ANNEX G - DRAFT BID COMPLIANCE MATRIX

COMPLIANCE WITH ANNEX B - STATEMENT OF WORK AND MANDATORY PLANS & DOCUMENTS

A	B	C	D	E	F	G
Item Number	**Description**	**Mandatory or Rated Requirement**	**Proof of Compliance**	**Compliant or Non-Compliant**	**Reference in Proposal (Document, Page No. Etc.)**	**Bidder's Comments**
1	**STATEMENT OF WORK (SOW)**	**Information**	**NA**	**NA**	**NA**	**NA**
1.1	Compliance with entire SOW is Mandatory except para 11.5.2 which is a Rated Requirement.	Mandatory	Compliance Statement			
1.2	All requirements of the SOW except sub-paragrarph 11.5.2 are Mandatory requirements. Bidders must demonstrate in their technical bid on paragraph to paragraph basis as to how they meet the requirements.	Mandatory	Compliance Statement			
1	**DRAFT PLANS AND DOCUMENTS REQUIRED WITH BID**	**Information**	**NA**	**NA**	**NA**	**NA**
1.1	In addition to be compliant with the SOW, Bidders must provide the following DRAFT plans and document that will be reviewed and approved by Canada. The Contractor must implement the approved versions after the contract award.	Mandatory	Draft Plans and Documents must be submitted with the bid.			
1.1.1	Bidders must provide their proposed DRAFT Project Management Plan (PMP), outlining the methods for integrating all management, planning and control activities for the contract. The submission describes the processes that will be used to manage the work described in the SOW, addressing: • Project Manager experience and qualifications; • PM approaches, methods and procedures to support work described in the SOW; • Bidder PM organizational structure; • Process for tracking and reporting progress; • Sub-contractor management and responsibilities; • Risks identification, control and mitigation IAW approved methodologies; • Communication management with Canada; and • Address scheduling management IAW Integrated Master Schedule.	Mandatory	Draft PMP must be submitted with the bid.			
1.1.2	Bidders must submit the DRAFT Integrated Logistics Support plan to support the contract, addressing the following items: • Provision of technical publications required by CAF maintenance and operators to fulfil their duties; • Spares management procedures including identification of spares requirements, management of a pool of spares, storage and transport; • Technical data, publications and material for the packing, transportation handling, storage and disposal procedures for COMO activities; • Transportation procedures for equipment, spares (initial and replacement) and import/export documentation; • Transportation plan of UAS and spares to Trenton, Esquimalt or Halifax; and • 2nd and 3rd line repair procedures to support operations.	Mandatory	Draft ILS Plan must be submitted with the bid.			
1.1.3	Bidders must submit the DRAFT Training Master Plan to describe how it will implement a Training Master Plan in order to meet DND airworthiness requirements. The description must include: • How Contractor personnel will be trained to support Stream 1; • How the Contractor will train CAF personnel for Stream 2; • How the Contractor plans to train Contractor instructions; • How the Contractor will "train the trainers"; • Instructor course pre-requisites and recertification procedures; and Candidate pre-requisites and recertification procedures.	Mandatory	Draft Training Master Plan must be submitted with the bid.			
1.1.4	Bidders must submit the DRAFT version of their Performance Monitoring System (PfMS) that will be used by the Contractor and Canada to provide advance notice of any deviation from the planned schedule, costs, or performance.	Mandatory	Draft PfMS Plan must be submitted with the bid.			

1.1.5	Bidders must submit their proposed DRAFT Security Plan, addressing the following elements: • Personnel Security to include: o Estimate of number of staff required by security classification • Materiel Security to include: o Plans to provide protection of classified materiel and documents; and o Transportation security; • Information Security to include: o Network security in Canadian and deployed theatre of operations for classified and unclassified data; o the transmission of classified information and material; o Contractor's plans and procedures for handling the storage of classified material; • UAS Security to include: o How the UAS will include security features to address potential operational security risks; o GPS signal security measures including strength, satellite identification codes; o Data link security from UA to GCS; and o Data zeroing methods; and • Facility Security to include security clearance level required for all facilities required in support of the contract.	Mandatory	Draft Security Plan must be submitted with the bid.			
1.1.6	Bidders must describe: • How it will implement an unclassified electronic shared data environment that will enable only Canada and the Contractor to store, exchange and share data deliverables; • How it will implement a secret classified electronic shared data environment that will enable only Canada and the Contractor to store, exchange and share program data; and • How the TA will be notified when a data deliverable is placed on the SDE.	Rated	Draft Plan to share data must be submitted with the bid.			

ANNEX G - DRAFT BID COMPLIANCE MATRIX

COMPLIANCE WITH APPENDIX B1 - AIRWORTHINESS REQUIREEMNTS

A	B	C	D	E	F	G
Annex A Reference	**Description**	**Mandatory or Rated Requirement**	**Proof of Compliance**	**Compliant or Non-Compliant**	**Reference in Proposal (Document, Page No. Etc.)**	**Bidder's Comments**
1	**BACKGROUND**	**Heading**	**NA**	**NA**	**NA**	**NA**
1.1		Information	Compliance Statement			
1.1.1	***Compliance with Appendix B1 - Airworthiness Requirements is mandatory. This tab will be populated later at the RFP stage, however, Appendix B1 is included in the DRAFT RFP.***					
1.1.2		Information	Compliance Statement			
1.2		Information	Compliance Statement			
1.3		Information	Compliance Statement			
2		**Heading**	**NA**	**NA**	**NA**	**NA**
2.1		Information	Compliance Statement			
2.2		Information	Compliance Statement			
2.2.1		Information	Compliance Statement			
2.2.2		Information	Compliance Statement			
2.2.3		Information	Compliance Statement			
2.3		Requirement	Compliance Statement			
2.4		Requirement	Compliance Statement			
2.5		Requirement	Compliance Statement			
2.6		Requirement	Compliance Statement			
2.7		Requirement	Compliance Statement			
2.8		Requirement	Compliance Statement			
2.9		Requirement	Compliance Statement			
2.1		Information	Compliance Statement			
2.2		Requirement	Compliance Statement			
3		**Heading**	**NA**	**NA**	**NA**	**NA**
3.1		Requirement	Compliance Statement			
		Information	Compliance Statement			
4.1		Information	Compliance Statement			
4.1.1		Requirement	Compliance Statement			
4.1.2		Requirement	Compliance Statement			
4.2		Information	Compliance Statement			
4.2.1		Information	Compliance Statement			
4.2.2		Information	Compliance Statement			
4.2.3		Requirement	Compliance Statement			
4.2.4		Requirement	Compliance Statement			
4.2.5		Information	Compliance Statement			
5.1.9		Requirement				
6			**NA**	**NA**	**NA**	**NA**
6.1		Requirement	Compliance Statement			
6.2		Requirement				
6.3		Requirement	Compliance Statement			

