Acquisition Directorate
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NCIA/ACQ/2020/6589
24th April 2020

To: All Nominated Prospective Bidders

Subject: Invitation for Bids (RFQ) Amendment Letter – AMD4, for Forensic and Investigative Tools, CO-115009-FIT.

Reference:
A- NCIA/ACQ/2019/12965, BOA Announcement for RFQ-CO-115009-FIT, dated 07 November 2019
B- NCIA/ACQ/2020/6201, Request for Quotation RFQ-CO-115009-FIT Forensic and Investigative Tools, dated 27th February 2020.
C- NCIA/ACQ/2020/6433, RFQ-CO-115009-FIT Amendment Letter AMD1, dated 17th March 2020.
D- NCIA/ACQ/2020/6447, RFQ-CO-115009-FIT Amendment Letter AMD2, dated 20th March 2020.
E- NCIA/ACQ/2020/6486, RFQ-CO-115009-FIT Clarification Questions 2a Cover Letter, dated 27th March 2020.
F- NCIA/ACQ/2020/6536, RFQ-CO-115009-FIT Amendment Letter AMD3, dated 3rd April 2020.

Dear Madam / Sir,

1. The purpose of this this Amendment 4 is to:
   a. Publish Round 4 of RFQ Bidder's questions and NCI Agency answers;
   b. Extend the quotation closing date;
   c. Issue revisions to the following documents:
      - 02_RFQ-CO-115009-FIT – Book I – Bidding Instructions
      - 08_RFQ-CO-115009-FIT – Book II – Part IV SOW
   d. Issue three additional documents regarding backups referenced in the Agency's answers.
2. Following a request for extension, the closing time for submissions of quotations in response to this RFQ has been extended to **Friday 15th May 2020 at 13:00 HOURS (CENTRAL EUROPEAN TIME).**

NATO Communications and Information Agency
Agence OTAN d'information et de communication
Avenue du Bourget 140
1140 Brussels, Belgium
www.ncia.nato.int

3. This Amendment makes the following revisions:

   a. **02_RFQ-CO-115009-FIT – Book I – Bidding Instructions – Summary of Changes**

      - Paragraph 2.3.1 amended to reflect the extended quotation closing date.

   b. **08_RFQ-CO-115009-FIT – Book II – Part IV SOW – Summary of Changes**

      - Whole document updated to reflect –AMD4;
      - Removed “Releasable to North Macedonia” marking caveat in accordance with official guidance
      - 4.4.6.4: Updated to clarify Microsoft Active Directory
      - 4.4.12.1: Updated to clarify execution of tasks within each specific domain
      - 4.5.5.1-4.5.5.3: Updated to clarify requirement for all Manufacturer-provided connectors, adapters etc.

4. NCI Agency answers to Bidders’ questions received up to 3rd April 2020 are hereby published with this RFQ Amendment 4. Previous responses to Clarification Requests have been greyed out for your convenience.
5. The response to these clarification questions has necessitated changes to the RFQ bidding documents. The revised bidding documents as indicated in paragraphs 1 and 3 above are attached to this RFQ Amendment 4 and replace the original version in its entirety. Potential Bidders are strongly advised to carefully review revised bidding documents.
6. With the exception of the revisions mentioned above, all other RFQ documents remain unchanged from their original version as issued on 27th February 2020 or as already amended.
7. Prospective Bidders are advised that the NATO NCI Agency reserves the right to cancel this RFQ at any time in its entirety and bears no liability for bid preparation costs incurred by firms or any other collateral costs if bid cancellation occurs.
8. The Principal Contracting Officer responsible for this solicitation is Ms. Rebecca Benson, and all correspondence regarding this RFQ should solely be addressed to Mr. Darren Corkindale (Contractor), who may be reached at RFQCO.115009.FIT.COMMUNICATIONS@NCIA.NATO.INT
9. Please note that the deadline for submission of clarification questions has now passed and that no new questions will be answered by the Agency.

NCIA/ACQ/2020/6589

FOR THE DIRECTOR OF ACQUISITION

//SIGNED//

Ms. Rebecca Benson
Principal Contracting Officer

Attachments: RFQ Amendment 4:

1. Revised Bidding Documents:
    a. 02_RFQ-CO-115009-FIT – Book I – Bidding Instructions
    b. 08_RFQ-CO-115009-FIT – Book II – Part IV Statement Of Work

NCIA/ACQ/2020/6589

Distribution List for RFQ-CO-115009-FIT
Amendment 4

Offerors (sent separately in electronic version)

NATO Delegations (Attn: Investment Adviser):

Albania
Belgium
Bulgaria
Canada
Croatia
Czech Republic
Denmark
Estonia
France
Germany
Greece
Hungary
Iceland
Italy
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Lithuania
Luxembourg
Montenegro
The Netherlands
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Poland
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Spain
Turkey
United Kingdom
United States
Belgium Ministry of Economic Affairs

Embassies in Brussels (Attn: Commercial Attaché):

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Norway
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Slovakia
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Spain
Turkey
United Kingdom
United States

- **NATO HQ**

NA TO Office of Resources
Management and Implementation Branch - Attn: Deputy Branch Chief
Director, NA TO HQ C3 Staff
Attn: Executive Co-ordinator

- **SACTREPEUR**

Attn: Infrastructure Assistant

- **Strategic Commands**

ACO/DCOS CIS & Cyber Defence
ACT/DCOS Capability Development

- **NCI Agency -Internal Distribution**

ACQ Director of Acquisition (Mrs Simona Rocchi)
ACQ Deputy Director of Acquisition (Mrs Agata Szydelko)
Chief of Contracts (Mr Philip Chulick)
Administrator Contracts Award Board (Mrs Dorina Cani)
ACQ Principal Contracting Officer (Ms Rebecca Benson)
ACQ Contracting Officer (Mr Andrew Powell- consultant)
ACQ Principal ILS Officer (Mr Massimiliano Filippi)
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CSSL Chief (Mr Ian West)
CSSL Principal Scientist (Mr. Fred Jordan)
CS SL Project Manager (Mr Atilla Okten)
Legal Office (Mr Vincent Roobaert)
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Registry

- **NCI Agency - All NATEXs**

TECHNICAL				
Serial Nr	**RFQ Section Ref.**	**OFFEROR'S QUESTION**	**NCI AGENCY ANSWER**	**Status***
Clarifications Round 4 – answered in Round 4				
T.1	SOW Section 4.5.6	In order to calculate cost of renewals of existing software licenses, we need to know license reference (dongle, license ID, etc.) information for below indicated software. Four (4) license of X-Ways Forensics Two (2) license of EnCase Forensics Three (3) license of AccessData AD Lab. One (1) license of Magnet Axiom Especially "AccessData AD Lab." and Magnet Axiom is not a standalone software but a system. Therefore, we need all license and configuration information for this item.	DUPLICATE QUESTION. See response to T.1 in clarification round 3.	Closed
T.2	SOW Section 4.4.4.7	Could you clarify totally how many clients are located in all locations mentioned in SOW 4.4.4.7? Maximum how many OCF licenses are requested? This is very important for scaling the OCF solution. If the exact total number of clients requested to be licensed is not clarified, the offerings will be prepared for 100.000 client licenses which will increase the price of the product a lot.	An estimate of the approximate number of NR OCF clients was provided in the response to T.4 in clarifications round 3, to give bidders a rough order of magnitude. However, owing to various factors the existing OCF deployment has some agents fully deployed and enrolled, some that have been deployed but not properly enrolled, and some endpoints which have not received any agent deployments, hence the numbers provided should not be relied upon for	Closed

			exact totals or distributions. The quantity of endpoints that the OCF solution must support are stated in Section 4.4.2.1 The number of endpoints onto which the OCF solution software agent(s) are to be deployed shall be based on the site survey to be conducted by the Contractor.	
T.3	SOW Section 4.5.2.3	What are the types of connection interfaces (copper, fiber, DAC cable etc.) of the network adapters mentioned in section 4.5.2.3? In addition, could you clarify cabling specifications more detailed (cable length etc.)?	DUPLICATE QUESTION. See response to T.2 in clarifications round 3.	Closed
T.4	Sow Section 4.4.4	For OCF solution, it is supposed to deploy minimum four servers on NR and NS domains. The specs of the corresponding servers are given below. Will they be provided as virtual servers by using Purchaser's existing environment? (If it will not be provided by the Purchaser, we are planning to deploy OCF solution by using VMware vSphere Standard Edition. In this case, will you provide your existing vCenter for managing new OCF virtual environment?) • Database Server (1 Server for NR + 1 Server for NS) o Server class hardware (64-bit) o Network Connection - 10GB Ethernet o CPU – 8 core, 16 threads min o 128GB RAM o Storage § OS volume – 500GB, 7200RPM or better § Application volume – 500GB, 7200RPM or better § SQL Data, log, temp volume – 4TB SSD in RAID configuration or equivalent 70,000 IOPs or better • Web Service Server (1 Server for NR + 1 Server for NS)	In response T.3 in clarifications round 3, the Purchaser has clarified that the Contractor shall not be able to utilise the existing virtualised NCIRC Tier-2 central management infrastructure as this may not be adequately scaled given the presence of the existing OCF solution and potential cut-over times. The Contractor shall need to deliver, install, and configure all necessary management components (for example, VMware vSphere Standard Edition) as required for the operation of the Contractor-delivered components.	Closed

		o Server class hardware (64-bit) o Network Connection - 10GB Ethernet o CPU – min 4 cores, 8 threads o 96GB RAM o Local Storage: § OS/ Application – 500GB. § Temp Storage – 500GB SSD Drive (or 15k RPM drive) • License Server (1 Server for NR + 1 Server for NS) o Server class hardware (64-bit) o Network Connection - 10GB Ethernet o CPU – 2 cores, 4 threads o 10GB RAM o Local Storage - OS, 250 GB • Examiner Server (One server per each 10.000 clients is assumed: For example; for 30.000 clients, three Examiner Servers are needed) o Server class hardware (64-bit) o Network Connection - 10GB Ethernet o CPU – 8 cores to 12 cores, 16 threads to 24 threads o 96GB RAM o Local Storage: § OS – 1TO § Application/Local Storage – 500GB hard drive. § Temp Storage – 500GB SSD Drive (or 15k RPM drive) § Network Output storage – 2TB • Desktop Server (1 Server for NR + 1 Server for NS) o Desktop or Server class hardware (64-bit) o Network Connection - 10GB Ethernet o CPU – 4 cores, 8 threads min o 32GB RAM o Local Storage: § OS – 250GB § Application/Local Storage – 500GB		

