These two phases are equally as important according to H+K because unreliable vendor is selected, how can a capital procurement project be expected to remain on schedule and on budget (H+K, 2019, p. 8-10)? Furthermore, without effective transparency measures in place, such as: scheduled progress reports, scheduled/unscheduled inspections or the obfuscation/hiding of project impediments, a project will not stay on budget and on schedule (H+K, 2019, p. 11-14). H+K further emphasized that these phases of procurement projects must be underpinned by public servants with sufficient knowledge of both recent and effective PMMs (of which, H+K found, based on their consultations, were lacking in the Civil Service, both in terms of the amount of project managers currently employed and their insufficient job experience) (H+K, 2019, p. 8-9).

In terms of recommendations, the H+K report offered a series of recommendations borne from their consultations to implement their solutions. These included a framework of how to evaluate the reliability of potential vendors based on: past performance with Canadian and non-Canadian vendors, the scale of the jobs completed by the vendors (in terms of money, time and

resources), logistical capabilities, quality of merchandise produced and price of the vendor's products/services (H+K, 2019, p. 11-17). Furthermore, H+K emphasized the need for project managers to become proficient in newer, modern and more complex/comprehensive PMMs, including VAA, as there is a significant gap in project management capabilities between the public and private sectors (with the public sector lagging) (H+K, 2019, p. 8). H+K argues that through increased education and awareness about modern PMM practices as well as the ability to identify reputable and reliable vendors, project managers would also be able to be more proactive in addressing the requests for changes and modifications requested by Federal ministries both before and during the procurement process (which is the primary cause of excessive costs and scheduling delays) (H+K, 2019, p. 8).

To quantify all these policy solutions and recommendations, H+K also created a KPI framework for the Federal government (H+K, 2019, p. 17, 20-22). This KPI was based both on the procurement priorities set out by PSPC, ISED and the TBC, but also on the feedback received from project managers consulted (H+K, 2019, p. 2).

In terms of inspections and supervising capital procurement projects, H+K was not able to provide comprehensive recommendations about how it should be applied to various projects (H+K, 2019, p. 11-12, 14, 16). The reason for this is because the project managers they consulted were divided in terms of how inspections and supervisions should be implemented pending the size of the project (both in terms of money and time) (H+K, 2019, p. 11-12). However, H+K did state that the general opinion of the project managers is that procurements that cost less money and are shorter in time need less inspections and supervision compared to more cost and time intensive projects (H+K, 2019, p. 11). On this matter, H+K provided suggestions regarding time

lengths and costs of projects correlating to potential inspections and expected progress reports (H+K, 2019, p. 11, 17).

Project Management Issues:

Procurement Policy Priority: National Defence or Economic Development?

The Federal Cabinet must ask itself, what is the prevailing policy priority when undertaking capital procurement projects: National Defence or Economic Development? If the policy is Economic Development, then there is significant added value being added for Canadian manufacturers. They are receiving a steady supply of contracts and federal funding while upgrading their infrastructure and the skills of their labour force.

If the policy is National Defence, then added value is not present, waste is in fact being created by relying on Canadian vendors. Projects are rarely completed on time or on budget, quality is compromised, supply chains are unreliable for building materials, labour costs are more expensive compared to other OECD States and the CAF is left without capital assets that could be needed at a moments notice given the sudden and violent nature of the CAF's military duties.

Delays and cost overruns diminish added value and choosing Canadian vendors when there are viable foreign alternative vendors is waste. Therefore, the Federal Cabinet and Parliament must make one of two decisions. The first choice is to keep insisting on IRTs from procurement projects which can lead to economic returns at the expense of much needed quality capital assets on time and on budget. The second choice is to rely on foreign vendors improving the costs and the timetables of procurements at the expense of foreign investment and economic development in Canada. The choice is a zero-sum situation, the current system of trying to

procure quality capital assets in a cost effective and timely manner from domestic sources is not sustainable.