ANNEX G - DRAFT BID COMPLIANCE MATRIX

COMPLIANCE WITH ANNEX C - SYSTEM PERFORMANCE SPECIFICATIONS

A	B	C	D	E	F	G
Item Number	**Description**	**Mandatory or Rated Requirement**	**Proof of Compliance**	**Compliant or Non-Compliant**	**Reference in Proposal (Document, Page No. Etc.)**	**Bidder's Comments**
1	**SCOPE**	Heading	NA	NA	NA	
1.1	The requirements listed in this System Performance Specification (SPS) document are for the Unmanned Aircraft System (UAS) that must be used in the delivery of the Canadian Armed Forces (CAF) UAS Services Contract.	Information	Compliance Statement			
2	**OPERABILITY**	Heading	NA	NA	NA	
2.1	Launching and Recovery	Mandatory	Compliance Statement			
2.1.1	The UAS must be ready to launch from a Cold Start in no more than 30 minutes. Readying for launch includes, but is not limited to:		Compliance Statement			
a	Powering all systems in the UAS;		Compliance Statement			
b	Performing all pre-launch functional checks;		Compliance Statement			
c	Incorporating pre-flight Mission data;		Compliance Statement			
d	Loading any pre-planned Mission routes;		Compliance Statement			
e	Configuring all communication, navigation and installed Payload systems for the Mission; and					
f	Moving the UA within the launch and recovery area.		Compliance Statement			
2.1.2	The UAS must be readied for launch from a storage condition in no more than three (3) hours.		Compliance Statement			
2.1.3	The UAS must be readied for launch from a maintenance condition in no more than three (3) hours.		Compliance Statement			
2,1,4	The UAS must be able to recover, refuel, change removable data storage devices, and launch for a second six (6) hour Sortie in no more than 30 minutes.		Compliance Statement			
2,1,5	The UAS must conduct Sortie Missions with no more than two Operators.		Compliance Statement			
2.1.6	The UAS must launch and recover under ship motion limits of up to and including Sea State 3 as described in Table 1, Displacement, Velocity and Acceleration at Center of Flight Deck.					
2.1.7	The UAS must launch and recover from an area the size of the launch and recovery area as described in this document without causing health and safety hazards to personnel located outside the launch and recovery area.		Compliance Statement			
2.2	**Shipping and Storage**	Requirement	Compliance Statement			
2.2.1	The UAS must be able to be stored and transported in a standard 20 foot ISO shipping container.	Requirement	Compliance Statement			
2.2.2	The UAS must be able to be stored in the Halifax-class torpedo magazine with dimensions as described in Figure 1, with the exception of the antenna(s) and GCS.	Requirement	Compliance Statement			
2.3	**Weight**	Requirement	Compliance Statement			
2.3.1	Individual UAS components must not exceed 84 kg, with the exception of the UA and Communications antenna when fully assembled.	Requirement	Compliance Statement			
2.3.2	The UA and Communications antenna must be disassembled for storage and transport into components weighing less than 84 kg.	Requirement	Compliance Statement			
2.4	**Data Zeroize**	Requirement	Compliance Statement			
2.4.1	The UAS must provide a data Zeroize function to Zeroize all data stored within the UAS, with the exception of ground based removable data storage devices.	Requirement	Compliance Statement			
2.4.2	The Zeroize function should render data unrecoverable within five minutes.	Requirement	Compliance Statement			
2.4.3	The Zeroize function should be accessible to the Operators at the UAO station and PO station as defined in this document.	Requirement	Compliance Statement			
2.4.4	The UAS should have an independent guarded means to Zeroize ground based removable data storage devices.	Requirement	Compliance Statement			
2.4.5	The UAS must have a means of Zeroizing equipment that due to component failure cannot be Zeroized prior to releasing the equipment for repairs. This may include maintenance instructions on removing and/or destroying on board memory devices.	Requirement	Compliance Statement			
2.6	**External Electrical Power**	Requirement	Compliance Statement			
2.5.1	The UAS must operate using 50-60 Hz single phase 110/220 Volts Alternating Current (VAC) external power supply.	Requirement	Compliance Statement			
2.5.2	The UAS must have the capacity to maintain positive control of the UA for a period of not less than 30 minutes without external power supply.	Requirement	Compliance Statement			
2.5.3	The UAS should operate from a 28 Volts Direct Current (VDC) vehicle power supply without the use of a 110 VAC inverter/power supply.	Requirement	Compliance Statement			
3	**SURVIVABILITY**	Heading	NA	NA	NA	
3.1	The UAS Availability and Reliability must be sustained in the environmental conditions	Requirement	Compliance Statement			
3.2	The UA must have a sound profile of <35dB at a slant range of 4,330 m under the	Requirement				
a	International Standard Atmospheric conditions with zero wind; and	Requirement	Compliance Statement			
b	With the UA operating both at cruise power setting and at loiter power settings required to maintain altitude when executing standard turns to orbit a nearby point.	Requirement	Compliance Statement			
3.3	The UA must return to an Operator specified point upon loss of communication link.	Requirement	Compliance Statement			
3.4	The UA should return by multiple waypoint route upon loss of communication link.	Requirement	Compliance Statement			
3.5	The UAS must operate in conditions of up to and including the upper limit of Sea State 3 as defined in World Meteorological Organization, Manual on Codes, International Codes, Vol I.1 table 3700, p.I.1-C-106.	Requirement	Compliance Statement			
3.6	For ship-based operations, stowed UAS shipboard components must survive conditions of at least up to and including Sea State 6 as described in World Meteorological Organization, Manual on Codes, International Codes, Vol I.1 table 3700, p.I.1-C-106.	Requirement	Compliance Statement			
3.7	The UAS must use a GPS anti-jamming system.	Requirement	Compliance Statement			
3.8	The UAS should have a secondary navigational and position information system.	Requirement	Compliance Statement			
3.9	The UA should have a low visibility profile while in flight.	Requirement	Compliance Statement			
3.10	The UAS should be equipped with an audible and visual alarm system to alert the UAS Operator at any time an instruction is issued to the UA, or a situation arises that would result in the UA failing to maintain safe UA-ground separation (e.g. a routine that periodically compares UA altitude and position with DTED information, and warns Operators if the UA will encounter terrain in the next two minutes).	Requirement	Compliance Statement			
3.11	Electromagnetic Compatibility (EMC)	Requirement	Compliance Statement			
a	The UAS must operate in an Electromagnetic Interference (EMI) environment of a Halifax-class frigate.	Requirement	Compliance Statement			
b	The UAS emissions must not interfere with existing shipboard systems.	Requirement	Compliance Statement			
c	All UAS components and wiring must be provided with suitable shielding to be immune to the electromagnetic conditions in the operational area.	Requirement	Compliance Statement			
d	The UAS must operate in an EMI environment of a populated area without emissions interfering with day-to-day activities of the general population.	Requirement	Compliance Statement			
e	The UAS must operate in a contested and congested EM/GPS environment.		Compliance Statement			
4	**AVAILABILITY**	Heading	NA	NA	NA	
6.1	The UAS must have a Sortie Availability of not less than 95%.	Requirement	Compliance Statement			
6.1.1	Availability must not be limited to launching a Sortie on time.	Requirement	Compliance Statement			
6.2	Availability must include performing in accordance with the SPS for the duration of the scheduled Sortie to meet the Mission.	Requirement	Compliance Statement			
5	**MATURITY AND RELIABILITY (OPERATIONAL HOURS)**	Heading	NA	NA	NA	
5.1	The UAS must either:	Requirement	Compliance Statement			
5.1.1	Have accumulated over 2,100 flying hours of military operational experience for each of the components affecting Airworthiness as defined at para 5.3; or	Requirement	Compliance Statement			
5.1.2	Have accumulated over 5,000 flying hours of operational experience for each of the components affecting Airworthiness as defined at para 5.3.	Requirement	Compliance Statement			
5.1.3	The UAS must have had a system reliability of not less than 95% for the most recent 1,000 operational flight hours.	Requirement	Compliance Statement			
5.1.4	The UAS must meet the minimum maturity requirement of paragraph 5.1 of this SPS for each one of the following components:	Requirement	Compliance Statement			
5.1.4.1	Airframe;	Requirement	Compliance Statement			
5.1.4.2	Propulsion system;	Requirement	Compliance Statement			