T.5	SOW Section 4.4.4.8	For each centrally unmanageable remote location defined in SOW 4.4.4.8, could you provide virtual servers with the following specs? (If it will not be provided by the Purchaser, we are planning to deploy OCF solution by using VMware vSphere Standard Edition. In this case, will you provide your existing vCenter for managing new OCF virtual environment?) • Database Server (5x1 Servers for NR + 8x1 Servers for NS) o Server class hardware (64-bit) o Network Connection - 10GB Ethernet o CPU – 8 cores, 16 threads min o 128GB RAM o Storage § OS volume – 500GB, 7200RPM or better § Application volume – 500GB, 7200RPM or better § SQL Data, log, temp volume – 4TB SSD in RAID configuration or equivalent 70,000 IOPs or better • Web Service Server (5x1 Servers for NR + 8x1 Servers for NS) o Server class hardware (64-bit) o Network Connection - 10GB Ethernet o CPU – min 4 cores, 8 threads o 96GB RAM o Local Storage: § OS/ Application – 500GB. § Temp Storage – 500GB SSD Drive (or 15k RPM drive) • License Server (5x1 Servers for NR + 8x1 Servers for NS) o Server class hardware (64-bit) o Network Connection - 10GB Ethernet o CPU – 2 cores, 4 threads o 10GB RAM o Local Storage- OS, 250 GB	In response T.3 in clarifications round 3, the Purchaser has clarified that the Contractor may utilise the existing virtualised NCIRC Tier-3 platforms subject to the available resources. The Contractor shall need to deliver, install, and configure all necessary management components (for example, VMware vSphere Standard Edition) as required for the operation of the Contractor-delivered components.	Closed

		• Examiner Server (5x1 Servers for NR + 8x1 Servers for NS) o Server class hardware (64-bit) o Network Connection - 10GB Ethernet o CPU – 8 cores to 12 cores, 16 threads to 24 threads o 96GB RAM o Local Storage: § OS – 1TO § Application/Local Storage – 500GB hard drive. § Temp Storage – 500GB SSD Drive (or 15k RPM drive) o Network Output storage – 2TB • Desktop Server (5x1 Servers for NR + 8x1 Servers for NS) o Desktop or Server class hardware (64-bit) o Network Connection - 10GB Ethernet o CPU – 4 cores, 8 threads min o 32GB RAM o Local Storage: § OS – 250GB § Application/Local Storage – 500GB		
T.6	SOW Section 4.4.4.8	For centrally unmanageable locations depicted in SOW 4.4.4.8, could you clarify that, whether each site resides on a different MS Windows Domain or not? If not, could you clearly define more specifically about the existing isolated MS Windows Domains involved in addition to the physical sites description?	The Purchaser's OCF deployment involves physically and logically separate sites. Some of the sites are non-Purchaser NATO agency sites which are not centrally managed and have their own domains/directories to which the Purchaser does not have administrative access. The specific configuration and quantity of those domains is not known, and the Purchaser has clearly stipulated that any solution provided must be able to operate indepdent of Microsoft Windows directory structures - see Section 4.4.8.6.	Closed

T.7	SOW Section 4.4.4.8	For centrally unmanageable remote locations depicted in SOW 4.4.4.8, can agent and virtual server deployment be performed via OOB management interfaces?	The nature and structure of the remote sites varies, and these are not necessarily managed directly by the Purchaser and so there may not be suitable OOB interfaces available. The deployment approach for each site will need to be determined as part of the site survey to be conducted by the Contractor.	
T.8	SOW Sections 4.4.4.8, 4.4.10.3	For centrally unmanageable remote sites listed in SOW 4.4.4.8, OCF Management servers should be installed. In this manner, is it required to backup these management servers? As mentioned in SOW 4.4.10.3, for NetBackup integration of centrally unmanageable sites, who is supposed to provide the NetBackup licenses (Contractor or Purchaser)? Could you clarify the following issues regarding to existing NetBackup System located in these remote locations and give more detailed information about the existing backup infrastructure? • Is existing NetBackup Solution managed centrally? § Is there any NetBackup Master Server? § Is there any NetBackup Media Server? § Is there any system for backup virtual machines (ESX or Hyper-V)? § What is the backup destination storage? (Disk or Tape) § What is the type of backup network? (SAN or Ethernet) § What are the corresponding RPO and RTO values of the existing system?	The current backup solution is sited at and managed from NCIRC's central Tier-2 site at SHAPE, Mons, Belgium. Any Contractor-deployed management servers as part of the OCF solution must be backed up. Reuse of existing hardware is not anticipated with the exception of the existing Symantec NetBackup management center (to which backup agents enrolled), plus the storage of backed-up data to the existing tape library, and utilisation of the existing backup catalogs. An assumption is made that the data backup requirements of the Offeror's proposed solution will not be significantly different to the existing storage volumes utilised by the current product. For those sites where connectivity is achievable through existing links (i.e. where connections to the central Tier-2 management and backup platforms exist), then those sites are to be included in the backup and	Closed

			monitoring regime as is already established. The list of all NCIRC NetBackup server hardware currently in use is attached as Backup-Hardware-NR.pdf, Backup-Hardware-NS.pdf, and Backup-Hardware-RS.pdf for information. NetBackup is being run on both Windows and Linux operating systems. In the NR and NS domains, the current NetBackup version is 7.7.3. NetBackup version 8.1.2 is currently deployed to the Reference System (RS) to validate functionality prior to its introduction into the production NR and NS environments. Offerors may assume that the NR and NS environments shall be upgraded by the Purchaser to at least NetBackup 8.1.2 by the time installation and integration of Contractor-delivered components begins. The tape library in each domain (NR and NS) is a Quantum Scalar i40, each with 25 slots and an HBA with 2 x 8Gb ports. The drive in each tape library uses LTO-6 media. The existing system has an RTO value of one (1) hour, and an RPO of two (2) hours. The Contractor shall need to provide	

			sufficient additional backup licenses as required to integrate their solution with the existing NetBackup management system in each domain. Bidders are also reminded of the availabilty requirements that are to be met as per Section 4.4.1.11. The Contractor shall verify all information through the site survey.	
T.9	SOW Section 4.4.10.3	For NetBackup solution headquartered centrally, who is supposed to provide the NetBackup licenses (Contractor or Purchaser)? Could you clarify the following issues regarding to existing central NetBackup System located in each NR, NS and RS domain and give more detailed information about the existing backup infrastructure? § Is there any NetBackup Master Server? § Is there any NetBackup Media Server? § What is the backup destination storage? (Disk or Tape) § What is the type of backup network? (SAN or Ethernet) § What are the corresponding RPO and RTO values of the existing system?	SEE RESPONSE TO T.8 above.	Closed
T.10	SOW Section 4.5.6.5	Some products specified under SCF have been requested to renewal for 5-years. However, some manufacturers are unable to bid on a 5-year renewal. Has any confirmation been received from the vendors regarding this issue? Could you provide more specific information about the existing licensing requested to renewal?	DUPLICATE QUESTION. See response to T.5 in clarifications round 3.	Closed

T.11	SOW Section 4.4.1.10	What type of modules are used for existing Solarwinds monitoring solution? Who is supposed to provide licenses for the corresponding modules (Contractor or Purchaser)?	The current NCIRC FOC SolarWinds licenses are as follow: SolarWinds Licence SW22002755 (to 2021-02-28) - Server & Application Monitor - ALX (unlimited) SolarWinds Licence SW21916558 (to 2021-02-28) - Orion NetFlow Traffic Analyzer - SLX (unlimited) - Orion Network Configuration Manager v7 - DL100 - Orion Network Performance Monitor SL100 - Orion Network Performance Monitor SLX (unlimited) - Server & Application Monitor - AL150 - Storage Manager - STM1000 (up to 1000 disks) The Contractor may connect/enroll against existing Solarwinds central management facilities, but shall supply all necessary additional licenses to support the Contractor-delivered components.	Closed
T.12	SOW Sections 4.4.4.8, 4.4.1.10	Is it required to integrate centrally unmanageable remote locations with the existing Solarwinds monitoring solution? Is there any existing Solarwinds monitoring infrastructure deployed on these locations? If it is required, could you clarify that what types of modules are being used for existing Solarwinds monitoring solution? Who is supposed to	The current OCF Gateway instances are manageable from NCIRC Tier-2 Central management components, however the endpoints currently connected to the OCF gateways at those sites are not. For those sites where connectivity is achievable through existing links (i.e.	Closed

		provide licenses for the corresponding modules (Contractor or Purchaser)?	where connections to the central Tier-2 management and backup platforms exist), then those sites are to be included in the backup and monitoring regime as is already established. See response to T.11 above for information on the existing SolarWinds licences.	
T.13	SOW Section 4.5.6.9	For AccessData Lab license renewal mentioned in SOW 4.5.6.9, could you clarify how many of the following modules required? § Number of AD Lab Suite? (It is understood as three Lab Suites are requested, the clarification of this issue is important since this affects the cost of the product.) § Number of AD Lab Scalable Processing Core for each AD Lab Suite? § Number of Quin-C Collaboration Full User for each AD Lab Suite?	There is a requirement for three instances of AD Lab - this includes the ability to process data on three nodes independetly. The Purchaser does not currently have any licenses for Quin-C. However, the Offeror may propose a combination of products, including module licenses, which meet the requirements specified in the Statement of Work.	Closed
T.14	Sow Section 4.5.5	Could you provide more detailed information about the optional accessories needed for SCF Acquisiton Tools (Tableau TX1 forensic imager, Atola TaskForce evidence acquisition tool, Logicube Falcon-NEO forensic imager device)? Which connectivity modules, cables, adapters, software and power supplies shall be supplied? All devices have many SW and accessories options. For example, are “Falcon-NEO Fibre Channel Module Option and Adapter Kit”, “Falcon-NEO Mobile Device Capture” and “Falcon-NEO Cloud-Storage Acquisition” software with imager device needed?	The Contractor is to deliver a complete set of all accessories (including cables, connectors, and adapters) for each device, that the Manufacturer produces for each of those devices. For example, if the device manufacturer offers six different connector kits for use with the device, then all six kits shall be supplied with the device by the Contractor. If the device is offered with varying software levels, then the highest level edition with the complete set of features shall be supplied.	SOW Sections 4.5.5.1, 4.5.5.2, and 4.5.5.3 Closed

			In Amendment 4, SOW Sections 4.5.5.1, 4.5.5.2, and 4.5.5.3 have been modified to clarify the requirement.	
T.15	SOW Section 4.4.6.4	Can we use Microsoft Active Directory for authentication and authorization instead of LDAP? If it is acceptable, could you update SOW requirements considering this issue?	In Amendment 4, SOW Section 4.4.6.4 has been modified to clarify the requirement for using Microsoft Active Directory.	SOW Section 4.4.6.4 Closed
T.16	SOW Section 4.4.8.4	Is it acceptable for the OCF solution that sending warnings, alerts and notifications be performed via an integration with a third party SIEM?	The OCF solution must be able to perform independent notification of events via email which can be configured by the OCF solution administrators within the OCF product(s) so as not to be reliant on messaging management being done via a SIEM or the administrators of the SIEM.	Closed
T.17	SOW Section 4.4.8.6	Is it acceptable if OCF endpoints can work independent of any MS Windows domain membership whilst requiring Domain Admin account to work with the other components? If it is, could you update SOW requirements considering this issue?	The OCF endpoints in some sites may be in environments where a domain, and therefore Domain Adminstrator accounts, are not necessarily available. The OCF solution shall not be depedent on any Microsoft Domain membership, as per Section 4.4.8.6	Closed
T.18	SOW Section 4.4.11.5	Is it acceptable to support more open signatures such as YARA and STIX instead of Open IOC? If it is, could you update SOW requirements considering this issue?	The solution may support additional open formats such as STIX, however the solution shall be provided with the ability to utilise the Purchaser's OpenIOC-format data, such as an editor which can map OpenIOC data fields or a data conversion utility.	SOW Section 4.4.12.1 Closed