In the case of the NSS, this procurement project, like others over the past 30 years, has been designed to benefit Canada both in terms of National Defence and Economic Development (Auger, 2015, p. 1-3). The project is designed so as to maximize both the added value of the RCN and CCGS, respectively (through the procurement of state of the art ships) and maximize the added value of the shipyards themselves through infrastructure upgrades and gained experience allowing them to be competitive with international shipyards post-NSS (Auger, 2015, p.13). There is much skepticism amongst pundits if the NSS will be able to achieve both goals (or either) as delivery schedules for ships keep being delayed and construction costs keep inflating (Ring, 2016, p. 1, 9-11; Collins, 2019b, p. 14-15; Mack, 2019, p. 10-11). Will the ships ordered provide maximum added value to the RCN and CCGS? Should the CSC component have been prioritized for construction instead of the JSSs and OPSs? Should foreign shipyards with more experience building combat ships have been considered for the ACANs? Can the current and projected supply of Canadian skilled labour meet the demand generated by the NSS? Will the NSS actually break the boom and bust cycle that plagues the Canadian shipbuilding industry? The best answer is that it is still too early to determine if the NSS will succeed. Thus far, only one ship, the HMCS *Harry DeWolf*, has been delivered and the first frigates of the CSC have yet to begin construction (Collins, 2019b, p. 6).

Supervision, Accountability & Communications: Whose Job is it?

Overseeing the whole procurement process are a series of regulatory, supervisory, inspection and auditing authorities from multiple departments, offices, and committees within

the Federal government. These include: the Project Management Board (PMB) of PSPC, the Office of the Auditor General of Canada (OAG), the Ombudsman of the DND, the Parliamentary Committee on National Defence, the Chief Review Service (CRS) of the TBC and the Assistant Deputy Ministers (ADM) responsible for procurements in the DND, ISED, PSPC and TBC respectively (Collins, 2019a, p. 1-2, 9-10; Ho, 2014, p. 9-11, 21, 24, 30-31; Nossal, 2016, p. 91-92; PSPC, 2013; TBC, 2021). As this list indicates, it can be confusing at the best of times who project managers are to report the status of procurement projects to or where in the hierarchical authority of the Federal government various groups are ranked given their decentralized and siloed structure.

Having redundant and contradictory accountability organizations is a form of waste as, in practice, one central organization could be responsible for such oversight and accountability. One central office/organization/individual/entity would optimize oversight (an essential task). While it is not practical for this entity to conduct extensive inspections and liaising with vendors (which is the job of the project managers assigned to their respective procurement projects) added value would be maximized due to two factors. First, project managers would have a clear and identifiable single entity to report to regarding the status of their procurement projects. Second, the entity can then take the reports from the procurement managers and pass it on to senior Public Servants and elected Officials (ADMs, DMs, Ministers, the Cabinet, Parliamentary Committees, etc.). The entity would report what projects are progressing as planned, which ones require remedial action and which ones are failing and need lawmakers to make a decision regarding the fate of said projects. Furthermore, if there is neglect in keeping up inspections, progress reports or failure to alert senior members of the Federal government as to problems, the

single entity can be called to account. The entity would be held responsible if there is evidence, they failed in their duties due to incompetence or neglect.

This confusing structure of accountability is also apparent regarding the NSS. Currently, there are three working groups in charge of governing (project managing) the NSS, from eight different ministries in the Federal government (Auger, 2015, p. 9). The three working groups have been structured in a hierarchy with the Ministerial Working Group at the top, a DM group in the middle and an ADM group at the bottom (Auger, 2015, p. 9). There is also a dispute resolution group that exists to both resolve issues between the Federal government and shipyard-vendors as well as a defacto appellate board for differences of opinion between the different working groups (Ring, 2016, p. 5, 11).