5.1.4.3	Avionics system;	Requirement	Compliance Statement			
5.1.4.4	Data link;	Requirement	Compliance Statement			
5.1.4.5	Payloads;	Requirement	Compliance Statement			
5.1.4.6	Command & control system; and	Requirement	Compliance Statement			
5.1.4.7	Corresponding software builds.	Requirement	Compliance Statement			
5.1.4.8	ENVIRONMENTAL	Requirement	Compliance Statement			
	The UAS must launch, operate and recover the UA in all environmental categories described in STANAG 2895 with the exception of zones C4 Extreme Cold, C3 Severe Cold, C2 Cold, C1 Intermediate Cold and M3 Marine Cold for temperatures below – 28°C.	Requirement	Compliance Statement			
5.2	The UAS must launch and recover in sustained and gusting winds of up to and including	25 knots.	Compliance Statement			
5.3	The UAS should operate in icing conditions.	Requirement	Compliance Statement			
5.4	The UAS must operate in precipitation of up to 1.4 mm per minute.	Requirement	Compliance Statement			
5.5	The UAS must launch and recover on ground slopes up to and including 10 degrees as measured from the horizontal oriented along any radial.		Compliance Statement			
5.6	The UAS must launch and recover on unprepared ground, including unevenness of	errain and small debris	Compliance Statement			
5.7	The UAS must launch and recover on packed snow, ice, and slush not more than an inch in depth.	Requirement	Compliance Statement			
5.8	The UAS may be operated in a nuclear fallout environment.	Requirement	Compliance Statement			
5.9	The UAS will not be operated in, nor expected to withstand, a nuclear Electro-Magnetic Pulse (EMP).	Requirement	Compliance Statement			
5.10	Canada will provide nuclear decontamination of all UAS components.	Requirement	Compliance Statement			
5.11	The UAS may be operated in a radioactive environment.	Requirement	Compliance Statement			
5.12	Canada will provide radiological decontamination of all UAS components.	Requirement	Compliance Statement			
5.13	The UAS may be operated in a biological warfare environment.	Requirement	Compliance Statement			
5.14	Canada will provide biological decontamination of all UAS components.	Requirement	Compliance Statement			
5.15	The UAS may be operated in a chemical warfare environment.	Requirement	Compliance Statement			
5.16	Canada will provide chemical decontamination of all UAS components	Requirement	Compliance Statement			
6	**FLIGHT SAFETY REQUIREMENTS**	**Heading**	**NA**	**NA**	**NA**	
9.1	The UAS must have a voice recorder in the GCS.		Compliance Statement			
9.2	The GCS voice recorder must record:		Compliance Statement			
6.2.1	Voice communications transmitted from or received in the GCS;	Requirement	Compliance Statement			
6.2.2	Voice communications in the GCS;	Requirement	Compliance Statement			
6.2.3	Voice communications of UAS crew using the UCS's intercommunication system; and	Requirement	Compliance Statement			
6.2.4	Voice or audio signals introduced into a headset or speaker.	Requirement	Compliance Statement			
6.2.5	The GCS must have an area microphone, which records voice communications originating at UAS crew work place and voice communications of other ground staff when directed to those stations.	Requirement	Compliance Statement			
6.2.6	The GCS voice recorder must have an aural or visual means for pre-flight checking of the recorder for proper operation.	Requirement	Compliance Statement			
6.2.7	The GCS voice recorder must have a Universal time reference signal recorded on a special track.	Requirement	Compliance Statement			
6.2.8	The UAS must have a GCS data recorder	Requirement	Compliance Statement			
6.2.9	The GCS data recorder must continuously record all the data transmitted via the command and control data link and the status of the GCS.	Requirement	Compliance Statement			
6.2.10	The GCS data recorder must have a capacity to record the maximum duration of a Sortie.	Requirement	Compliance Statement			
6.2.11	The GCS data recorder time basis used must be synchronised with a uniform time basis.	Requirement	Compliance Statement			
6.3	The GCS downlink data must be labelled and recorded with the time basis at which they have been generated in the UA.	Requirement	Compliance Statement			
6.4	The GCS uplink data must be labelled and recorded with the time basis at which they have been generated in the GCS.	Requirement	Compliance Statement			
6.5	The GCS data recorder must record a reference to Air Traffic Control time.	Requirement	Compliance Statement			
6.6	The GCS data and voice recorder time basis must allow a post synchronisation of all recorded data or information with an accuracy better than half a second (0.5 s) between any of the recorders.	Requirement	Compliance Statement			
6.7	The GCS should provide a function that is able to read the data recorder for post-flight operation.	Requirement	Compliance Statement			
7	**SUB-SYSTEM REQUIREMENTS**	**Heading**	**NA**	**NA**	**NA**	
7.1	**7.1 Unmanned Aircraft (UA)**	**Sub-Heading**	Compliance Statement			
7.1.1	The UA must have a maximum takeoff weight less than 300 kg.	Information	Compliance Statement			
7.1.2	The UA must have an endurance of not less than six (6) hours of flight, while carrying the Imaging Payload throughout all environments as specified in this document.	Requirement	Compliance Statement			
7.1.3	The UA must be capable of being programmed with flight profiles prior to launch.	Information	Compliance Statement			
7.1.4	The UA must operate automatically from launch to recovery under the supervision of the Operator.	Requirement	Compliance Statement			
7.1.5	The UA must be able to receive commands from an Operator, including manual override of automatic functions, at all times to ensure positive control is maintained.	Information	Compliance Statement			
7.1.6	The UA must be capable of automated launch and recovery without requiring input from the Operator.	Requirement	Compliance Statement			
7.1.7	In addition to the Imaging Payload, the UA must simultaneously employ not less than two (2) other Payloads defined in this document.	Requirement	Compliance Statement			
7.1.8	In addition to the Imaging Payload, the UA should have at least 15 kg of payload capacity.	Requirement	Compliance Statement			
7.1.9	The UA must take off and land vertically.	Requirement	Compliance Statement			
7.1.10	The UA must launch and recover from areas as restrictive as the Halifax-class flight deck; which measures 22 m x 13.5 m surrounded by 10 m high obstacles.	m x 13.5 m surround	Compliance Statement			
7.1.11	The UA must have a heavy fuel engine, operating NATO F76 / F44 for naval assignments.	Requirement	Compliance Statement			
7.1.12	When tracking a moving contact, the UA must maintain at least 70 knots. The UA must record and store at least one (1) Sortie of all Payload data (including Full Motion Video), related metadata and Mission data in accordance with the associated Payload SPS requirements.		Compliance Statement			
7.1.13	The UA and its payloads should operate down to altitudes of 30 m AGL. The UA must use the GPS anti-jamming system for primary navigation and position information.		Compliance Statement Compliance Statement			
7.1.14	The UA must include an IFF transponder to respond to interrogation in mode 3C.	Requirement	Compliance Statement			
7.1.15	The UA must have a low visibility colour scheme suitable for typical daylight operations in both the land and maritime environment.	Requirement	Compliance Statement			
7.1.16	The UA must be equipped with an Infrared (IR) strobe visible to generation III Night Vision Goggles, to allow other airspace users to locate the UA during night operations.	Requirement	Compliance Statement			
7.1.17	The IR strobe must be controllable by the UAS Operator.	Information	Compliance Statement			
7.1.18	The IR strobe must not emit light visible to the unaided eye.	Requirement	Compliance Statement			
7.2	**7.2 Payloads**	Information	Compliance Statement			
7.2.1	**7.2.1 Imaging Payload**	**Sub-Heading**	Compliance Statement			
7.2.1.1	The UAS must include an Imaging Payload.	**Sub-Heading**	Compliance Statement			
7.2.1.2	The Imaging Payload must have a surface positional accuracy of at least a 20m Circular Error of 90% (CE 90) at a slant range of 1,300 m.	Requirement	Compliance Statement			
7.2.1.3	The Imaging Payload must have a colour high definition daylight Electro-Optical (EO) video camera, a medium wave IR video camera, and an IR illuminator.	Requirement	Compliance Statement			
7.2.1.4	The Imaging Payload must have a laser target designator within 12 MACA.	Requirement	Compliance Statement			
7.2.1.5	Under clear atmospheric conditions, the Imaging Payload must produce a colour EO image of at least NATO Imagery Interpretability Rating Scale (NIIRS) Leve	Requirement	Compliance Statement			
7.2.1.6	Under clear atmospheric conditions, the Imaging Payload must produce an IR image of at least NATO Imagery Interpretability Rating Scale (NIIRS) Level 5 at a	Requirement	Compliance Statement			
7.2.1.7	The Imaging Payload must be a 4 axis gimbal with 360 degree continuous azimuth pan.	Requirement	Compliance Statement			
7.2.1.8	The Imaging Payload must be stabilized in 4 axis.	Requirement	Compliance Statement			
7.2.1.9	The Imaging Payload must be controllable by the operator, including video and still image capture.	Requirement	Compliance Statement		NA	
7.2.1.10	The EO camera must have variable Fields of View (EOW/EON) with multiple levels of zoom.	Requirement	Compliance Statement			
7.2.1.11	The IR camera must have variable Fields of View.	Requirement	Compliance Statement			
7.2.1.12	The Imaging Payload must synchronise the EO and IR video fields of view, to allow the UAS Operator to switch back and forth between the two views.	Requirement	Compliance Statement			
7.2.1.13	The EO camera must have an optical zoom capability.	Requirement	Compliance Statement			
7.2.1.14	The Imaging Payload must provide a zoom capability with selectable continuous fields of view for both EO and IR cameras.	Requirement	Compliance Statement			
7.2.1.15	The Imaging Payload must be interchangeable in the field without the need for calibration.	Requirement	Compliance Statement			
7.2.1.16	The Imaging Payload must automatically track Contacts of Interest (COI) once identified by the Operator.	Requirement	Compliance Statement			
7.2.1.17	The Imaging Payload must continuously track moving COIs with speeds up to 80 km/h ground track speed; unless the COI is obstructed for more than 5 second	Requirement	Compliance Statement			
7.2.1.18	The laser target designator must have an effective range of at least 6,000 m.	Requirement	Compliance Statement			

