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SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

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Title - Sujet NVSM Project RFI	
Solicitation No. - N° de l'invitation W8476-216347/A	**Amendment No. - N° modif.** 002
Client Reference No. - N° de référence du client W8476-216347	**Date** 2020-08-14
GETS Reference No. - N° de référence de SEAG PW-$$QT-002-27811	
File No. - N° de dossier 002qt.W8476-216347	**CCC No./N° CCC - FMS No./N° VME**
Solicitation Closes - L'invitation prend fin **at - à 02:00 PM** **on - le 2020-10-30**	**Time Zone** **Fuseau horaire** Eastern Daylight Saving Time EDT
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Canada

Amendment #002 is raised to extend the Closing Date to 30 October 2020; and to add the Sustainment Requirements (Attachment #4) to the RFI.

Preferred response time to initial release of RFI (Attachment #3): remains 31 August 2020 (Comments, responses and questions will be accepted throughout the RFI period).

See attached.

Attachment # 4
Sustainment Approach and Questions

Attachment #4 provides the sustainment information for how the Canadian Armed Forces (CAF) typically sustain its fleets in terms of supply chain, maintenance, and central management of equipment. It also provides the sustainment requirements specific to the NVSM project.

Attachment #4 will be delineated into two broad streams (or topics) of information requirements: Acquisition of Initial Integrated Logistics Support (Initial ILS) and Sustainment.

Acquisition of Initial ILS: This stream, as it pertains to equipment support, includes all the enabling systems which are required along with the acquisition of the prime equipment to ensure the CAF's ability to maintain the equipment's capability and readiness while in-service. Traditionally this is known as the Initial ILS package. Where ILS could include the following elements (this is not an exhaustive list and could include further or fewer elements as each case requires):

a) Maintenance
b) Supply support
c) Training
d) Software Support
e) Facilities and infrastructure
f) Packaging, handling, storage and transportability
g) Technical data
h) Personnel
i) Support tools and test equipment
j) Support and engineering services

The meaning of each element will be described in their respective sections below. For each ILS element, the questions may refer to both the physical resources required and the services necessary during the equipment acquisition phase. For example, supply support can refer to the initial provisioning of spare parts and also to the analysis required to determine the initial provisioning, if applicable.

Sustainment: Considering the same ILS elements identified above, the sustainment stream addresses the enabling systems' requirements throughout the prime equipment's service life (effectively the equipment's ongoing ILS requirements). Some may refer to this as In-Service Support (ISS). However, in addition to ISS, sustainment also addresses any ongoing service arrangements, ISS contracts, or ongoing in-service support maintenance concepts which may apply to ensure the system effectiveness of the overall Materiel System (i.e. the ongoing resources and services required to maintain the capability and readiness of equipment and its enabling systems).

The objective of Attachment #4 is to engage industry to:

a) Explore the depth and breadth of resources and services required during the acquisition of the various types of equipment (i.e. the Initial ILS)
b) By extension, explore ongoing resources and services required for the various types of equipment while in-service (i.e. In-Service Support or ongoing ILS)

c) Seek proposed solutions from industry to help develop a successful sustainment solution which leverages industry's strengths and abilities, while ensuring a mutually beneficial solution for all stakeholders involved. (i.e. Sustainment or delivering ISS for the life of the system).

6.1 Preliminary Concept of Sustainment

6.1.1 Operational Concept. These night vision systems are anticipated to remain in service for no less than 10 years. The following summarizes how each type of system will be distributed and used.

6.1.1.1 Combat arms soldiers and naval boarding parties will be issued the BNVD and will use them in Canada and when deployed abroad. MNVDs will be used by all other soldiers and sailors who require night vision to perform their tasks during training and on operations. The entire NVD fleet can expect to be used across the full spectrum of operations and training of the Canadian Armed Forces. The devices will need to be ready for use at all times with the potential to be deployed to various operations around the world.