T.19	SOW Section 4.4.12.1	In SOW 4.4.12.1, it is mentioned that the implementation is required for all site endpoints at a time. Is it acceptable to perform this implementation on one instance per domain at a time? If it is, could you update SOW requirements considering this issue?	In Amendment 4, SOW Section 4.4.12.1 this has been updated to clarify that this refers to the execution of tasks within an OCF instance inside a domain, to cover up to and including all of the endpoints within a specific domain.	
T.20	SOW Section 4.4.12.9	Is it acceptable to export data from OCF endpoints in a raw format (bit-for-bit copy) via software or plugin? If it is, could you update SOW requirements considering this issue?	The OCF solution must be able to perform the ability to export data from endpoint(s) as per the requirements. This may be achieved natively within in a single product, or may be a fully integrated solution comprised of multiple elements to achieve the requirements.	Closed
T.21	SOW Sections 4.4.8.6 & 4.4.4.7	Could you clarify that do SHAPE and the centrally manageable remote sites mentioned in SOW Section 4.4.4.7 share the same MS Windows Active Directory or MS Windows domains? If not; • Are there separate MS Windows Active Directory Servers placed on each remote site? • Is there any trust between different MS Windows domains? • Is it possible to access these MS Windows Active Directory servers from the Center (SHAPE)?	As per Section 4.4.8.6, the OCF solution shall be operate independent of any Microsoft Windows domain membership. The membership of a domain or presence of trust relationships (or lack thereof) shall have no impact on the ability of the OCF solution to function fully and correctly.	Closed
T.22	SOW Sections 4.4.8.6 & 4.4.4.8	Could you clarify that do SHAPE and the centrally unmanageable remote sites mentioned in SOW Section 4.4.4.8 share the same MS Windows Active Directory or MS Windows domains? If not; • Are there separate MS Windows Active Directory Servers placed on each remote site? • Is there any trust between different MS Windows domains? • Is it possible to access these MS Windows Active	As per Section 4.4.8.6, the OCF solution shall be operate independent of any Microsoft Windows domain membership. The membership of a domain or presence of trust relationships (or lack thereof) shall have no impact on the ability of the OCF solution to function fully and correctly.	Closed

		Directory servers from the Center (SHAPE)?		

TECHNICAL				
Serial Nr	**RFQ Section Ref.**	**OFFEROR'S QUESTION**	**NCI AGENCY ANSWER**	**Status***
Clarifications Round 3 – answered in Round 3				
T.1	SOW Section 4.5.6	In order to calculate cost of renewals of existing software licenses, we need to know license reference (dongle, license ID, etc.) information for below indicated software. Four (4) license of X-Ways Forensics Two (2) license of EnCase Forensics Three (3) license of AccessData AD Lab. One (1) license of Magnet Axiom Especially "AccessData AD Lab." and Magnet Axiom is not a stand alone software but a system. Therefore, we need all license and configuration information for this item.	X-Ways Forensics - Current licence information: Code: 457069 Quantity: 1 Item: WinHex Specialist 3 Users 2 Years Licence (ESD) by X-Ways Code: 457068 Quantity: 1 Item: X-Ways Forensics BYOD 3 Users 2 Years License (ESD) by X-Ways End Customer Reference: 4500156125 EnCase - Current licence information: Customer ID: 10016757 Support Contract: G-SC2009427 Entitlement Group: 10432779 Access Data - Licence number is 85172. Axiom - Dongle number is B201705120001137	Closed

T.2	SOW Section 4.5.2.3	What are the types of connection interfaces (copper, fiber, DAC cable etc.) of the network adapters mentioned in section 4.5.2.3?	The current solution is split across two rooms at the same physical location - backend services in one room, and frontend services in another room.The length of the fibre cable run between the rooms is not known, but bidders should assume a length of up to 400 metres between rooms. Based on the provided hardware inventory, it is believed that the connections between current workstations and the switch is copper, and the connection between the switches in each room is fibre. The Contractror shall confirm such details during the Site Survey and ensure that correct types, quantities, and compatability of proposed devices/connectivity for the system design as per Section 4.5.2.6 Additional background information on the existing SCF solution has been added in Amendment 3, Book II - The Prospective Contract, Statement of Work Section 1.3.1.4	Amendment 3, Book II - The Prospective Contract, Statement of Work Section 1.3.1.4 updated
T.3	SOW Sections 1.1.2.1, 4.4.2.2, 4.4.4.2, 4.4.4.8	Regarding OCF deployment, could you clarify the following issues? Can OCF solution be on-premise for each domain (e.g. SOW 4.4.2.2, 4.4.4.2) or shall be deployed in Purchaser's existing virtual environments (SOW 1.1.2.1)? What is the specification in Purchaser's existing	The Offeror may propose hardware appliances, software solutions, and/or virtualised components (or a combination thereof) which address the totality of the requirements for the OCF solution. The Offeror may propose physical hardware for OCF client management, or the management	No amendment required – closed.

		virtual environment for installing OCF management system? Will the contractor install a separate physical server system for OCF client management? Will the OCF management servers be installed on Purchaser's virtual server systems? What will be the Purchaser's policy and approach to the management of OCF client software, especially in these sites (mentioned in 4.4.4.8) that are not centrally managed from Shape? Will a separate OCF management system be installed for sites that cannot be centrally managed?	solution may be virtualised - this will be dependent on the proposed solution and its design. The Offeror is expected to propose a solution which addresses the management and deployment requirements for both centrally-connected and isolated systems, including any necessary hardware to run the solution. For the avoidance of doubt, some sites are not directly manageable (including deployment of endpoint agent software) by the Purchaser from its central NCIRC Tier-2 site at SHAPE in Mons, Belgium. Those sites may have a mixture of independent deployment solutions, none of which are accessible by the Purchaser and so must be able to deploy the agents within those sites completely independently of the central Tier-2 management. Each of those non-centrally connected sites will also be independently responsible for software updates and control within their own site networks. The Purchaser’s existing OCF solution is virtualised with the following specifications at NCIRC's central Tier-2 infrastructure: - OCF Hub: CPU’s 16, Memory 64GB, Disks: 3 (100GB,100GB,500GB) - OCF Business Server (Webserver): CPUs 16, Memory 32GB, Disks: 3 (70GB,	

			100GB, 200GB) - OCF Server: CPUs 16, Memory 64GB, Disks: 4 (80GB, 110GB, 48GB, 2TB) The existing OCF solution is virtualised with the following specifications at the remote NCIRC Tier-3 sites: - OCF Gateways: CPU's 4. Memory 8GB, Disks: 2 (100GB, 500GB) As it is expected that there will be a transitional period, the Contractor shall not to be able to utilise the Tier-2 central virtualised resources. However, the Contractor may utilise virtualised infrastructure at the remote Tier-3 sites for the deployment of components if necessary, as there is sufficient capacity for additional virtual machines to be added. The specification of the proposed solution which utilises the Purchaser's existing VM hosts at Tier-3 shall not exceed that specified above for the OCF Gateways.	
T.4	SOW Section 4.4.4.8	How many clients in which OCF clients installed, exist in each location listed in SOW 4.4.4.8?	An estimated count of the OCF agents currently deployed across the NR sites can be found in the attached file OCF_NR_Agent_Groups.pdf. The Contractor shall gather and validate all endpoint quantities and site distribution for all domains (NR, NS, and RS) as part of the site survey.	A separate document has been provided detailing the specific Agent Groups. Closed

T.5	SOW Section 4.5.6	Some products specified under SCF have been requested to renewal for 5-year. However, some manufacturers are unable to bid on a 5-year renewal. Has any confirmation been received from the vendors regarding this issue?	The licence renewal duration requirements in the Statement of Work have been specified in line with the requested cycle from the end user. We are unaware of any specific constraints issued by vendors.	No amendment required – closed.
T.6	4.4.1.9, 4.4.1.10, 4.4.10.3	In relation to paragraphs 4.4.1.9, 4.4.1.10, 4.4.10.3. Please can the Purchaser confirm that they will provide OS, monitoring (Solarwinds) and backup (NetBackup) licences as PFE, to enable the Contractor to integrate the OCF solution with the existing infrastructure environment?	The Contractor shall integrate their solution with the relevant monitoring (Solarwinds) and backup (NetBackup) platforms in each domain. The existing central management components for Solarwinds and NetBackup will be utilised to connect to any new Contractor-delivered components. The Contractor must supply all necessary additional licences for the Solarwinds and NetBackup to cover the Contractor-delivered components. The Contractor shall supply all operating system licenses for the Contractor-delivered components as part of their system design. The current NCIRC NetBackup licenses are documented in attachment Backup-Licenses.pdf for information. However, with the exception of the existing Backup Manager software, it is NOT anticipated that the Offeror will utilize these licenses. The Offeror's proposal shall include licensing for all new components in the Offeror's proposal.	A separate document has been provided detailing the specific backup licenses. Amendment 3, Book II - The Prospective Contract, Statement of Work Section 4.8.1 updated. Closed

			Clarification of the Solarwinds and NetBackup Management elements PFE has been added in Amendment 3, Book II - The Prospective Contract, Statement of Work Section 4.8.1 The Contractor shall verify all information through the site survey.	
T.7	SOW	Can the purchaser confrim if only one product may be proposed for each forensic capability, or if the offeror can propose multiple products to fully address the requirements which may have overlapping functionality.	Please see the following sections of the SOW regarding the use of multiple products to meet the totality of the requirements per Forensic Capability. 4.4.1.2 (OCF) 4.5.1.2 (SCF) 4.6.1.2 (PRADE) 4.7.1.2 (MDA)	No amendment required – closed.

TECHNICAL				
Serial Nr	**RFQ Section Ref.**	**OFFEROR'S QUESTION**	**NCI AGENCY ANSWER**	**Status***
Clarifications Round 2a – answered in Round 2a				
T.1	SOW Section 4.4.4.7	What is the number of sites on each location defined in 4.4.4.7?	The table in Section 4.4.4.7 shows the list of physical sites - the NR OCF and NS OCF columns indicate which domains are present at each of those physical sites.	No amendment required – closed.

T.2	SOW Sections 1.1.2.1, 4.4.4	Could you give more detailed information about the existing OCF solution?	The current OCF solution involves endpoint agent software deployed across multiple sites. Many of these sites are centrally managed from a central controller in each domain, but owing to certain limitations (for example, bandwidth constraints) some sites have a local management component which is access remotely over a WAN link. OCF agents may be deployed using a variety of mechanisms, depending on the availability of management infrastructure at certain sites. Some agents may be deployed using a mechanism such as Microsoft SCCM, others may be deployed using manual, ad-hoc batch files or scripts.	No amendment required – closed.
T.3	SOW Section 4.4.4.12	Are we supposed to install OCF clients over Microsoft SCCM or do you have any infrastructure for central client software installation?	The method for installation of OCF endpoint software may vary from site to site. Sites which are centrally managed may be able to take advantage of existing Microsoft SCCM or Group Policy based deployment. Other sites may require dedicated deployment hubs. Some sites may require manual/ad-hoc installation through batch files, powershell etc. The Contractor-delievered OCF solution shall need to be flexible to accommodate a range of deployment scenarios, including limited or no access to central management services.	No amendment required – closed.