7.2.1.19	The IR illuminator must indicate contacts or areas of interest to other observers with generation III Night Vision Goggles at a slant range of at least 1,000 m.		Compliance Statement			
7.2.2	**7.2.2 Automatic Identification System (AIS) Payload**	**Sub-Heading**	Compliance Statement			
7.2.2.1	The UAS must include an AIS Payload.	Information	Compliance Statement			
7.2.2.2	The AIS Payload must receive AIS messages from contacts within VHF range.	Requirement	Compliance Statement			
7.2.3	**7.2.3 Synthetic Aperture RADAR (SAR) Payload**	**Sub-Heading**	Compliance Statement			
7.2.3.1	The UAS must include a SAR Payload.	Requirement	Compliance Statement			
7.2.3.2	The SAR Payload must include Spot SAR, Strip SAR, Ground Moving Target Indicator (MTI), Maritime MTI, Coherent Detection, and slow moving/man sized target detection modes.	Requirement	Compliance Statement			
7.2.3.3	The SAR Payload must provide spot SAR with a resolution of at least 1m resolution at 8 km.	Information	Compliance Statement			
7.2.3.4	The SAR Payload must provide strip SAR with a resolution of at least 1m at 20km.	Requirement	Compliance Statement			
7.2.3.5	The SAR Payload must operate in day/night, blowing dust, fog/cloud, and precipitation as defined in this document.	Requirement	Compliance Statement			
7.2.4	**7.2.4 Communication Relay Payload**	**Sub-Heading**	Compliance Statement			
7.2.4.1	The UAS should include a Communication Relay Payload	Requirement	Compliance Statement			
7.2.4.2	If the Communications Relay Payload is included, it must relay VHF and UHF radio broadcasts to ground elements within range.	Requirement	Compliance Statement			
7.2.4.3	If the Communications Relay Payload is included, it must be compatible with VHF and UHF frequencies used by joint and combined forces as follows:	Requirement	Compliance Statement			
7.2.4.3.1	30 to 512 MHz narrowband VHF/UHF;	Requirement	Compliance Statement			
7.2.4.3.2	762 to 870 MHz narrowband VHF/UHF; and	Requirement	Compliance Statement			
7.2.4.3.3	225 to 450 MHz wideband UHF.	Requirement	Compliance Statement			
7.2.4.4	7.2.4.4 If the Communications Relay Payload is included, it should relay Link 16 messages and Tactical Common Data Link as follows:	Requirement	Compliance Statement			
7.2.4.4.1	969 to 1206 MHz Link 16;	Requirement	Compliance Statement			
7.2.4.4.2	1.25 MHz wideband UHF;	Requirement	Compliance Statement			
7.2.4.4.3	Transmission Modes Simplex or half-duplex 16 kbps data;	Information	Compliance Statement			
7.2.4.4.4	Link 16 TDMA; and	Requirement	Compliance Statement			
7.2.4.4.5	All OP modes and enhanced throughput.	Requirement	Compliance Statement			
7.2.5	**7.2.5 Communication Intercept Payload**	**Sub-Heading**	Compliance Statement			
7.2.5.1	The UAS should include a Communication Intercept Payload	Requirement	Compliance Statement			
7.2.5.2	If the Communications Intercept Payload is included, it must find, localize and listen to cell phone signals within range.	Information	Compliance Statement			
7.2.5.3	If the Communications Intercept Payload is included, it must detect and intercept terminal and call activity including voice, fax, data, and SMS on Thuraya and ISatPhone Pro networks.	Requirement	Compliance Statement			
7.2.5.4	If the Communications Intercept Payload is included, it must passively monitor up to 30 full duplex channels simultaneously on Thuraya and ISatPhone Pro networks (60 total).	Requirement	Compliance Statement			
7.3	**7.3 Ground Control Station (GCS)**	Requirement	Compliance Statement			
7.3.1	7.3.1 The GCS must fit and be able be operated from an area no larger than 2.44 m wide, 2.59 m high, and 3.05 m long.	**Sub-Heading**	Compliance Statement			
7.3.2	7.3.2 The GCS must have UA Operator and Payload Operator work stations.	Requirement	Compliance Statement			
7.3.3	7.3.3 The GCS must have a Tactical Fiber Optic Cable Assemblies (TFOCA) II MIL-C-83526 compliant optical fiber Ethernet interface. The interface will be used to collect Payload data during and post flight.	Requirement	Compliance Statement			
7.3.4	7.3.4 Upon Operator selection, the GCS must change the UA flight profile to maintain contact tracking (commonly referred to as "Fly the Foot print" or "Camera Guide").	Requirement	Compliance Statement			
7.3.5	7.3.5 The GCS mapping software must be able to use Compressed ARC Digitized Raster Graphic (CADRG), ADRG, ECRG, ECW, Esri Grid, Geo Tiff, JPEG 2000, MrSID, and netCDF maps of scales 1:50,000, 1:100,000, 1:250,000, 1:500,000, and 1:1,000,000.	Requirement	Compliance Statement			
7.3.6	7.3.6 The GCS mapping software must be able to use and display map data in Military Grid Reference System (MGRS), Universal Transverse Mercator (UTM), Latitude and Longitude coordinate systems.	Requirement	Compliance Statement			
7.3.7	7.3.7 The GCS coordinate systems must be Operator selectable.	Information	Compliance Statement			
7.3.8	7.3.8 The GCS must display UA and contact positions in the selected coordinate systems.	Requirement	Compliance Statement			
7.3.9	7.3.9 The GCS must use Digital Terrain Elevation Data (DTED) Levels 0-3.	Information	Compliance Statement			
7.3.10	7.3.10 The GCS must have a removable data storage device for the recording of all Payload data.	Requirement	Compliance Statement			
7.3.11	7.3.11 The GCS removable data storage device must be removable and replaceable by hand, without tools.	Requirement	Compliance Statement			
7.3.12	7.3.12 The GCS removable data storage device must have data storage capacity not less than 24 hours of Imaging and SAR Payload data.	Information	Compliance Statement			
7.4	**7.4 Unmanned Aircraft Operator (UAO) Station**	**Sub-Heading**	Compliance Statement			
7.4.1	The UAO station must enable near real time control and monitoring of the UA in flight.	Requirement	Compliance Statement			
7.4.2	The UAO station must permit the UAO to create, store, update and delete waypoints during all phases of flight.	Information	Compliance Statement			
7.4.3	The UAO station must permit the UAO to assign waypoint position, course, speed, altitude, and selectable overfly with heading.	Requirement	Compliance Statement			
7.4.4	The UAO station must permit the UAO to create, store, update and delete Routes during all phases of flight.	Requirement	Compliance Statement			
7.4.5	The UAO station must permit the UAO to assign Route Leg altitude, track, airspeed, and selectable altitude transition.	Requirement	Compliance Statement			
7.4.6	The UAO station should have the capability to hand over control of an UA to, and to receive hand-over control of an UA from another GCS.	Information	Compliance Statement			
7.4.7	Upon Operator selection, the UAO station software must conduct a pre-set:	Information	Compliance Statement			
7.4.7.1	Loiter;	Requirement	Compliance Statement			
7.4.7.2	Orbit; and	Requirement	Compliance Statement			
7.4.7.3	Route.	Information	Compliance Statement			
7.4.8	**The UAO station must continuously display:**	Requirement	Compliance Statement			
7.4.8.1	UA position;	Information	Compliance Statement			
7.4.8.2	UA status (e.g. fuel state, engine, battery, etc.);	Information	Compliance Statement			
7.4.8.3	UA Altitude (AGL or MSL);	Information	Compliance Statement			
7.4.8.4	UA Speed (true and ground);	Requirement	Compliance Statement			
7.4.8.5	UA Bearing;	Requirement	Compliance Statement			
7.4.8.6	Wind speed; and	Requirement	Compliance Statement			
7.4.8.7	Live multiple view map display.	Requirement	Compliance Statement			