It is currently unclear how effective this structure is at governing the NSS for several reasons. First, due to constant lay-offs and attrition of military procurement project managers within the Federal Civil Service for over 30 years, there is a knowledge and experience gap, especially for shipbuilding and naval procurements which is considered a distinct sub-specialty amongst military procurement project managers (Mack, 2019, p. 4, 9-10). Both the OAG and PBO have admitted that their staff lack the experience and education to understand the nuances of shipbuilding in order to accurately audit the costs and schedule of the NSS (Ring, 2016, p. 11; Mack, 2019, p. 8). Despite having commissioned consultation reports on logistics and operations of marine procurements from independent third party experts including First Marine Industries (FMI) and KPMG, the Federal Civil Service is still struggling to hire new project managers and existing project managers are directing multiple, major procurement projects in addition to the NSS (Ring, 2016, p. 4).

Second, due to the de-centralized and siloed structure of the NSS, it is difficult to hold any one particular individual, group, office or ministry to account. According to retired Admiral Ian Mack, inter-ministerial rivalries and personality clashes has lead to sub-optimal communications regarding project statuses of the NSS or justification for various decisions made leading to confusion and delays in decision making (Mack, 2019, p. 3). Further, J. Craig Stone has argued that due to the sheer amount of inter-departmental involvement in the NSS, there are competing policy interests at play that result in zero-sum outcomes for various entities within Canada as a whole (Stone, 2019, p. 6).

Third, underpinning the previous two reasons, is a lack of communications both at the intra-governmental level and to the Canadian public as a whole regarding both the purpose of the NSS and its progression. Pundits, both in support of the NSS and critical of the program, seem to agree that the Federal government is failing to effectively provide transparency on the status of the NSS or communicate why the project exists in the first place (Collins, 2019b, p. 5, 7-9; Mack, 2019, p. 4-5; Ring, 2016, p. 8-12; Stone, 2019, p. 4). Currently, most information on the status of the NSS comes from journalists' reports usually stating further delivery delays and inflating costs (Pugliese, 2022). Further, accusations of the NSS being tainted by nepotism have resulted from political pundits due to a lack of justification by Federal Ministers to explain why various Canadian shipyards are being awarded NSS-related ACANs (Stone, 2019, p. 3-5). All three of these reasons contribute to uncertainty of the purpose and potential success of the NSS.

Conclusion

This Capstone has argued that the first and foremost issue contributing to capital projects running over budget and behind schedule is project mismanagement related to vendor and capital

asset selection. Furthermore, this Capstone has proposed that VAA as a strategy needed to effectively manage the expectation and requirements of vendors and assets when conducting capital procurement projects. As this Capstone has presented, there are numerous contributing factors and multiple changes that need to be made to implement VAA as the optimal project management of capital procurements.

While the analysis and policy recommendations in this Capstone are likely to be unpopular, even outright refuted or dismissed as “not possible” by civil servants, elected officials and pundits alike, these recommendations are both prudent and doable. Canada’s political and military leaders will have to decide soon regarding how it manages capital procurement projects.

There are two options to choose from. Maintain current PMMs to avoid public disapproval and partisan political attacks while risking billions of taxpayers’ dollars in extra costs and months, even years in delaying new capital assets from being operationally ready. Alternatively, the Cabinet can choose to take the risk of drawing the ire of the Canadian public and political opponents and employ VAA. There will be resentment for having to rely on foreign vendors for capital procurements, but the Cabinet can then honestly tell Canadians, with conviction, that these capital assets were achieved in a cost-effective and speedy manner. Last, but not least, the Cabinet would also be able to tell Canadians, added value was achieved since the CAF would acquire the capital assets they need, Canada would be prepared to defend its sovereignty from all military threats. This is the choice that is ultimately at stake with the type of PMM for military capital procurements.