T.4	SOW Section 4.4.7.1	Are there any technical specification document for existing data diode? Can this document be shared?	Security domains are separated by a BAE Systems Data Diode operating in a high-availability pair, each with its own fibre path.	No amendment required – closed.
T.5	SOW Section 5.6	Will computers in the training classroom be provided by Purchaser? If licenses of the products subject to training are required, can we use the licenses we supply for Purchaser?	The classroom/office space for the training will be provided by the Purchaser. The Contractor is however responsible • as per SOW 5.6.19 for Instructor Materials and Tools • as per SOW 5.6.18 for Training Data and Material • as per SOW 5.6.7 for the system/reference environment to deliver the training (includes HW, SW, FW, Licenses) In particular, considering the requirement in SOW 5.6.7, the contractor can propose any solution that will make the training effective, including the use of licenses that are part of the supply, under the condition that the licenses shall be managed by the contractor as per Warranty requirements in SOW 5.8	No amendment required – closed.
T.6	Para 1.1.2.1 and 4.4.1.12, 4.4.4.1 and 2	Para 1.1.2.1 refers to replacing the existing Online Computer Forensics (OCF) software in two security domains in existing virtual machine environments. However there are a few other requirements that imply an expectation for the delivery of Hardware in relation to OCF including 4.4.1.12, 4.4.4.1 and 2. For the avoidance of doubt, please confirm that a refresh of the Hardware environment for OCF is not required and that the existing infrastructure environment will	The current OCF solution is partially hosted on a virtualised infrastructure, but this does not require that a new solution utilise the existing infrastructure. The Offeror shall propose an OCF solution which meets the totality of the requirements, which may include hardware to manage not just the central components, but also any remote sites	No amendment required – closed.

		be made available to the Contractor.	where necessary.	
T.7	4.4.2, 4.4.2.1, 4.4.4.7	Under para 4.4.2 OCF Solution Scalability Requirements, paragraph 4.4.2.1 requests that the OCF solution is 'able to manage up to 100,000 endpoints across a minimum of 150 sites per domain'. Given the heading 'Scalability', and that 4.4.4.7 gives an initial set of 28 sites in scope, we could interpret paragraph 4.4.2.1 as referring to ultimate capacity, not initial. Please could the Purchaser clarify / confirm what coverage / number of endpoints should be provided under this requirement.	The deployment of the OCF solution is to be across all sites as described in SOW Section 4.4.4.7. The products which are provided by the Contractor shall support the expandability from the stated sites up to a total of 150 to accommodate future potential expansion.	No amendment required – closed.

ADMINISTRATIVE				
Serial Nr	**RFQ Section Ref.**	**OFFEROR'S QUESTION**	**NCI AGENCY ANSWER**	**Status***
Clarifications Round 1 – answered in amendment 1				

A.1	Bidding Instructions	Given the recently imposed travel restrictions across Europe and North America, would the Agency consider allowing suppliers to submit their quotations via email?	In order to ensure business continuity in light of national emergencies regarding COVID-19, the FIT Bidding Instructions have been updated to specify email delivery of quotations. As per section 2.3.2 of the Bidding Instructions, the submission email address is: RFQCO.115009.FIT@ncia.nato.int Please note that as a result of this amendment, **no** physical/hard copy versions of quotations shall now be accepted.	Amendment 1 of Book I – Bidding Instructions sections: 2.3 2.5.3.3 3.2.1 (b) 3.2.1 (c) 3.3.1 3.3.5 3.3.5.1 3.4.1 3.4.17 3.4.17.1 3.5.1 3.5.3 3.5.3.1 Closed
A.2	SSS	Could you please state which version of the PIP is expected at EDC+0weeks? Moreover, can you elaborate on the iterations and related CLIN's if applicable?	CLIN 1.2 of the SSS and SOW Section 3 have been amended accordingly.	Amendment 1 of Book II – The Prospective Contract, Part I SSS CLIN 1.2 Sections 3.2, 3.3 and 3.4 in Amendment 1, Book II – The Prospective Contract, Part IV, Statement of Work Closed
A.3	SOW Section 2 and 4	The documents specified in Section 2 are referenced in Section 4 as below. However, we could not find most of the referenced documents online. Could you share the corresponding documents?	These documents are part of the reference documentation as specified under SOW Section 2 and have been posted to the bidders who have requested them from	Closed

			RFQCO.115009.FIT.Communications@ncia.nato.int	
A.4	SOW 4.2.3, 4.2.6.3, 4.13.3.5.5	Could you please provide an up-to-date web link or the document containing the NCIA Approved Fielded Products List (AFPL)?	The AFPL document referenced in the SOW is available to all Bidders on request. Once the request has been received, the Purchaser will endeavor to ship a CD including the requested documents. Please send all requests for this document to: RFQCO.115009.FIT.Communications@ncia.nato.int	Closed
A.5	RFQ-CO-115009-FIT-Book II, The Prospective Contract Section IV, Statement of Work Section 1.1.1 And RFQ-CO-115009-FIT Book II, The Prospective Contract Part II, Special Provisions Section 2	Having in mind the scope of work and potential its extension after Q&A which contract provision is binding for Completion Date for this Contract:? 2.2.1 - EDC +40 weeks or, 2.2. - The Completion Date for this Contract shall be no later than January 2021? Giving the contractor full 40 weeks of PoP to compete all tasks before Jan 31-st, 2021 the EDC should happen at the end of April 2020. Is it right estimation?	The Bidding Instructions, Bidding Sheets, SSS and Special Provisions have been updated to +39 weeks.	Amendment 1 of Book I – Bidding Instructions paragraph 1.6.1 Amendment 1 of Book I – Annex C Bidding Sheets, CLIN Summary Tab Amendment 1 of Book II – The Prospective Contract, Part II, Special Provisions paragraph 2.1.1 Amendment 1 of Book II – The Prospective Contract, Part I SSS Closed
A.6	Bidding Sheets	Please explain where we add the quantitiy of licenses in the Bidding Sheets.	Yellow cells now added to the Bidding Sheets to allow suppliers to	Amendment 1 of Book I – Annex C Bidding Sheets

			populate and enter quantity of licenses provided in their solution.	
TECHNICAL				
Serial Nr	**RFQ Section Ref.**	**OFFEROR'S QUESTION**	**NCI AGENCY ANSWER**	**Status***
Clarifications Round 1 – answered in amendment 1				
T.1	SOW Para. 4.13.1	Will emissions scanning by Purchaser be required for delivered equipment? If yes, how long after equipment is delivered to site will the scanning be complete?	The duration of testing is dependent upon the TEMPEST Level required, the type and quantity of equipment to be tested, and the availability of the test facility. As per the additional wording in SOW section 8.1.14 (AMD1), it is anticipated that two to three devices could be tested per working day.	Section 8.1.14 in Amendment 1, Book II – The Prospective Contract, Part IV, Statement of Work Closed
T.2	SOW Para. 4.13.2.8.3	Is the initial SIS a deliverable for the Site Survey Phase?	As per SOW 4.11.7 the Site Survey Deliverables are: • The Site Survey • The Site Survey Report (SSR) Therefore there is no requirement to provide the initial SIS for the Site Survey Phase. As per SOW section 4.8, the Purchaser will provide the extant SIS at EDC + 3 weeks. A delta version of the extant SIS is a Contractor deliverable for the Installation, Implementation and Testing phase as per SOW section 4.13.	Section 4.13.2.8.3 in Amendment 1, Book II – The Prospective Contract, Part IV, Statement of Work Section 4.8 in Amendment 1, Book II – The Prospective Contract, Part IV, Statement of Work Closed

T.3	SOW Para. 4.13.2.8.3	Is the initial SICP a deliverable for the Site Survey phase?	As per SOW 4.11.7 the Site Survey Deliverables are: • The Site Survey • The Site Survey Report (SSR) Therefore there is no requirement to provide the initial SICP for the Site Survey Phase. As per SOW section 4.8, the Purchaser will provide the extant SICP at EDC + 3 weeks. A delta version of the extant SICP is a Contractor deliverable for the Installation, Implementation and Testing phase as per SOW section 4.13.	Section 4.13.2.8.3 in Amendment 1, Book II – The Prospective Contract, Part IV, Statement of Work Section 4.8 in Amendment 1, Book II – The Prospective Contract, Part IV, Statement of Work Closed

RFQ-CO-115009-FIT

CYBER SECURITY FORENSICS AND INVESTIGATIVE TOOLS (TECHNOLOGY REFRESH)

NATO Communications and Information Agency
Agence OTAN d'information et de communication

BOOK I

BIDDING INSTRUCTIONS

Table of Contents

SECTION I - INTRODUCTION

1.1 The purpose of this Request for Quotation (RFQ) is to establish a contract for the acquisition and deployment of cybersecurity forensics capabilities to replace and refresh obsolete hardware, software, and tools within the NCIRC central (Tier-2) infrastructure at the Supreme Headquarters Allied Powers Europe (SHAPE), Mons, Belgium. This project is referred to as Forensics and Investigative Tools (FIT).

1.2 The contract performance requirements are set forth in the prospective contract Statement of Work (Book II Part IV) and in the Contract Schedule of Supplies and Services (Book II Part I).

1.3 This RFQ is conducted under Basic Ordering Agreement (BOA) procedures outlined within the "*Procedure Governing the Use of Basic Ordering Agreements concluded by the NATO Communications and Information Agency – 2019 version*, Ref: AC/4-D(2019)0004 (INV)". Pursuant to these procedures, quotation submittal is restricted to companies from participating NATO member nations in accordance with paragraph 2.1.6 of Section II of the Bidding Instructions. The security of this RFQ is "NATO UNCLASSIFIED".

1.4 This RFQ will not be the subject of a public opening.

1.5 Award(s) of the Contract(s) will be made on a Firm Fixed Price Basis to the lowest compliant Offeror.

1.6 The Period of Performance (PoP) for this critical, time of the essence project, from the Effective Date of Contract (EDC) and not including the warranty period is as follows:

1.6.1 Schedule A: EDC + 39 weeks.

1.7 The solicitation, evaluation and award processes will be conducted in accordance with the terms and conditions contained herein.

1.8 The Offeror shall refer to the Purchaser all queries for a resolution of conflicts found in information contained in this document in accordance with the procedures set forth in paragraph 2.6 of Section II of the Bidding Instructions entitled "Requests for RFQ Clarifications".

1.9 The target date for Contract Award is July 2020.

SECTION II – GENERAL BIDDING INSTRUCTIONS

2.1 DEFINITIONS

2.1.1 In accordance with MIL-HDBK-505, the term “Assembly” as used herein means an item forming a portion of equipment that can be provisioned and replaced as an entity and which normally incorporates replaceable parts or groups of parts.

2.1.2 The term “Basic Ordering Agreement” (BOA) refers to the acquisition instruments negotiated between suppliers of products / services and the NCI Agency, on behalf of NATO.

2.1.3 The term "Compliance" as used herein means strict conformity to the requirements and standards specified in this Request for Quotation.

2.1.4 The term "Contractor" refers to a firm of a participating country which has signed a Contract under which he will perform a service, manufacture a product, or carry out works for NATO.