7.4.9	**Upon Operator selection, the UAO station must display:**	Information	Compliance Statement			
7.4.9.1	The flight plan;	Requirement	Compliance Statement			
7.4.9.2	GCS location;	Information	Compliance Statement			
7.4.9.3	Contacts provided by manual updates;	Requirement	Compliance Statement			
7.4.9.4	Selectable units (metric and imperial); and	Requirement	Compliance Statement			
7.4.9.5	Available remaining data storage.	Information	Compliance Statement			
7.4.9.6	The UAO station must have Operator tools that include:	Requirement	Compliance Statement			
7.4.9.6.1	Surveillance area coverage planning;	Requirement	Compliance Statement			
7.4.9.6.2	Data link range and Line of Sight (LOS) calculations;	Requirement	Compliance Statement			
7.4.9.6.3	Danger/no fly zones such as inputted Air Space restrictions with	Requirement	Compliance Statement			
7.4.9.6.4	Provision for standard Military icons and overlays;	Requirement	Compliance Statement			
7.4.9.6.5	Provision for user defined graphics and overlays;	Requirement	Compliance Statement			
7.4.9.6.6	Loading and changing of map data;	Requirement	Compliance Statement			
7.4.9.6.7	Automatic Operator alerts for emergencies;	Requirement	Compliance Statement			
7.4.9.6.8	Electronic checklists and vehicle monitoring;	Requirement	Compliance Statement			
7.4.9.6.9	UA location history; and	Requirement	Compliance Statement			
7.4.9.6.10	Camera view history.	Requirement	Compliance Statement			
7.5	**7.5 Payload Operator (PO) Station**	**Sub-Heading**	Compliance Statement			
7.5.1	7.5.1 The PO Station must allow the PO near real time control and monitoring of the Payload(s) in flight.	Information	Compliance Statement			
7.5.2	7.5.2 The PO Station must allow the PO to review and manipulate still and video imagery while continuing to record real-time data.	Requirement	Compliance Statement			
7.5.3	**7.5.3 The PO Station must display the following as a minimum:**	Requirement	Compliance Statement			
7.5.3.1	Imagery Payload outputs (e.g. imagery, contacts, etc.);	Requirement	Compliance Statement			
7.5.3.2	UA location, altitude, bearing;	Information	Compliance Statement			
7.5.3.3	Contact location;	Requirement	Compliance Statement			
7.5.3.4	Indication of CEP of selected contact location;	Requirement	Compliance Statement			
7.5.3.5	Selectable units in metric and imperial;	Information	Compliance Statement			
7.5.3.6	Camera mode;	Requirement	Compliance Statement			
7.5.3.7	Date/time;	Requirement	Compliance Statement			
7.5.3.8	Camera zoom level;	Information	Compliance Statement			
7.5.3.9	Status of laser designator/pointer/flood;	Requirement	Compliance Statement			
7.5.3.10	Terrain elevation;	Requirement	Compliance Statement			
7.5.3.11	Camera bearing;	Requirement	Compliance Statement			
7.5.3.12	Selectable Sensor Image Overlay colour; and	Requirement	Compliance Statement			
7.5.3.13	Compass indicating North.	Requirement	Compliance Statement			
7.5.4	**7.5.4 The PO station must have Operator tools including as a minimum:**	Requirement	Compliance Statement			
7.5.4.1	Surveillance area coverage planning;	Requirement	Compliance Statement			