6.1.1.2 LADs will be issued to every soldier and sailor who has a NVD.

6.1.1.3 Long range HHTIs will used by specialist roles in the Canadian Army and Royal Canadian Navy. Medium range HHTIs will be used by combat arms soldiers in the CA. Both devices will be used within Canada for training and while deployed abroad. The quantities used on operations varies greatly depending on the mission profiles. These devices will need to be ready for use at all times during operations and training.

6.1.2 The CAF Support Structure

6.1.2.1 DND has an existing organic support organization capable of sustaining electro-optical type equipment such as Image Intensified Monoculars/Bioculars/Binoculars, as well as Thermal Imaging devices. As such, with the acquisition of the appropriate enabling systems (such as support and test equipment, training, maintenance manuals, spare parts, etc.), the ideal solution for DND would be where both DND and industry contribute to the sustainment solution. A sustainment solution where both DND and industry support the NVS would ensure an optimized balance between performance, value for money, flexibility and economic benefits.

6.1.3 Maintenance

6.1.3.1 In the past, CAF equipment users and electro-optical technicians have performed operator maintenance as well as some relatively low complexity preventive and corrective maintenance tasks. Maintenance tasks of a higher complexity or duration were contracted to an external organization. Although such an arrangement is possible for future Night Vision Systems, DND is receptive to different types arrangements, spanning from one extreme where DND performs all maintenance to the other extreme where an external entity is responsible for all maintenance tasks.

6.1.4 Supply Support

6.1.4.1 Historically, DND acquired two years of spares during the acquisition of complex equipment systems. This provided enough time to develop and transition to in-service

support. As a starting assumption, the NVSM project anticipates acquiring two years of spares to support DND-assigned maintenance tasks. Sustaining supply support (including the management, warehousing and distribution of inventory) could be either performed in house or contracted externally. In either case, DND would require contractor obsolescence management including issue identification and proposed solutions.

6.1.5 Training

6.1.5.1 Initial Cadre Training (ICT) will allow the CAF to operate and maintain the fleets upon initial delivery. During acquisition, operator and technician training will be required for a specific quantity of operators, operator-trainers, maintainers and instructors.

6.1.5.2 Steady State Training will allow the CAF to operate and maintain the fleets throughout their respective service life. Operator training will be required across Canada at Canadian Army (CA) and the Royal Canadian Navy (RCN) major bases. Technician training will be required by the Royal Canadian Electrical and Mechanical Engineers School. In service, operator and technician training may require training materials and services on an ongoing basis, either developed internally within DND or externally via a sustainment contract(s).

6.1.6 Software Support

6.1.6.1 Some digital systems may require integration with other equipment systems in use by the CAF. During acquisition, expertise in software integration may be required. Sustaining this software (whether within DND or by industry) may be required in order to facilitate configuration management, incremental improvements, and obsolesce management such that it is able to keep pace with ever changing and evolving technology.

6.1.7 Facilities and infrastructure

6.1.7.1 The NVSM project does not anticipate the need for any new facilities to store, operate, or maintain the new equipment systems. CAF units operating the new equipment will manage and store the equipment using existing DND secure storage facilities. Maintenance and spares depots will not be expanded, nor will the existing schools.

6.1.8 Packaging, handling, storage and transportability

6.1.8.1 The NVSM project assumes each equipment kit will be delivered in a self-contained package usable by the CAF user. Specific storage and handling requirements would have to be identified for any long term storage or transportability purposes.

6.1.9 Technical data

6.1.9.1 The Technical data package (TDP) required during acquisition and sustainment could include:

a) OEM technical publications such as operator manuals, preventative & corrective maintenance manuals, and available commercial part numbering listings (as procured by OEM);
b) Proprietary rights data (e.g. measurements, weights, tolerances, CAD drawings, 3D models, systems components, etc.);

c) Nomenclature and identification plate data, fitted equipment and loose items lists, minimum equipment lists; Supplementary Provisioning Technical Data (SPTD) needed for cataloguing; and
d) Drawing and software documentation needed for maintenance and in-service configuration management.