2.1.5 The term "Offeror" as used herein refers to a firm, consortium, or joint venture which submits an offer in response to this solicitation.

2.1.6 The term “Participating Country” as used herein means one of the contributory NATO nations in the project, namely, (in alphabetical order): ALBANIA, BELGIUM, BULGARIA, CANADA, CROATIA, CZECH REPUBLIC, DENMARK, ESTONIA, FRANCE, GERMANY, GREECE, HUNGARY, ICELAND, ITALY, LATVIA, LITHUANIA, LUXEMBOURG, MONTENEGRO, NETHERLANDS, NORTH MACEDONIA, NORWAY, POLAND, PORTUGAL, ROMANIA, SLOVAKIA, SLOVENIA, SPAIN, TURKEY, UNITED KINGDOM, UNITED STATES OF AMERICA.

2.1.7 The term "Purchaser" refers to the authority issuing the RFQ and/or awarding the Contract (the NCI Agency).

2.1.8 In accordance with MIL-HDBK-505, the term “Sub-Assembly” as used herein refers to a portion of an assembly consisting of two or more parts that can be provisioned and replaced as an entity. The definition purposely excludes components and/or parts.

2.2 ELIGIBILITY

2.2.1 This RFQ is being conducted under BOA procedures, therefore, only firms which hold an active Basic Ordering Agreement (BOA) with the NCI Agency are eligible to take part in this RFQ.

2.2.2 All Contractors, sub-Contractors and manufacturers, at any tier, must be from Participating Countries.

2.2.3 None of the work, including project design, labour and services shall be performed other than by firms from and within Participating Countries.

2.2.4 No materials or items of equipment down to and including identifiable sub-assemblies shall be manufactured or assembled by a firm other than from and within a Participating Country.

2.2.5 The intellectual property rights to all design documentation and related system operating software shall reside in NATO member countries, and no license fee, or royalty charges shall be paid by the Contractor to firms, individuals or governments other than within the NATO member countries.

2.3 QUOTATION SUBMITTAL AND QUOTATION CLOSING DATE

2.3.1 All Quotations shall be in the possession of the Purchaser at the email address given below in Paragraph 2.3.2 below before 1 pm/13:00 hours (CENTRAL EUROPEAN TIME) on Friday 15th May 2020 at which time and date Quotations shall be closed.

2.3.2 Due to the COVID-19 restrictions imposed by some governments and organisations within the NATO alliance, the Purchaser is permitting Offerors with a revised form of submitting Quotations via email.

Email: RFQCO.115009.FIT@ncia.nato.int

2.3.3 The Quotation shall consist of three (3) separate subject emails:

2.3.3.1 For the first e-mail the subject line shall read: “RFQ-CO-115009.FIT – Official Bid for [company name] – Part 1 - Administrative Envelope”. The e-mail content shall be as described in Paragraph 3.2.1(a) below, with no password protection to the file and shall be not larger than 20MB total.

2.3.3.2 For the second e-mail the subject line shall read: “RFQ-CO-115009.FIT – Official Bid for [company name] – Part 2 - Price Quotation”. The e-mail content shall be as described in Paragraph 3.2.1(b) below, with no password protection to the file, and shall be not larger than 20MB total.

2.3.3.3 For the third e-mail the subject line shall read: “RFQ-CO-115009.FIT – Official Bid for [company name] – Part 3 – Technical Proposal”. The e-mail content shall be as described in Paragraph 3.2.1(c) below, with no password protection to the file, and shall be not larger than 20MB total per e-mail. For large Technical Proposals, multiple e-mails may be required to submit the entire package. In such case, Bidders shall clearly indicate the correct order in the e-mail subject line.

2.3.4 Quotations which are delivered to the Purchaser after the specified time and date set forth above for Bid Closing are “Late Bids” and shall not be considered for award.

2.3.5 It is the responsibility of the Offeror to ensure that the Quotation submission is duly completed by the specified Quotation Closing time and date. If a Quotation received at the NCI Agency’s facility by electronic data interchange is unreadable to the degree that conformance to the essential requirements of the solicitation cannot be ascertained, the Purchaser will immediately notify the Offeror that the Quotation will be rejected unless the Offeror provides clear and convincing evidence:

(a) Of the content of the Quotation as originally submitted; and,

(b)That the unreadable condition of the Quotation was caused by Purchaser software or hardware error, malfunction, or other Purchaser mishandling.

2.3.6 One (1) copy of the Quotation shall be submitted via email. The evaluation will be based on the Quotation provided via email. Due to the current state of emergency regarding COVID-19, no physical/hard copy versions of the Quotation shall be provided.

2.4 REQUESTS FOR EXTENSION OF QUOTATION CLOSING DATE

2.4.1 All questions and requests for extension of the Quotation Closing Date must be submitted by e-mail. Such questions shall be forwarded to the point of contact specified in paragraph 2.5 below and shall arrive not later than seven (7) calendar days prior to the stated "Quotation Closing Date". The Purchaser is under no obligation to answer requests submitted after this time. Extensions to the quotation closing date are at the discretion of the Purchaser.

2.5 PURCHASER POINT OF CONTACT

2.5.1 The Purchaser point of contact for all information concerning this RFQ is:

NATO Communications and Information Agency

Acquisition Directorate

Boulevard Léopold III

1110 Brussels

Belgium

2.5.2 Attention:

Mr. Darren Corkindale

Senior Contracting Officer (Consultant)

Tel: +32 2 707 5182

2.5.3 Emails:

2.5.3.1 Questions/Clarifications: RFQCO.115009.FIT.Communications@ncia.nato.int

2.5.3.2 Quotation Guarantee: TreasuryVendorBank.Finance@ncia.nato.int

2.5.3.3 Quotation: RFQCO.115009.FIT@ncia.nato.int

***Please note that there is a « . » between Bank and Finance.**
***The subject line shall read RFQ-CO-115009-FIT Quotation Guarantee for [INSERT COMPANY NAME]**

2.6 REQUESTS FOR RFQ CLARIFICATIONS

2.6.1 Offerors, during the solicitation period, are encouraged to query and seek clarification of any matters of a contractual, administrative and technical nature pertaining to this RFQ.

2.6.2 All questions and requests for clarification must be submitted by e-mail and using the form in Annex A of Book I – Bidding Instructions. All questions and requests must reference the section(s) in the RFQ subject for clarifications. The questions and/or requests shall be forwarded to the email address specified in paragraph 2.5.3.1 above and shall arrive not later than seven (7) calendar days prior to the stated "Quotation Closing Date". The Purchaser is under no obligation to answer questions submitted after this time. Requests for clarification must address the totality of the concerns of the Offeror for any given area, as the Offeror will generally not be permitted to revisit areas of the RFQ for additional clarification as noted in 2.6.3 below.

2.6.3 Offerors are advised that subsequent questions and/or requests for clarification included in a quotation shall neither be answered nor considered for evaluation and may be grounds for a determination of non-compliance.

2.6.4 Except as provided above, all questions will be answered by the Purchaser and the questions and answers (deprived of any means of identification of the questioner) will be issued in writing to all prospective Offerors. Answers will be provided on a weekly basis.

2.6.5 The published answers issued by the Purchaser shall be regarded as the authoritative interpretation of the RFQ, and may lead to a formal amendment to the RFQ. Such amendment may also contain changes to the language, terms, conditions and/or specifications of the RFQ. Amendments to the language of the RFQ included in the answers, and/or the formal RFQ amendment, shall be incorporated by the Offeror in its offer.

2.7 REQUESTS FOR WAIVERS AND DEVIATIONS

2.7.1 Offerors are informed that requests for alteration to, waivers of, or deviations from the Schedule, the Special Contract Provisions, the Terms and Conditions in the NCI Agency's Basic Ordering Agreement, the Technical Specifications, the Statement of Work and any other Terms and Conditions of the Prospective Contract will not be considered after the Request for Clarification process.

2.7.2 Requests for alterations to the other requirements, terms or conditions of the RFQ or the Prospective Contract may only be considered as part of the clarification process set forth in section 2.6 above. Requests for alterations to the specifications, terms and conditions of the Contract which are included in a Quotation as submitted may be regarded by the Purchaser as a qualification or condition of the Quotation and may be grounds for a determination of non-compliance.

2.8 AMENDMENT OF THE RFQ

2.8.1 The Purchaser may revise, amend or correct the terms, conditions and/or specifications and provisions of the RFQ documents at any time prior to the date set

for the Quotation Closing Date. Any and all modifications will be transmitted to all prospective Offerors by an official amendment designated as such and signed by the Contracting Authority. Such amendment shall be recorded in the Acknowledgement of Receipt which the Offeror shall complete and enclose as part of his quotation. This process may be part of the clarification procedures set forth in section 2.6 above or may be an independent action on the part of the Purchaser.

2.8.2 The Purchaser will consider the potential impact of amendments on the ability of prospective Offerors to prepare a proper quotation within the allotted time. The Purchaser may extend the " Quotation Closing Date" at his discretion and such extension will be set forth in the amendment document.

2.8.3 In no case, however, will the closing date for receipt of quotation be less than seven (7) days from the date of issuance of any amendment to the RFQ.

2.9 MODIFICATION AND WITHDRAWAL OF QUOTATION

2.9.1 Quotations, once submitted, may be modified by Offerors, but only to the extent that the modifications are in writing, conform to the requirements of the RFQ, and are received by the Purchaser prior to the exact time and date established for Quotation Closing. Such modifications shall be considered as an integral part of the submitted bid.

2.9.2 Modifications to quotations which arrive after the Quotation Closing Date will be considered as "Late Modifications" and will be processed in accordance with the procedure set forth above concerning "Late Quotation", except that unlike a "Late Quotation", the Purchaser will retain the modification until a selection is made. A modification to a quotation which is determined to be late will not be considered in the evaluation and selection process. If the Offeror submitting the modification is determined to be the successful Offeror on the basis of the unmodified quotation, the modification may then be opened. If the modification makes the terms of the quotation more favourable to the Purchaser, the modified quotation may be used as the basis of Contract award. The Purchaser, however, reserves the right to award a Contract to the apparent successful Offeror on the basis of the quotation submitted and disregard the late modification.

2.9.3 An Offeror may withdraw his Quotation at any time prior to Quotation Opening without penalty. In order to do so, an authorised agent or employee of the Offeror must provide an original statement of the firm's decision to withdraw the Quotation and remove the Quotation from the Purchaser's premises.

2.9.4 Except as provided in paragraph 2.10.4 (b) below, an Offeror may withdraw his Quotation after Quotation Opening only by forfeiture of the Quotation Guarantee.

2.10 QUOTATION VALIDITY

2.10.1 Offerors shall be bound by the term of their quotation in which the Offeror has provided a quotation for a period of 6 months starting from the Quotation Closing Date specified at paragraph 2.3.1.

2.10.2 In order to comply with this requirement, the Offeror shall complete the Certificate of Quotation Validity set forth in Annex B-3. Quotations offering less than the period of

time referred to above for acceptance by the Purchaser may be determined to be non-compliant.

2.10.3 The Purchaser will endeavour to complete the evaluation and make an award within the period referred to above. However, should that period of time prove insufficient to render an award, the Purchaser reserves the right to request an extension of the period of validity of all quotations which remain under consideration for award.