7.5.4.2	Automated search patterns;	Requirement	Compliance Statement			
7.5.4.4	Payload control modes such as automatic search, point to coordinates	Requirement	Compliance Statement			
7.5.4.5	Marking, storing and reviewing contacts or data of interest;	Requirement	Compliance Statement			
7.5.4.6	Graphic definition tools (e.g. the PO can overlay traces indicating contact	Requirement	Compliance Statement			
7.5.4.7	Imagery Analysis tools to produce imagery products of contacts of	Requirement	Compliance Statement			
7.5.4.8	Loading and changing of map data.	Requirement	Compliance Statement			
7.6	**7.6 Training Simulator**	**Sub-Heading**	Compliance Statement			
7.6.1	The training simulator must provide the means to conduct training and pre-Mission rehearsal using both simulated and recorded data.	Requirement	Compliance Statement			
7.6.2	The training simulator must:	Requirement	Compliance Statement			
7.6.2.1	Be embedded in the GCS or a separate stand-alone, operator-deployable system.	Requirement	Compliance Statement			
7.6.2.2	Employ the UAS operational software interface to provide enough fidelity to conduct acceptable pilot currency training;	Requirement	Compliance Statement			
7.6.2.3	Provide Operator alterable environment conditions and geographical topography; and	Requirement	Compliance Statement			
7.6.2.4	Simulate launch, recovery and in-flight emergencies.	Requirement	Compliance Statement			
7.7	**7.7 Compatibility With Coalition Interoperability Standards**	**Sub-Heading**	Compliance Statement			
7.7.1	The UAS information must enable Canada to adapt the native metadata to the Canadian Multilateral Interoperability Program (MIP) format.	Requirement	Compliance Statement			
7.7.2	The UAS Command and Control metadata should already be compliant with coalition Command and Control (C2) system interfaces via the NATO sponsored Multilateral Interoperability Program (MIP) data handling processes.	Requirement	Compliance Statement			
7.8	**7.8 Communications**	**Sub-Heading**	Compliance Statement			
7.8.1	The GCS Information Technology (IT) equipment must conform to current Internet Protocol Standards and minimum USB2 standards, enabling the passage an	Requirement	Compliance Statement			
7.9	**7.9 Information Formats**	**Sub-Heading**	Compliance Statement			
7.9.1	The GCS must capture and enable editing of still images from the UA in NATO Secondary Imagery Format (NSIF) and National Imagery T	Requirement	Compliance Statement			
7.9.2	The UAS must have telemetry data synchronized to the video in a format complying with STANAG 4609, and follow the applicable implem	Requirement	Compliance Statement			
7.9.3	The UA must format the data from the SAR Payload using the UA datalinks in STANAG 4545 format for Imagery and STANAG 4607 for G	Requirement	Compliance Statement			
7.9.4	These data formats must conform to STANAG 4559 (Coalition Shared Database) population requirements.	Requirement	Compliance Statement			
7.9.5	All payload information and associated metadata must be accessible via the Ethernet interface as specified in this document.	Requirement	Compliance Statement			
7.9.6	The UAS captured metadata elements must include not less than the elements listed in Table 2.					
7.9.7	The GCS must be able to open, manipulate and save files compliant with STANAG 4609.					
7.9.8	The metadata time code must be derived from GPS time.	Requirement	Compliance Statement			
7.10	**7.10 Data Link**	**Sub-Heading**	Compliance Statement			
7.10.1	The effective UAS data link range for land assignments must be up to and including 80NM in all types of environmental conditions as described in this docume	Requirement	Compliance Statement			
7.10.2	The effective UAS data link range for naval assignments must be up to and including 50NM in all types of environmental conditions as described in this docum	Requirement	Compliance Statement			
7.10.3	The data link quality must be sufficient to control the UA and receive all Payload data within range.	Requirement	Compliance Statement			
7.10.4	The UAS data link must use Advanced Encryption Standard (AES) 256 encryption.	Requirement	Compliance Statement			
7.10.5	The UAS data link should be able to integrate High Assurance Internet Protocol Encryptor (HAIPE) Type 1 encryption.	Requirement	Compliance Statement			
7.10.6	The UAS should include a HAIPE Type 1 encryption device.	Requirement	Compliance Statement			
7.10.7	The GCS data link antenna must automatically track the UA.	Requirement	Compliance Statement			
7.10.8	The UAS data link must provide all payload sensor and metadata information to the GCS.	Requirement	Compliance Statement			
7.10.9	The UA data link must be compatible with the CAF remote video terminal, the Stinger and Remote Optical Video Enhanced Receiver (ROVER) family of equipment (L3 Tactical Network Rover (TNR), Rover 5i and Rover 6).	Requirement	Compliance Statement			
7.10.10	The UA Payload data link must provide sensor and metadata information to a station separate from the control station.	Requirement	Compliance Statement			
7.10.11	The GCS must transmit received Payload data via the Ethernet interface as specified in this document.	Requirement	Compliance Statement			
7.10.12	The UA Control data link should have a backup capability, in the event that the primary control link is lost.	Requirement	Compliance Statement			
7.10.13	The GCS should use a STANAG 7085 compliant data link.	Requirement	Compliance Statement			
7.11	**7.11 Frequency Management**	**Sub-Heading**				
7.11.1	7.11.1 Industry Canada is the approving authority for frequency spectrum clearance for training and operations in Canada, and therefore the UAS will operate using approved frequencies.	Requirement	Compliance Statement			
7.11.2	7.11.2 The UAS must be capable of frequency selection to allow for frequency allocation in NATO coalition operational environments and to allow separate UASs to operate in the same airspace without interference.	Requirement	Compliance Statement			
7.11.3	7.11.3 The UAS must allow the Operator to change the frequency during the Mission preparation phase without physically changing components.	Requirement	Compliance Statement			
7.11.4	7.11.4 In Canada, the UAS must operate using frequencies assigned to DND. The frequency bands for which there is a high degree of assurance that Industry Canada will grant DND the required licenses are listed below:	Requirement	Compliance Statement			
7.11.4.1	225 – 400 MHz (NATO Wide harmonized spectrum)	Requirement	Compliance Statement			
7.11.4.2	2360 – 2400 MHz	Requirement	Compliance Statement			
7.11.4.3	4400 – 4940 MHz (NATO Wide harmonized spectrum)	Requirement	Compliance Statement			
7.11.4.4	14.4 – 14.83 / 15.15 – 15.35 GHz (STANAG 7085 Ku band spectrum)	Requirement	Compliance Statement			
7.11.4.4.1	7.11.4.4.1 Note: Industry Canada has provided DND 160 MHz of the Ku band which has been allocated to the CAF in Canada, with a signal level (EIRP) criterion of – 47.33 dBm/5 MHz at the band edges. This criterion must be met in order to operate in Canada in the Ku band.	Requirement	Compliance Statement			

ANNEX G - DRAFT BID COMPLIANCE MATRIX
MANDATORY, RATED MANDATORY AND RATED REQUIREMENTS CRITERIA

A	B	C	D	E	F	G
Item Number	**SPS Reference**	**Requirement**	**Mandatory, Rated Mandatory and / or Rated**	**Required Proof of Compliance**	**Rating Metholodolgy**	**Maximum Points Allocated**
1	2.1	UAS must be ready to launch from a cold start in no more than 30 minutes. Ready for launch includes but is not limited to: a. Powering all systems in the UAS; b. Performing all pre-launch functional checks; c. Incorporating pre-flight Mission data; d. Loading any pre-planned Mission routes; e. Configuring all communication, navigation and installed Payload systems for the Mission; and f. Moving the UA within the launch/recovery area.	Rated Mandatory	Bidder Conducted Demonstration and Operator Performacne Report	a. Bidder documentation (0 point) b. Operator provided performance report (3 points for the report)	3
2	2.2 & 2.3	Individual UAS components must not exceed 84 kg, with the exception of the UA and Communications antenna, when fully assembled.	Rated Mandatory	Bidder Provided Docuemntation	Level Rating: a. 84kg (0 point) b. 60 to 83.9 kg (2 points) c. 45 to 59.9 kg (4 points)	4
3	2.4	The UA and Communications antenna must be disassembled for storage and transport into components weighing less than 84 kg.	Rated Mandatory	Bidder provided documentation	Bidder response with detailed diagram/photos	0
4	2.5	Complete UAS components must be stored and transported in a single 20' ISO shipping container. Components include: a. UA; b. All GCS components; c. Antenna system; d. Maintenance tools; e. Ground support equipment (test equipment, power supplies, lifts, manoeuvring frames etc); f. Oils and lubricants; and g. Maintenance personal safety equipment.	Mandatory	Bidder Provided Docuemntation	Bidder response with detailed diagram/photos	0
5	2.5	Shipborne operations, complete UAS components (minus antenna system and GCS components) must be storable within the Halifax starboard torpedo magazine area, in two adjacent areas with dimensions of (W/D/H): 4 m x 2 m x 3 m, 9.349 m x 3.807 m x 3 m. Components include: a. UA; b. Maintenance tools; c. Ground support equipment (spares, test equipment, power supplies, lifts, manoeuvring frames, etc); d. Oils and lubricants; and e. Maintenance personal safety equipment.	Mandatory	Bidder Provided Docuemntation	Bidder response with detailed diagram/photos	0
6	2.6	UAS must be readied for launch from a storage and/or transport state to flight in no more than 3 hours.	Rated Mandatory	Bidder Provided Docuemntation	Rated Levels: a. 3hrs (0 point) b. 2.5 to 2.9 hrs (2 points) c. 2.0 to 2.4 hrs (3 points) d. Less than 1.9 hours (4 points)	4
7	2.7	UAS must be readied for launch from routine maintenance in no more than three (3) hours.	Rated Mandatory	Bidder Provided Docuemntation	Level Rating: a. 3 hours (0 point) b. 2.5 to 2.9 hours (2 points c. Less than 2.4 hours (3 points)	3
8	2.9	UAS must be able to recover (land), refuel, change removable data storage devices and launch for a second six (6) hour Sortie in no more than 30 minutes.	Rated Mandatory	a. Bidder provided documentation b. Letter from a past client certifying they met the requirement	Level Rating: a. 30 minutes (0 points) b. <30 minutes and Letter (4 points)	4
9	2.10	The UAS must provide dedicated and guarded data Zeroize function to Zeroize all data stored within the UAS, with the exception of ground based removable data storage devices. The UAS must have a means of Zeroizing equipment that due to component failure cannot be Zeroized prior to releasing the equipment for repairs. This may include maintenance instructions on removing and/or destroying on board memory devices. The Zeroize function should: a. Render data unrecoverable within five minutes; b. Be accessible to the UAS Operators at their stations; and/or c. Have an independent guarded means to Zeroize ground based removable data storage devices.	Rated Mandatory	Bidder Provided Docuemntation	Level Rating: a. Dedicated and guarded data Zeroize function (0 point) b. 1 point per additional function a, b, and/or c.	3
10	2.11.2	UAS must have the capacity to maintain positive control of the UA for a period of not less than 30 minutes without external power supply.	Rated Mandatory	Bidder Provided Docuemntation	Rating Levels: a. 30 min (0 point); b. 31 to 40 mins (3 points); c. >41 to 50 mins (5 points); d. >50 mins (7 points)	7
11	2.11.3	UAS should operate using 28 Volts Direct Current (VDC) vehicle power without the use of a 110 VAC inverter/power supply.	Rated	Bidder Provided Docuemntation	Level Rating: a. Meets the requirement, compliant (10 points)	10
12	3.2	The UA must have a sound profile of <35dB at a slant range of 4,330 m under the following conditions: a. International Standard Atmospheric conditions with zero wind; and b. With the UA operating both at cruise power setting and at loiter power settings required to maintain altitude when executing standard turns to orbit a nearby point.	Mandatory	Bidder Provided Docuemntation showing UA noise profele at prescribed range.	Level Rating: a. 35dB at 4330m and greater than 30m AGL/MSL (0 points) b. <35db at 4330m and greater than 30m (3 points)	3