Policy Recommendations

1) Establish Defence Procurement Canada (DPC):

During the 2015 Federal Election, the Liberal Party pledged to create Defence Procurement Canada (DPC) to improve the Federal government's military procurement functions. Primarily the aim of creating the DPC is to keep capital procurement projects on time and on budget (Collins, 2019a, p. 1, 10). The DPC would operate in a very similar fashion its predecessor, the Department of Supply and Service (DSS). The DPC would consolidate the top procurement experts in the Federal Civil Service into one department, in one ministry (the DND) and under the direct supervision of one ADM. One department would be responsible for drafting SORs, one department would be responsible for advising the Cabinet on which vendor(s) to award ACANs to, one department would be responsible for supervising the progression of procurement orders from the signing of ACAN contracts through the contractual obligations of all parties involved, through to the delivery of the finished capital assets.

The CAF's top logistical and technical experts, along with representatives from the SRB, would be assigned to the DPC allowing the DND, TBC and the Cabinet to keep up to date regarding developments and progress on capital procurement projects. In this consolidation of project managers and procurement experts, neither the services of the ISED or PSPC would be needed anymore as their top procurement experts will answer directly to the DND. Furthermore, as will be stated in recommendation #4, the services of the ISED in accounting for IRTs will no longer be needed either.

The DPC would synergize capital procurement projects solving various issues associated with said projects, which is the very essence of VAA. The DPC will maximize optimality in

terms of time and eliminating the redundancy of sending/receiving information that currently exists due to the siloed nature of the Federal government's current procurement process.

2) Fully Implement Hill + Knowlton's KPI Evaluation Chart:

H+K have created a comprehensive research report into PMMs and how to evaluate the application of various PMMs for procurements (H+K, 2019, p. 2). This is a ready-made report that can be adopted immediately and take anywhere from a few weeks to a few months before all of the DND's current vendors have had their KPI evaluations completed. Having reviewed H+K's report, it is based on the doctrines of VAA and includes the framework for a KPI customized for Canadian military capital procurements.

The Federal government will be able to ascertain how vendors manage projects, including if/how they utilize VAA. The DPC can therefore use this KPI to identify vendors who will deliver projects on time and on budget and identify assets offered by vendors that will best meet the operational needs of the CAF.

3) Prioritize Knowledge and Training in VAA Amongst Public Servants:

As a colloary to the previous recommendation regarding the H+K report, the Federal Civil Service but especially project managers, need to gain a comprehensive and working knowledge of VAA. Innovation and efficiency are not only to be acknowledged and adopted but embraced by the Federal government. Therefore, public servants must be knowledgeable of these methodologies not only to implement them, but to also be aware of when waste is occurring or when policies and practices will lead to waste.

Therefore, the PSPC and the TBC need to emphasize, incentivize, and prioritize those new hires be certified either as VAA analysts. Incentives, such as: higher wages, preferred placements, flex-work (remote working) and fast-tracking for promotion can be implemented to

incentivize new hires to acquire these credentials. Existing public servants in the employ of the Federal government, who are currently unaccredited in VAA, can be encouraged to gain these credentials. The only difference would be is that existing civil servants should be given the additional option of paid leave and even have their training fees subsidized if they seek education to gain these credentials.

4) Prioritize PBAs over TDEs & SOIQs over IRTs When Drafting SORs and

Awarding ACANs:

By prioritizing a PBA approach over a TDE approach when drafting SORs, customizations will be kept to a minimum and for only operationally essential purposes, therefore allowing the DPC to create accurate and cost-effective procurement budgets as well as timely and speedy delivery schedules. Furthermore, by fully adopting SOIQ tactics (augmented by the H+K KPI) when identifying vendors to grant ACANs, the DPC will be able to better choose vendors who can be relied upon to deliver quality capital procurements on time and on budget.

To achieve this Performance-based/Capability approach, the Federal government must cease using both TDEs when drafting SORs and IRTs when choosing vendors for ACANs. Both tactics call for non-essential activities and components to capital procurement projects that produce waste. Instead, PBAs and SOIQs need to become the standard tactics used when drafting SORs and awarding ACANs as they will maximize added value in capital procurement projects.

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