2.10.4 Upon notification by the Purchaser of such a request for a time extension, the Offerors shall have the right to:

(a) accept this extension of time in which case Offerors shall be bound by the terms of their quotation for the extended period of time and the Certificate of Quotation Validity extended accordingly; or

(b) refuse this extension of time and withdraw the quotation without penalty.

2.10.5 Offerors shall not have the right to modify their quotations due to a Purchaser request for extension of the quotation validity unless expressly stated in such request.

2.11 QUOTATION GUARANTEE

2.11.1 The Offeror shall furnish with its Quotation a guarantee in an amount equal to One Hundred and Fifty Five Thousand Euros (€ 155,000) only. The Quotation Guarantee shall be in the form of an irrevocable, unqualified and unconditional Quotation bond, i.e. Standby Letter of Credit issued by a Belgian banking institution fully governed by Belgian legislation or issued by a non-Belgian financial institution and confirmed by a Belgian banking institution fully governed by Belgian legislation. In the latter case signed original letters from both the issuing institution and the confirming institution must be provided. The confirming Belgian bank shall clearly state that it will guarantee the funds, the drawing against can be made by the NCI Agency at its premises in Belgium. Quotation Guarantees shall be made payable to the Treasurer, NATO Communications and Information Agency and its legal successor.

2.11.2 Alternatively, an Offeror may elect to post the required Guarantee in cash (via direct bank deposit) or by certified cheque to be submitted in the Offeror's Quotation Administration Package in paragraph 3.3. If the latter method is selected, Offerors are informed that the Purchaser will cash the cheque on the Quotation Closing Date. Instructions regarding direct bank deposit can be obtained from the designated Point of Contact indicated in paragraph 2.5.3.1 above.

2.11.3 "Standby Letter of Credit" as used herein, means a written commitment by a Belgian financial institution either on its own behalf or as a confirmation of the Standby Letter of Credit issued by a non-Belgian bank to pay all or part of a stated amount of money, until the expiration date of the letter, upon presentation by the Purchaser of a written demand therefore. Neither the financial institution nor the Offeror can revoke or condition the Standby Letter of Credit. The term "Belgian financial institution" includes non-Belgian financial institutions licensed to operate in Belgium.

2.11.4 The format described in Annex B-16 may be used by the issuing financial institution to create a Standby Letter of Credit:

2.11.5 If the Quotation Closing Date is extended after a Offeror's financial institution has issued a Quotation Guarantee, it is the obligation of the Offeror to have such Quotation Guarantee (and confirmation, as applicable) extended to reflect the revised Quotation Validity date occasioned by such extension.

2.11.6 Failure to furnish the required Quotation Guarantee in the proper amount, and in the proper form and for the appropriate duration by the Quotation Closing Date may be cause for the Quotation to be determined non-compliant.

2.11.7 Quotation Guarantees will be returned to Offerors as follows:

a) to non-compliant Offerors forty-five (45) days after notification by the Purchaser of a non-compliant Quotation (except where such determination is challenged by the Offeror; in which case the Quotation Guarantee will be returned forty-five (45) days after a final determination of non-compliance);

b) to all other unsuccessful Offerors within thirty (30) days following the award of the Contract to the successful Offeror;

c) to the successful Offeror upon submission of the Performance Guarantee required by the Contract or, if there is no requirement for such a Performance Guarantee, upon contract execution by both parties;

d) pursuant to paragraph 2.10.4. (b).

2.11.8 Quotation Guarantees will be covering the full scope of the implementation.

2.12 CANCELLATION OF REQUEST FOR QUOTATIONS

2.12.1 The Purchaser may cancel, suspend or withdraw for re-issue at a later date this RFQ at any time prior to Contract award. No legal liability on the part of the Purchaser for payment of any sort shall arise and in no event will any Offeror have cause for action against the Purchaser for the recovery of costs incurred in connection with preparation and submission of a quotation in response to this RFQ.

2.13 ELECTRONIC TRANSMISSION OF INFORMATION AND DATA

2.13.1 The Purchaser will endeavour to communicate answers to requests for clarification and amendments to this RFQ to the prospective Offerors by the fastest means possible, including the use of e-mail where the firms have forwarded the necessary address information. All Offerors are consequently strongly encouraged to provide accurate email addressing information and notify the Purchaser at the earliest practicable date should any changes occur.

2.13.2 Offerors are cautioned that the Purchaser will rely exclusively on electronic mail to manage all correspondence, amendments, etc., related to this RFQ.

SECTION III - QUOTATION PREPARATION INSTRUCTIONS

3.1 GENERAL

3.1.1 Quotations shall be prepared in accordance with the instructions set forth herein. Failure to comply with these instructions may result in the Offer being declared non-compliant.

3.1.2 The requirements under this RFQ are compiled in a single Schedule (Schedule A). To ensure compliance, Offerors shall quote for the Schedule A. Award of the requirements will be by Schedule and this Schedule may not be subdivided for partial quotation purposes. The Purchaser shall place one contract to cover the entire scope of the project.

3.1.3 Quotations and all related documentation shall be submitted in the English language.

3.1.4 Offerors shall prepare a complete quotation which comprehensively addresses all requirements stated herein. The quotation shall demonstrate the Offeror's understanding of the RFQ and his ability to provide all the deliverables and services listed in the Schedule of Supplies and Services (SSS). Quotations which are not complete will be declared non-compliant.

3.1.5 The Offeror shall not restate the RFQ requirements in confirmatory terms only. The Offeror must clearly describe what is being offered and how the Offeror will meet all RFQ requirements. Statements in confirmatory terms will only be sufficient for determining the bid to be non-compliant.

3.1.6 Offerors shall classify their response in accordance with the classification of the RFQ.

3.1.7 Offerors are advised that the Purchaser reserves the right to incorporate the Offeror's Technical Proposal in whole or in part in the resulting Contract.

3.2 QUOTATION CONTENT

3.2.1 Offerors shall prepare their quotation in three (3) volumes in the following quantities:

(a) Administrative Envelope (Volume I): The Administrative Envelope shall contain PDF copies of the Certificates with physical (non-digital) signatures and a PDF copy of the Quotation Guarantee as detailed in section 2.11.

(b) Price Quotation (Volume II): The Price Quotation shall contain one (1) email containing the individual files as described in in section 3.4.

- Annex C to Bidding Instructions – Bidding Sheets (Excel format)
- Annex C to Bidding Instructions – Bidding Sheets (PDF format)

- Schedule of Supplies and Services (Excel Format)
- Schedule of supplies and Services (PDF format)

(c) Technical Proposal (Volume III):

The Offeror shall submit their Technical Proposal as one (1) email. This email shall contain one (1) file which addresses each criterion as described in sections 3.2.3, 3.5, 4.4 and in accordance with the requirements of section 3.5.2.

- Table of Contents and Cross-Reference/Compliance Table
- PIP Sections 1 & 2 Project Overview and Applicable Documents
- PIP Section 3 Project Management
- PIP Section 4 System Design, Integration and Implementation
- PIP Section 5 Integrated Logistics Support
- PIP Section 6 Configuration Management
- PIP Section 7 Quality Assurance and Control
- PIP Section 8 Documentation
- PIP Section 9 Training
- PIP Section 10 Testing and Acceptance
- PIP Section 11 Project Master Schedule
- PIP Section 12 Project Work Breakdown Structure
- Corporate Experience
- Project Manager CV
- Technical Lead CV
- Purchaser Furnished Equipment (PFE) Management

3.2.2 No information disclosing or contributing to disclose the quotation price shall be made part of the Technical Proposal. Failure to abide to this prescription shall result in the quotation being declared non-compliant.

3.2.3 As part of the Technical Proposal, the Offeror shall provide One (1) unpriced copy of the Bidding Sheets detailing the breakdown of labour, hours and equipment.

3.2.4 Documents submitted in accordance with paragraph 3.2.1 above shall be classified no higher than “NATO UNCLASSIFIED” material.

3.2.5 Partial Quotations on a Schedule and/or Quotations containing conditional statements will be declared non-compliant.

3.2.6 Where no specific format is mandated, electronic quotation documentation shall be delivered in PDF format without limitations of printing or "copy & paste". The Purchaser reserves the right to request native formats electronic files of the proposal to facilitate the evaluation process.

3.3 PREPARATION OF THE ADMINISTRATIVE ENVELOPE (VOLUME I)

3.3.1 Contents: Required documents submitted by email, containing one PDF file comprised of all of the required documents; and one copy of the Quotation Guarantee submitted directly to the Purchaser Treasury office.

3.3.2 No information disclosing or contributing to disclose the quotation price shall be made part of the Administration Volume. Failure to abide to this prescription shall result in the quotation being declared non-compliant.

3.3.3 As explained in section 2.11 and paragraph 3.3.1, the Quotation Guarantee shall be sent directly to the Purchaser Treasury email address specified in paragraph 2.5.3.2. Additionally, a copy of the Guarantee shall be included in this volume. Offerors are reminded that the Quotation Guarantee shall reflect any extensions to the Quotation Validity Date due to extensions in the Quotation Closing Date.

3.3.4 Volume I shall include the certificates set forth in the Annex to these Bidding Instructions, signed in the original by an authorised representative of the Offeror. The text of the certificates must not be altered in any way. The certificates are as follows:

B-1: Certificate of Legal Name of Offeror

B-2: Certificate of Independent Determination

B-3: Certificate of Quotation Validity

B-4: Certificate of Understanding

B-5: Certificate of Exclusion of Taxes, Duties and Charges

B-6: Acknowledgement of Receipt of RFQ Amendments (if applicable)

B-7: Disclosure of Requirements for NCI Agency Execution of Supplemental Agreements

B-8: Certification of NATO Member Country of Origin of Delivered Equipment, Services, Materials and Intellectual Property Rights

B-9: Comprehension and Acceptance of Contract General and Special Provisions.

B-10: List of Prospective Sub-Contractors / Consortium members

B-11: AQAP 2110 Compliance or ISO-9001:2015 Certification. The Offeror shall attach a copy of the company's AQAP 2110 compliance or ISO 9001:2015 certification.

B-12: List of Key Personnel.

B-13: Disclosure of Involvement of Former NCI Agency Employment

B-14: Offeror Background IPR

B-15: List of Subcontractor IPR

B-16: Quotation Guarantee- Standby Letter of Credit

B-17: Vendor Supply Chain Security Self-Attestation Statement

3.3.4.1 **Certificate B-7**, Disclosure of Requirements for NCI Agency Execution of Supplemental Agreements, Offerors shall note especially the following:

3.3.4.1.1 If supplemental agreements, such as End-User Certificates or Technical Assistance Agreements, are required by national regulations, a draft version of these must be submitted with the Offeror's quote. Supplemental agreements submitted after the Quotation Closing Date shall not be considered.

3.3.4.1.2 The terms of supplemental agreements, if necessary, are the Offerors / Contractors responsibility and shall be totally consistent with the terms of the (Prospective) Contract, and shall not duplicate, negate, or further interpret any provisions of this Contract. The terms of the (Prospective) Contract shall take precedence over the Supplemental Agreement.

3.3.4.1.3 A problem with the supplemental agreement in any of the areas mentioned previously in this provision may result in a determination that the Quotation is not compliant with the terms of the RFQ, and in rejection of the Quotation, or termination for default of the Contract if the supplemental agreement is submitted after Contract award.