13	3.4	The UA should return by multiple waypoint routing to an Operator specified location upon loss of communications link.	Rated	Bidder Conducted Demonstration Bidder Provided Documentation	Meets the requirement (5 points) Note: multiple is defined as more than one waypoint.	5
14	3.5	The UAS must launch and recover under ship motion limits of up to and including Sea State 3 (as defined in World Meteorological Organization, Manual on Codes, International Codes, Vol I.1 table 3700, p.I.1-C-106) as described in Table 1 of Annex C.	Rated Mandatory	Bidder conducted demonstration Bidder provided documentation Letter from a past client certifying they met the requirement	Rating Levels: a. SS 3 (0 point) b. >SS3 (3 points)	3
15	3.7	Stowed UAS shipboard components must survive conditions of at least up to and including Sea State 6 as described in World Meteorological Organization, Manual on Codes, International Codes, Vol I.1 table 3700, p.I.1-C-106.	Rated Mandatory	Bidder conducted demonstration Bidder provided documentation Letter from a past client certifying they met the requirement	Rating Levels: 1 point for each Letter from a past client	3
16	3.9	UAS should have a secondary navigational and position information system	Rated	Bidder Provided Docuemntation	Rating Levels: a. Single navigation positioning system (0 point) b. Dual navigation positioning system (2 point) c. Triple system (4 points)	4
17	3.11	UAS should be equipped with an audible and visual alarm system to alert the UAS Operator at any time an instruction is issued to the UA, or a situation arises that would result in the UA failing to maintain safe UA-ground separation	Rated	Bidder Provided Docuemntation	Rating Levels: a. No warning system (0 points) b. Audible or visual alarm system (2 points) c. Both audible and visual alarm system (4 points)	4
18	4.1	UAS must have a Sortie Availability of not less than 95%.	Rated Mandatory	a. Bidder provided documentation b. Letter from a past client certifying they met the requirement	Rating Levels: a. Bidder documentation (0 point) b. Letter from past client (4 points)	4
19	5.1	The UAS must either: a. Have accumulated over 2,100 flying hours of military operational experience for each of the components affecting Airworthiness listed below; or b. Have accumulated over 5,000 flying hours of operational experience for each of the components affecting Airworthiness as listed below. Listed Components a. Airframe; b. Propulsion system; c. Avionics system; d. Data link; e. Payloads; f. Command & control system; and g. Corresponding software builds	Rated Mandatory	a. Bidder provided documentation b. Letter from a past client certifying they met the requirement	Rating Levels: Military Operations a. 2100 hours (0 points) b. >2100 – 3000 hours or (1 point) c. >3000 – 4000 hours or (3 points) d. >4000 hours (5 points); or Operational Experience a. 5000 hours (0 points) b. >5000 – 6000 hours (1 point) c. >6000 – 7000 hours (3 points) d. >7000 hours (4 points) Letter from a past client (2 Points)	6
20	5.2	The UAS must have had a system reliability of not less than 95% for the most recent 1,000 operational flight hours.	Rated Mandatory	a. Bidder provided documentation b. Letter from a past client certifying they met the requirement	Rating Levels: a. 1000 hours reported (0 point); b. Most recent 2000 hours and Letter	8
21	6.2.1	The UAS must launch and recover in sustained and gusting winds of up to and including 25 knots.	Rated Mandatory	a. Bidder provided documentation b. Letter from a past client certifying they met the requirement	Level Rating: a. 25kts (0 points) b. >25 – 30kts (2 points) c. >30 kts (3 points) Letter from a past client certifying the requirement has been met (3 points)	6
22	6.3.1	The UAS should operate in icing conditions.	Rated	Bidder Provided Docuemntation	Level Rating: a. Not functional in icing (0 points) b. Fully functional in Icing (1 point)	1
23	7.1.1	The GCS should provide a function that is able to read the data recorder for post-flight operation.	Rated	Bidder Provided Docuemntation	Level Rating: a. No function (0 points) b. Meets the requirement (2 points)	2
24	9.1.2	UA must have an endurance of not less than six (6) hours of flight while employing the Imaging Payload throughout all environmental categories described in STANAG 2895 with the exception of zones C4 Extreme Cold, C3 Severe Cold, C2 Cold, C1 Intermediate Cold and M3 Marine Cold for temperatures below –28C. Note: Imaging Payload includes a colour High Definition daylight Electro-Optical (EO) video camera, a medium wave IR video camera, an IR illuminator.	Rated Mandatory	Bidder Conducted Demonstration Bidder Provided Documentation	Rating Levels: a. 6.0 hours (0 points) b. >6.1 to 6.3 hours (3 points) c. >6.4 to 6.5 hours (5 points) d. >6.5 hours (7 points)	7
25	9.1.7	In addition to the Imaging Payload, the UA must simultaneously employ not less than two (2) other Payloads of: a. Synthetic Aperture Radar (SAR); b. Automatic Identification System (AIS); c. Communications Relay; d. Communications Intercept; Note: Imaging Payload includes a colour High Definition daylight Electro-Optical (EO) video camera, a medium wave IR video camera, an IR illuminator.	Rated Mandatory	Bidder Conducted Demonstration Bidder Provided Documentation	Rating Levels: a. Three mandatory payloads as defined in SPS payloads (0 points) b. In addition to the three mandatory payloads as defined in SPS, the UA can simultaneously employ one additional payload (4 payloads in total) (3 points)	3
26	9.1.12	UA must maintain at least 70 knots while tracking a moving contact.	Rated Mandatory	Bidder Provided Docuemntation	Rating Levels: a. 70kts (0 points) b. >70 – 80kts (3 points) c. >80kts (5 points)	5
27	9.1.13	The UA system must record and store at least one (1) Sortie of all Payload data (including Full Motion Video), related metadata and Mission data in accordance with the associated Payload SPS requirements.	Rated Mandatory	Bidder Provided Docuemntation	Rating Level: a. 1 sortie of data (0 points) b. 2 sorties of data (3 points) c. 3 sorties of data (5 points)	5