6.1.9.2 It is likely that for the acquisition, DND will require a technical data package (TDP) containing operator manuals, maintenance manuals and training manuals, each with varying levels of detail depending on the sustainment solution. In any case, DND will require ongoing configuration management, engineering support, translation and publication services. Specific tasks such as asset tracking, maintenance planning, and spares inventory management may be required to use DND's SAP enterprise resource planning tool, the Defence Resource Management Information System (DRMIS).

6.1.10 Personnel

6.1.10.1 During the acquisition phase, potential bidders may be requested to provide personnel to support CAF user selection trials. While in-service, DND may require ongoing access to industry representatives for supply support, technical support, training delivery, or other roles as required.

6.1.11 Support tools and test equipment (STTE)

6.1.11.1 During the acquisition phase, DND may require sufficient quantities of standard tools, special tools and test equipment necessary operate and maintain the equipment for the tasks which are DND's responsibility. Organizations responsible for sustainment would maintain the necessary support tools for their respective support responsibilities.

6.1.12 Support and engineering services

6.1.12.1 The NVSM Project is exploring the capabilities of industry to carry out engineering and technical tasks, which are critical to ensuring system availability. Work may include modifications, system/sub-system/component reliability assessments or failure analysis.

6.2 Information Required to Determine a Sustainment Solution

6.2.1 In order to determine an optimum balance of responsibilities, the NVSM project requires input from industry to help guide how the various sustainment responsibilities might be divided and assigned between DND and industry. The solution space is vast and complex with any number of variables influencing any number of possible outcomes. However, as a point of departure, the NVSM project would like to determine the bounds of the solution space by identifying which support tasks can be performed by DND and which can be performed by industry.

6.2.2 To help organize these support considerations we are requesting information be provided in terms of four broad categories of tasks:

a) Operator tasks using no tools or tools carried within each kit and requiring less than 15 minutes to complete;
b) Low complexity tasks with limited access to STTE and requiring less than 4hrs to complete;

c) Higher complexity tasks with access to STTE and requiring up to 24hrs to complete; and
d) Very complex tasks (such as overhauls and mid-life refits) using highly specialized tools and production equipment, requiring significant time to complete.

6.2.3 Understandably, without further information regarding DND's support structure, those four broad categories are vague but intentionally so. This RFI seeks to investigated what is in the art of possible to support the future NVS.

6.2.4 You are requested to provide information within the context of what is possible and what is not. For example, you might indicate your willingness to provide all the enabling systems required for DND to perform all the Operator maintenance tasks. Alternatively, you might propose a solution where industry performs all Operator maintenance tasks by suggesting DND holds a specified number of spare kits and simply exchanges kits as required to meet a specific operational availability.

6.2.5 In the case of very complex tasks, you might suggest that only industry maintain that responsibility due to the inability to share proprietary information. Or, you may identify all the support services and resources required to perform those complex tasks, allowing DND the opportunity to analyze the cost effectiveness of such a support solution.

6.2.6 It is requested that responses not be limited to the industry preferred solution or a pre-determined DND support structure, but rather include a spectrum of possibilities.

Question 1. Maintenance:

1) Can you provide a complete list of the recommended preventive and corrective maintenance tasks (including task duration) for the proposed system(s)? Please include all tasks regardless of who you would propose be responsible for the task.
2) Can you provide the frequency of the preventive maintenance tasks?
3) What division of responsibilities would you recommend?
4) Does your organization have an interest and capability to provide maintenance support?
5) Are there any special considerations (e.g. infrastructure requirements, tooling) required for the maintenance for the proposed system?