3.3.4.2 **Certificate B-10,** the Contractor shall identify by name, project role, and country of origin, all sub-contractors whose sub-contract value is expected to equal or exceed EUR 125,000, if any. A list of consortium members shall also be completed and included. If there are no sub-contractors/consortium members involved, the Offeror shall state this separately. The subcontractors listed in this certificate shall be traceable in the Bidding Sheets.

3.3.4.3 **Certificate B-11** Offerors shall provide documentary evidence that the Offeror possesses a current certification that is compliant with the requirements of Allied Quality Assurance Publication (AQAP) 2110, ISO 9001:2015, or an equivalent QA/QC regime.

3.3.4.3.1 If the Offeror is presenting a QA/QC regime that is claimed to be equivalent to AQAP 2110 or ISO 9001:2015, the burden of proof of such equivalency

shall be on the Offeror and such evidence of equivalency shall be submitted with the Certificate at Annex B-11 in the Administration Package.

3.3.4.3.2 Failure to execute this Certificate, or failure to provide documentary evidence of compliance with this requirement may result in a determination of a non-compliant quotation.

3.3.4.4 **Certificate B-17**, Offerors are required to read the CONSULTATION, COMMAND AND CONTROL BOARD (C3B) Technical and Implementation Directive on Supply Chain Security for COTS CIS Security Enforcing Products. This Directive may be provided to Offerors requesting the Restricted Documents Pack. Offerors can request a copy of mentioned Directive through the email listed in 2.5.3.1.

3.3.5 The Offeror shall send Volume I - Administrative Envelope via email to the Purchaser's email address specified in section 2.5~~2.~~ above. This shall consist of One (1) copy of the Administrative Envelope.

3.3.5.1 The email provided shall be entitled: *RFQ-CO-115009-FIT Official Quotation for Company Name - Volume I – Administration Envelope* where the Administration Envelope shall be contained.

3.4 PREPARATION OF THE PRICE QUOTATION (VOLUME II)

3.4.1 The Offeror shall prepare their Price Proposal by submitting one (1) email containing the completed Bidding Sheets provided with this RFQ under Book I, Bidding Instructions Annex C in both Excel and PDF formats. The Offeror shall also propose an accurate and complete price quotation in completing the Schedule of Supplies and Services (SSS) as defined in these Bidding Instructions in both Excel and PDF formats.

3.4.2 The prices provided shall be intended as the comprehensive total price offered for the fulfilment of all requirements as expressed in the RFQ documentation including but not limited to those expressed in the SOW.

3.4.3 Offeror shall furnish Firm Fixed Prices for all required items in accordance with the format set forth in the Instructions for preparation of the Bidding Sheets.

3.4.4 Offerors are responsible for the accuracy of their Price Quotations. Price Quotations that have apparent computational errors may have such errors resolved in the Purchaser's favour or, in the case of gross omissions, inconsistencies or errors, may be determined to be non-compliant.

3.4.5 Offeror shall quote in their own national currency or in EUR, the host nation currency. Offeror may also submit Quotations in multiple currencies including other NATO member states' currencies under the following conditions:

(a) the currency is of a "Participating Country" in the project, and

(b) The Offeror can demonstrate, either through sub-contract arrangements or in its proposed work methodology, that it will have equivalent expenses in that

currency. All major sub-contracts and their approximate anticipated value should be listed on a separate sheet and included with the Price Quotation.

3.4.6 The Purchaser, by virtue of its status under the terms of Article IX and X of the Ottawa Agreement, is exempt from all direct taxes (incl. VAT) and all customs duties on merchandise imported or exported. The Contractor, therefore, shall certify that the prices stipulated in this Contract do not include amounts to cover such direct taxes or customs duties.

3.4.7 The Contractor shall be responsible for ensuring that its respective Sub-contractors are aware that the Purchaser is exempt from taxes and customs duties. The Contractor (and its respective Sub-contractors) shall be responsible for complying with all applicable national and local legal and administrative procedures to ensure that authorities do not attempt to assess taxes and customs duties on goods and property imported or exported through NATO member nation frontiers under this Contract nor assess direct taxation (VAT) on goods sold to the NCI Agency under this Contract. Offerors are reminded of the requirement to complete the certification to this effect in Annex B-5.

3.4.8 Unless otherwise specified in the instructions for the preparation of bidding sheets, all prices quoted in the proposal shall be DDP (Delivered Duty Paid) to specified destination, in accordance with the International Chamber of Commerce INCOTERMS 2020 and shall also cover all packaging, packing, preservation, insurance and transportation charges. Prices quoted shall include all costs for items supplied and delivered to final destination.

3.4.9 The Offeror's attention is directed to the fact that Price Quotation shall contain no document and/or information other than the priced copies of the Bidding Sheets and SSS. Any other document of a contractual or technical nature will not be considered for evaluation and may be cause for a determination of non-compliance by the Purchaser.

3.4.10 When completing the Bidding Sheets, a unit price and total fixed price for each specified element needs to be supplied on each CLIN line item. Offerors are required to insert price information in all cells marked in yellow in the Bidding Sheets. Prices should not be grouped. The prices and quantities entered on the document shall reflect the total items required to meet the contractual requirements. The total price shall be indicated in the appropriate columns and in the currency quoted. If the price of a line item is expressed in different currencies, these shall be identified, and there shall be as many totals on that line item as there are currencies. In preparing the Price Quotation, Offeror shall ensure that the prices of the Sub-items total the price of the major item of which they constitute a part. The accuracy of the inputs of the Bidding Sheets is the responsibility of the Offeror. The Purchaser in its favour may resolve ambiguous computation of prices.

3.4.11 The Offeror shall furnish Firm Fixed Price quotations, for all proposed items. Partial quotations shall be rejected.

3.4.12 The Offeror understands that there is no obligation under this Contract for the Purchaser to exercise an optional increase of the quantities set forth in any line

items, and that the Purchaser bears no liability should it decide not to exercise such Option. Furthermore, the Purchaser reserves the right to order another contractor through a new contract with other conditions for the additional quantities of any line item it might need.

3.4.13 The Contractor shall be liable for all other taxes, assessments, fees, licences, administrative charges or other Government assessments or charges which are applicable to the performance of this Contract. It is the Contractor's responsibility to inform itself of its liability in each country where such liability may arise.

3.4.14 Price Proposals exceeding the deadlines for delivery and completion of works indicated in the Schedule of Supplies and Services may be declared non-compliant.

3.4.15 The Offeror shall identify for each CLIN all significant sub-contractors and provide required information about their prospective sub-contractors whose estimated value of the subcontract is expected to equal or exceed EUR 125,000 using the "List of Prospective Sub-Contractors" form attached to Book I Annex B-10.

3.4.16 The Offeror shall separately price the cost of Warranty. Zero values or the statement that the Quotation price includes the cost of warranty are not allowed.

3.4.17 The Offeror shall send Volume II - Pricing Envelope via email to the Purchaser's email address specified in paragraph 2.52. above. This shall consist of One (1) copy of the Pricing Envelope.

3.4.17.1 The email provided shall be entitled*: RFQ-CO-115009-FIT Official Quotation for Company Name - Volume II – Price Quotation* where the Pricing Envelope shall be contained.

3.5 PREPARATION OF THE TECHNICAL PROPOSAL (VOLUME III)

3.5.1 The Offeror shall submit their Technical Proposal as one (1) email. This email shall contain one (1) file which addresses each criterion as described in paragraphs 3.2.3, 3.5, 4.4 and in accordance with the requirements of section 3.5.2

3.5.2 The Technical Proposal package shall include the following:

3.5.2.1 Table of Contents. Offeror shall compile a detailed Table of Contents which lists not only section headings but also major sub-sections, and topic headings required set forth in these Instructions or implicit in the organisation of the Technical Proposal.

3.5.2.2 Cross-Reference/Compliance Table. The Offeror shall include the completed Technical Proposal Cross-Reference Table at Annex E of Book I. The Offeror shall complete the Column marked "QUOTATION REFERENCE" of the Table, citing the appropriate section of the Technical Proposal that corresponds to each paragraph of these Instructions for the Preparation of the Technical Proposal. The completed Table serves as an index for the Purchaser's Technical Evaluation Panel and also as an aide memoire to the Offeror to ensure that all the required information has been provided in the Technical Proposal.

3.5.2.3 Project Implementation Plan (PIP). The Offeror shall submit a preliminary Project Implementation Plan in accordance with the requirements of Section 3 of the Statement Of Work (SOW) for the Forensics and Investigative Tools (FIT) (Book II Part IV), which clearly describes how the Offeror intends to implement the totality of the project in compliance with the contractual requirements and the following specific requirements.

3.5.2.3.1 PIP Section 1 – Project Overview: The Offeror shall provide the Project Overview which shall provide an executive summary overview of the offered capability. The Project Overview shall also summarise the main features of each of the sections of the Technical Proposal and shall indicate in broad detail how the Project will be executed during the full lifetime of the Project.

3.5.2.3.2 PIP Section 2 – Applicable Documents: listing all documents or standards referenced by the other sections of the PIP.

3.5.2.3.3 PIP Section 3 – Project Management Plan (PMP): defining how the Offeror intends to manage this project from contract signature through to Final System Acceptance and throughout any warranty periods.

3.5.2.3.3.1 The PMP shall consider all aspects of project management and control detailed in the section 3.2.4 of the SOW and demonstrate how all the critical dates defined in the contract will be met.

3.5.2.3.4 PIP Section 4 – System Design and Implementation: The Offeror shall describe how the FIT capability and underlying components will be implemented with sufficient technical detail for the Purchaser to determine compliance with the SOW. For this purpose the Offeror shall provide in its Quotation a draft System Design Specification (SDS) which shall demonstrate compliance with the Requirements as specified under section 4.2 of the SOW and indicate how the components and quantities of equipment and licenses in the SSS are to be deployed.

3.5.2.3.5 PIP Section 5 – Integrated Logistics Support: The Offeror shall describe the Integrated Logistics Support (ILS) aspects of the Quotation including an exhaustive description of the proposed Integrated Logistics Support offering. This description shall address, with an adequate level of details, the following: Contractor's ILS Organisation, Roles, Responsibilities and Procedures; Maintenance Concept; LSA & RAMT; Technical Documentation and Data, Supply Support, Support and Test Equipment Lists; Training, including Manpower and Personnel Requirements; Planning and execution of Packaging, Handling, Storage and Transportation; Warranty; and Planning of Supply Chain Security as set forth in section 5 of the SOW and in accordance with the applicable Standards and Specifications required in SOW section 2. The description shall provide sufficient evidence to confirm that the Offeror will be able to meet the timelines in accordance with the requirements of the Schedule of Supplies and Services and the SOW.

3.5.2.3.6 PIP Section 6 – Configuration Management: In this Section, the Offeror shall describe how it can meet the Configuration Management requirements as specified in section 3.2.7 and section 7 of the SOW. In conformance with the

required Standards and Specifications required in SOW section 2, this shall include a description of the unique Configuration Management framework, Baselines, the Product Lifecycle Management (PLM) tool, and the Configuration Management DataBase (CMDB).