28	9.1.14	The UA and its payloads should operate down to altitudes of 30 m AGL.	Rated	Bidder conducted demonstration Bidder provided documentation	Rating Level: a. >100m (0 points) b. >75 – 100m (3 points) c. >30 – 75 m (5 points) d. 30m (7 points)	7
29	9.2.1.2	Imaging Payload must have a surface positional accuracy of at least a 20m Circular Error of 90% (CE 90) at a slant range of 1,300 m. Note: Imaging Payload includes a colour High Definition daylight Electro-Optical (EO) video camera, a medium wave IR video camera, an IR illuminator.	Rated Mandatory	a. Bidder provided documentation b. Letter from a past client certifying they met the requirement	Rating Levels: a. 20m (0 points) b. 15 - >20m (3 points) c. 10 - <15m (5 points) Letter from a past client certifying they met the requirement (1 point)	6
30	9.2.1.5	Imaging Payload must have a surface positional accuracy of at least a 20m Circular Error of 90% (CE 90) at a slant range of 1,300 m. Note: Imaging Payload includes a colour High Definition daylight Electro-Optical (EO) video camera, a medium wave IR video camera, an IR illuminator. Under clear atmospheric conditions, the Imaging Payload must produce a colour EO image of at least NATO Imagery Interpretability Rating Scale (NIIRS) Level 7 at a slant range of 4,330 m.	Rated Mandatory	Bidder Conducted Demonstration Bidder Provided Documentation	Rating Levels: a. NIIRS Level 7 (0 points) b. NIIRS Level 8 (3 points)	3
31	9.2.1.6	Under clear atmospheric conditions, the Imaging Payload must produce an IR image of at least NATO Imagery Interpretability Rating Scale (NIIRS) Level 5 at a slant range of 4,330 m.	Rated Mandatory	Bidder Conducted Demonstration Bidder Provided Documentation	Rating Levels: a. NIIRS Level 5 (0 points) b. NIIRS Level 6 (3 points) c. NIIRS Level 7 (5 points)	5
32	9.2.1.7	The Imaging Payload must continuously track moving COIs with speeds up to 80 km/h ground track speed with maximum obstruction time of 5 seconds.	Rated Mandatory	Bidder Provided Docuemntation	Rating Levels: Automatically re-acquire obstructed target additional points provided: a. <5 seconds obscured (0 points) b. >5 – 7 seconds obscured (3 points) c. >7 seconds obscured (5 points)	5
33	9.2.1.9	IR illuminator must indicate contacts or areas of interest to other observers with generation III Night Vision Goggles at a slant range of at least 1,000 m.	Rated Mandatory	Bidder Provided Docuemntation	Rating Level; a. 1000m (0 points) b. >1000 – 1500m (3 points) c. >1500 – 2000m (5 points)	5
34	9.2.4	The UAS should include: a. Communication Relay Payload. If the Communications Relay Payload is included, it must: i. relay VHF and UHF radio broadcasts to ground elements within range. ii. be compatible with VHF and UHF frequencies used by joint and combined forces as follows: a) 30 to 512 MHz narrowband VHF/UHF; b) 762 to 870 MHz narrowband VHF/UHF; and c) 225 to 450 MHz wideband UHF. iii. it should relay Link 16 messages and Tactical Common Data Link as follows: a) 969 to 1206 MHz Link 16; b) 1.25 MHz wideband UHF; c) Transmission Modes Simplex or half-duplex 16 kbps data; d) Link 16 TDMA; and e) All OP modes and enhanced throughput. b. Communication Intercept Payload. If the Communications Intercept Payload is included, it must: i. find, localize and listen to cell phone signals within range; ii. detect and intercept terminal and call activity including voice, fax, data, and SMS on Thuraya and ISatPhone Pro networks; iii. passively monitor up to 30 full duplex channels simultaneously on Thuraya and ISatPhone Pro networks (60 total).	Rated	Bidder Provided Docuemntation	Rating Level: a. Communication Relay Payload (5 point) b. Communication Intercept Payload (5 points)	10
35	9.2.5.3	SAR Payload must provide spot SAR with a resolution of at least 1.0m at 8 km.	Rated Mandatory	Bidder Provided Docuemntation	Rating Level: a. 1.0m resolution (0 points) b. 0.8 - <1.0m resolution (3 points) c. 0.5 - <0.8m resolution (4 points) d. <0.5m resolution (5 points)	5
36	9.2.5.4	SAR Payload must provide strip SAR with a resolution of at least 1m at 20km	Rated Mandatory	Bidder Provided Docuemntation	Rating Level: a. 1.0m resolution (0 points) b. 0.8 - <1.0m resolution (3 points) c. 0.5 - <0.8m resolution (4 points) d. <0.5m resolution (5 points)	5
37	9.3.12	The GCS removable data storage device must have data storage capacity not less than 24 hours of Imaging and SAR Payload data.	Rated Mandatory	Bidder Provided Docuemntation	Level Rating: a. 24 hours storage (0 points) b. >24 – 30 hours storage (2 points) c. >30 hours storage (4 points)	4
38	9.4.6	UA Operator (UAO) station should have the capability to hand over control of an UA to, and to receive hand-over control of an UA from another GCS	Rated	Bidder Provided Docuemntation	Level Rating: a. Not able to provide (0 points) b. Compliant (4 points)	4
39	9.6.3	The UAS training simulation should be able to operate independently of other onboard training systems to facilitate individual station Operator training.	Rated	Bidder Provided Docuemntation	Level Rating: a. Not able to provide (0 points) b. Able to provide (3 points)	3
40	9.7.2	UAS Command and Control metadata should already be compliant with coalition Command and Control (C2) system interfaces via the NATO sponsored Multilateral Interoperability Program (MIP) data handling processes.	Rated	Bidder Provided Docuemntation	Level Rating: a. Not compliant with NATO (0 points) b. Compliant with NATO (3 points)	3

41	9.10.1	The effective UAS data link range for land operations must be 100NM in all types of environmental conditions as described in this document.	Rated Mandatory	Bidder conducted demonstration Bidder provided documentation Letter from a past client certifying they met the requirement	Level Rating: a. Bidder provided documentation (0 points) b. Letter from past client (3 points per client letter)	9
42	9.10.2	The effective UAS data link range for naval operations must be 50NM in all types of environmental conditions as described in this document	Rated Mandatory	a. Bidder provided documentation b. Letter from a past client certifying they met the requirement	Level Rating: a. Bidder provided documentation (0 points) b. Letter from past client (2 points per client letter)	6
43	9.10.5	The UAS data link **should be able to** integrate High Assurance Internet Protocol Encryptor (HAIPE) Type 1 encryption.	Rated	Bidder Provided Docuemntation	Level Rating: a. Not able to comply (0 points) b. Compliant (3 point)	3
44	9.10.6	UAS should include a HAIPE Type 1 encryption device.	Rated	Bidder Provided Docuemntation	Level Rating: a. Not able to comply (0 points) b. Compliant (3 point)	3
45	9.10.12	The UA Control data link should have a backup capability, in the event that the primary control link is lost.	Rated	Bidder Provided Docuemntation	Level Rating: a. Not able to comply (0 points) b. Compliant (3 point)	3
46	9.10.13	GCS should use a STANAG 7085 compliant data link.	Rated	Bidder Provided Docuemntation	Level Rating: a. No backup link (0 points) b. Backup link (4 points)	4
Total Allocated Score						**200**