Question 2. Supply Support:

1) During the acquisition contract, does your organization have the capability and interest in providing the logistic support analysis in support of your recommended initial spare parts?
2) Is your organization capable of providing spare parts to the CAF for the expected life of the proposed system?
3) What is the cost of two years of recommended spare parts as a fraction of the acquisition cost per equipment (or 100 kits, or 1,000 kits, or 10,000 kits) for each proposed systems?
4) Does your organization have an interest and capability to perform spare parts management, such as warehousing, maintaining and distribution of all NVSM equipment

for the life of the system? Please describe your methodology and associated costs to perform spare parts management based on past successful experiences.

5) Does your organization have an interest and capability to provide obsolescence management services? Please describe your methodology and associated costs to perform obsolescence management based on past successful experiences.

Question 3: Training

1) Please provide a rough order of magnitude (ROM) cost of delivering ICT as part of the acquisition contract.
2) Does your organization have the capability and an interest in providing Steady State Training? Please describe your methodology and associated costs to perform steady state training based on past successful experiences.

Question 4. Software Support:

1) Does your proposed system have the ability to interface with external systems?
2) Please describe the interface requirements.
3) Does your organization have an interest and the capability to provide ongoing software support? Please describe your methodology and associated costs to perform software support based on past successful experiences.

Question 5. Facilities and Infrastructure:

1) Please describe the capabilities and capacities of your organization's facilities and infrastructure to support the production and/or in-service support of the proposed system.
2) Would your organization require new facilities to produce and/or support the proposed system?

Question 6. Packaging, handling, storage and transportability:

1) Does your proposed system require any specific packaging, handling, storage or transportability considerations which would have an appreciable impact on the acquisition cost or sustainment cost?

Question 7. Technical Data Package

Technical Data

Canada is examining the Technical Data requirements during acquisition and for various sustainment options.

1) Would your organization be able to provide the TDP required to support the DND assigned tasks?
2) Would your organization be interested and capable in updating and maintaining technical publications as required during a 10 year lifecycle for the NVSM?
3) Would you be able to provide manuals in English and French languages?
4) What is the cost basis for each manual type? (i.e. Fixed cost? Incremental per number of equipment? Included in equipment price? Other?)

5) Would there be restrictions to further distribution of your electronic and hard copy manuals within DND?
6) DND manuals require a specific format. Does your organization have an interest and the capability to provide all required manuals in a DND-specified format?

Intellectual Property

Canada is examining the Intellectual Property (IP) implications during acquisition and for various sustainment options.

1) Is the required IP transferable through DND to third party support organizations?
2) Who holds the IP rights for the equipment (including software) that you would be proposing?
3) Does imbedded software/firmware included on equipment require a license to operate and/or maintain the system?

Question 8. Personnel:

1) Would your organization provide personnel to support acquisition activities (such as selection trials)?

Question 9. Support Tools and Test Equipment:

1) Please provide a list and associated costs of all the STTE required for tasks which could be DND's responsibility.

Question 10. Support and Engineering Services:

Configuration Management

During Sustainment, there may be a requirement to conduct Configuration Management (CM).

1) Does your organization have an interest and the capability to provide CM services? Please describe your methodology and associated costs to perform CM based on past successful experiences.

Key Performance Indicators (KPIs)

There may be a requirement to provide sustainment based on Key Performance Indicators (KPIs). Such KPIs could include Operational Availability (Ao), Mean time to repair (MTTR), Mean operating time between failures (MTBF), Mean logistics delay time, and Mean time between maintenance (MTTM).

1) Does your organization have the capability and an interest in providing sustainment services based on KPIs? Please describe your methodology and associated costs to perform sustainment based on past successful experiences.
2) Please describe reasonable targets for your proposed KPIs?

6.3 Sustainment Cost

6.3.1 The NVSM team is investigating the sustainment cost associated with each proposed system and requests indicative costing information from suppliers in order to forecast the

project acquisition costs as well as the equipment's sustainment costs. Responders are asked to provide Indicative or ROM pricing in Table 1 for as many questions and activities as possible as provided in Attachment #4. Please provide a breakdown, to the lowest level possible for the sustainment cost for the technical requirements identified in Attachment #4 based on all potential divisions of responsibilities between DND and Industry.

6.3.2 Please indicate each proposed system and associated costs if applicable in reference to Attachment #1 through Attachment #4.

Table 1: Sustainment Cost (ROM Cost Estimate)

Ref	Description		Monocular Night Vision Device (MNVD)	Binocular Night Vision Device (BNVD)	BNVD with Thermal Fusion System	BNVD with Augmented Reality Systems	Laser Aiming Device (LAD)	Hand Held Thermal Imager (Medium Range)	Hand Held Thermal Imager (Long Range)
6.1.3	**Maintenance**								
	Acquisition	Maintenance plan development (e.g. task assessment, level of repair analysis)							
		Maintenance plan deliverables (e.g. maintenance plan, task instructions, schedule)							
	Sustainment	Maintenance services (e.g. operator tasks, low complexity tasks, higher complexity tasks, very complex tasks)							
		Maintenance related physical deliverables (e.g. maintenance plan updates)							

6.1.4	**Supply Support**								
	Acquisition	Supply support development (e.g. sparing analysis)							
		Supply support deliverables (e.g. initial provisioning of spares)							
	Sustainment	Supply support services (e.g. inventory management, obsolescence management, warehousing and distribution)							
		Supply support deliverables (e.g. spare parts)							
6.1.5	**Training**								
	Acquisition	Training development (e.g. ICT and steady state training course design and development)							
		Training deliverables (e.g.							

		ICT and steady state training course packages)							
	Sustainment	Training services (e.g. Steady state training course instruction)							
		Training deliverables (e.g. Steady state training course materials)							
6.1.6	**Software Support**								
	Acquisition	Software support development (e.g. integration with DND equipment)							
		Software support deliverables (e.g. software licences, source code)							
	Sustainment	Software support services (e.g. software configuration management, software updates)							
		Software Support deliverables (e.g.							

		software/firmware updates)							
6.1.7	**Facilities and infrastructure**								
	Acquisition	Facilities and infrastructure development (e.g. infrastructure requirements analysis)							
		Facilities and infrastructure deliverables (e.g. facility improvements)							
	Sustainment	Facilities and infrastructure services (e.g. ongoing infrastructure requirements analysis)							
		Facilities and infrastructure deliverables (e.g. arising in-service facility improvements, additional warehousing)							
6.1.8	**PHS&T**								

	Acquisition	PHS&T development (e.g. PHS&T logistics related analysis)							
		PHS&T deliverables (e.g. hard cases, purpose-built shipping containers)							
	Sustainment	PHS&T services (e.g. ongoing PHS&T logistics related analysis)							
		PHS&T deliverables (e.g. additional packaging)							
6.1.9	**Technical data**								
	Acquisition	TDP development (e.g. technical writers, translation, publication services)							
		TDP deliverables (e.g. publications, intellectual property rights, drawings)							
	Sustainment	TDP services (e.g. configuration							

		management, translation, publication services)							
		TDP deliverables (e.g. updated publications)							
6.1.10	**Personnel**								
	Acquisition	Personnel (e.g. CAF user selection trial support personnel)							
	Sustainment	Personnel in-service (e.g. instructors, engineering support personnel)							
6.1.11	**STTE**								
	Acquisition	STTE development (e.g. STTE requirement analysis)							
		STTE deliverables (e.g. tools, calibration and test equipment for							

		operator tasks, low complexity tasks, high complexity tasks, very complex tasks)							
	Sustainment	STTE services (e.g. ongoing STTE logistics related analysis)							
		STTE deliverables (e.g. additional STTE)							
6.1.12	**Support and engineering services**								
	Acquisition	Support and engineering services (e.g. management, engineering, lab testing)							
		Support and engineering services deliverables (e.g. plans, engineering reports)							
	Sustainment	Support and engineering services (e.g. modifications, service support)							

		Support and engineering services deliverables (e.g. performance reports)							