3.5.2.3.7 PIP Section 7 – Quality Assurance and Control: The Offeror shall describe the Quality Assurance and Control aspects of their proposal including how the contents of SOW section 3.2.8 and SOW section 6 shall be met alongside adherence to the applicable Standards and Specifications required in SOW section 2. The description shall include the general processes, methods and procedures in place in the Contractor organization to deliver quality work, artefacts, studies and documents as required in the SOW, including sub-Contractors and COTS elements management and integration.

3.5.2.3.8 PIP Section 8 – Documentation: Here, the Offeror shall describe their Documentation Pack and proposed Project Portal as required in SOW section 3 and in accordance with applicable Standards and Specifications detailed on SOW section 2 (including but not limited to ISO9001:2015). The Contractor shall provide details on when and how the documents will be delivered.

3.5.2.3.9 PIP Section 9 – Training: The Offeror shall in this section demonstrate how it can meet the Training requirements as specified in section 3.2.10 and section 5.6 of the SOW.

3.5.2.3.10 PIP Section 10 – Testing and Acceptance: The Offeror shall in this section demonstrate how it can meet the FIT testing requirements and its methodology for conducting all related activities as detailed in section 2, section 3.2.11, section 4.13, section 5 and section 8 of the SOW. This includes the development of all test documentation required under this Contract, the conduct of all testing, the evaluation and documentation of the tests results by an Independent Verification and Validation (IV&V) as specified in section 2, section 3.2.11, section 4.13, section 5 and section 8 of the SOW.

3.5.2.3.11 PIP Section 11 – Project Master Schedule (PMS): that shall contain all contract events and milestones for the Project. As described in section 3.2.12 of the SOW, the PMS shall show all contractual deliverables, their delivery dates, and the tasks associated with them, including the Purchaser's review stages. The PMS shall for each task identify the start and finish dates, duration, predecessors, constraints, and resources. The PMS shall provide network, milestone, and Gantt views, and identify the critical path for the overall project. Any PMS which does not align with the dates provided in the SSS may be determined to be non-compliant.

3.5.2.3.12 PIP Section 12 – Project Work Breakdown Structure (WBS): that shall contain the critical work elements (tasks) of the project and illustrate their relationships to each other and to the project as a whole, as described in section 3.2.13 of the SOW.

3.5.2.4 Corporate Experience: The Offeror shall provide at least one (1) executive summary describing the successful delivery of a similar project in a similar environment during the last five (5) years. For each project, the Contractor shall describe:

3.5.2.4.1 The domain or area (ideally the customer name), the size (contract value range), duration and challenges encountered with remediation;

3.5.2.4.2 The scope of work, demonstrating its capability to implement Forensic Capabilities similar to the requirements defined in section 4.1 to 4.7 of the Statement of Work.

3.5.2.5 Key Personnel CVs: The Offeror shall provide the CV of the proposed Project manager and the Technical Lead.

3.5.2.5.1 For the Project Manager, the Offeror shall provide details about the qualifications, evidence of six (6) years' experience of successfully delivering requirements of a similar scope, duration, complexity and value and experience of applying formal project management methodologies (such as PRINCE2).

3.5.2.5.2 For the Technical Lead, the Offeror shall provide details about the qualifications, evidence of seven (7) years' experience in engineering positions associated with the review, design, development, evaluation, planning and operation of electrical or electronic components, subsystems, or systems for government or commercial use, membership of a recognised professional body and evidence of three (3) years' experience in system design and integration of networking and communication component parts similar to those detailed in the Statement of Work.

3.5.2.6 Purchaser Furnished Equipment (PFE) Management: in accordance with SOW section 4.8, the Offeror shall provide details on its approach to preventing projects from stalling following delay in the provision of PFE.

3.5.3 The Offeror shall send Volume III – Technical Envelope via email to the Purchaser's email address specified in paragraph 2.5~~2.~~ above. This shall consist of One (1) copy of the Technical Envelope and One (1) unpriced copy of the Bidding Sheets as per paragraph 3.2.3 above.

3.5.3.1 The email provided shall be entitled*: RFQ-CO-115009-FIT Official Quotation for Company Name - Volume III – Technical Proposal* where the Technical Envelope shall be contained.

SECTION IV - QUOTATION EVALUATION

4.1 GENERAL

4.1.1 The evaluation of Quotations will be made by the Purchaser solely on the basis of the requirements in this RFQ.

4.1.2 The evaluation of Quotations and the determination as to the compliance or technical adequacy of the supplies and services offered will be based only on that information furnished by the Offeror and contained in its Quotation. The Purchaser shall not be responsible for locating or securing any information which is not included in the Quotation.

4.1.3 To ensure that sufficient information is available, the Offeror shall furnish with its Quotation all information appropriate to provide a complete description of the work which will be performed and/or the supplies to be delivered. The information provided shall be to a level of detail necessary for the Purchaser to determine exactly what the Offeror proposes to furnish and whether the offer meets the technical, administrative and contractual requirements of this RFQ. Significant omissions and/or cursory submissions may result in a determination of non-compliance without recourse to further clarification.

4.1.4 During the evaluation, the Purchaser may request clarification of the Quotation from the Offeror, and the Offeror shall provide sufficient detailed information in connection with such requests as to permit the Purchaser to make a final determination based upon the facts. The purpose of such clarifications will be to resolve ambiguities in the Quotation and to permit the Offeror to state its intentions regarding certain statements contained therein. The Offeror is not permitted any cardinal alteration of the Quotation regarding technical matters and shall not make any change to its price quotation at any time nor restate the Statement of Work (SOW).

4.1.5 The Offeror's prompt response to the Purchaser's RFQ clarification requests is important and therefore failure to provide the requested clarifications within the time-limits set forth in the specific Clarification Requests may cause the Quotation to be deemed non-compliant.

4.1.6 The evaluation will be conducted in accordance with the Use of Basic Ordering Agreements (BOAs) by the NATO Communications and Information Agency (NCI Agency) set forth in the NATO document AC/4-D(2019)0004 (INV).

4.1.7 The administrative compliance of the Quotations will be evaluated first. Quotations that are declared administratively non-compliant may be rejected without further evaluation. Following evaluation for administrative compliance, evaluation will be carried out in the following two areas: Volume II - Price, Volume III- Technical. Should areas of Administrative non-compliance be identified in the Pricing or Technical evaluation this shall be treated in accordance with section 4.2 below.

4.1.8 All administrative compliant Quotations will be reviewed for price compliancy and the identified lowest offer will be reviewed for technical compliance. Any Contract resulting from this RFQ will be awarded to the Offeror whose offer, as evaluated by the Purchaser, is the lowest priced, technically compliant quotation and in compliance with the requirements of this RFQ.

4.2 ADMINISTRATIVE CRITERIA

4.2.1 Prior to commencement of the Price and Technical evaluation, Quotations will be reviewed for compliance with the Quotation Submission Requirements of this RFQ. These are as follows:

(a) The Quotation was received by the Quotation Closing Date and Time,

(b) The Quotation was packaged and marked properly (Paragraphs. 3.2 to 3.3),

(c) The Administrative Package containing the Quotation Guarantee is in the proper value amount, in the proper form and valid for the established length of time.

(d) The Administrative Package contains all the requested signed originals of the required Certificates at Annex B hereto (Paragraph 3.3).

(e) The Quotation is provided in the English language.

4.2.2 A Quotation that fails to conform to the above requirements may be declared non-compliant and may not be evaluated further by the Purchaser.

4.2.3 If it is discovered, during either the Price or Technical evaluation, that the Offeror has taken exception to the Terms and Conditions of the Prospective Contract, or has qualified and/or otherwise conditioned its Quotation on a modification or alteration of the Terms and Conditions or the language of the Statement of Work, the Offeror may be determined to have submitted a non-compliant Quotation.

4.3 PRICE CRITERIA

4.3.1 The Offeror's Price Quotation will be first assessed for compliance against the following standards:

4.3.1.1 The Price Quotation meets the requirements for preparation and submission of the Price Quotation set forth in the Quotation Preparation Section and the Instructions for preparation of the Bidding Sheets (Annex C) in particular.

4.3.1.2 The Offeror has furnished Firm Fixed Prices for all items listed. Not having provided a price for all items as required per the Bidding sheets, i.e. to fill out **all** yellow fields, may render the Quotation non-compliant. Prices cannot be embedded/included in other prices.

4.3.1.3 All pricing data, i.e., quantities, unit prices, has been provided as reflected in the Bidding Sheets.

4.3.1.4 Quotation prices include all costs for items supplied, delivered, and supported.

4.3.1.5 All prices have been accurately entered into appropriate columns and accurately totalled.

4.3.1.6 The Offeror has provided accurate unit prices (where required) and a total price for each line item.

4.3.1.7 The Offeror has provided accurate unit prices and a total price of each of the sub-items it added (if any).

4.3.1.8 The currency of all line items has been clearly indicated.

4.3.1.9 The Offeror has quoted in its own national currency or in the Host Nation currency, Euros. Where multiple currencies including other NATO member states' currencies are quoted, the conditions of Section III, Paragraph 3.4.5 shall be met.

4.3.1.10 The Offeror has indicated that in accordance with the treaties governing the terms of business with NATO, it excluded from its prices all taxes, duties and customs charges from which the Purchaser has been exempted.

4.3.1.11 Price quotes for each individual item(s), and totalled prices are accurate and realistic (based on historic data, and/or market and competitive trends in the specified industrial sector(s)).

4.3.1.12 Detailed pricing information has been provided and is adequate, accurate, traceable, and complete.

4.3.1.13 The Price Quotation meets requirements for price realism as described below in Paragraph 4.3.5.

4.3.2 A Quotation which fails to meet the compliance standards defined in this section may be declared non-compliant and may not be evaluated further by the Purchaser.

4.3.3 Basis of Price Comparison to determine lowest compliant Quotation

4.3.3.1 The Purchaser will convert all prices quoted into EURO for purposes of comparison and computation of price scores. The exchange rate to be utilised by the Purchaser will be the average of the official buying and selling rates of the European Central Bank at close of business on the last working day preceding the Quotation Closing Date.

4.3.3.2 The price comparison will be based on the Offered Grand Total Firm Fixed Price which includes all **CLINs** in the Bidding Sheets.

4.3.4 **Inconsistencies and discrepancies in Quotation price quotation**. In case of inconsistencies, discrepancies and/or contradictory pricing information in the different parts of the Quotation price submission and notwithstanding the possibility for the Purchaser, at its sole discretion to obtain clarification from the Offeror, for the purpose of determining the total price of the Quotation, the following order of precedence shall apply:

4.3.4.1 PDF copy of the completed Bidding Sheets

4.3.4.1.1 Schedule of Supplies and Services Total to be Evaluated Quotation Price as indicated by the Offeror

4.3.4.1.2 Total of the Quotation calculated from the indicated Total Prices(s) indicated per CLIN(s)

4.3.4.2 Microsoft Excel copy of the completed Bidding Sheets

4.3.4.2.1 Schedule of Supplies and Services Total to be Evaluated Quotation Price as indicated by the Offeror

4.3.4.2.2 Total of the Quotation calculated from the indicated Total Prices(s) indicated per CLIN(s)

4.3.5 Price Realism

4.3.5.1 Should an Offeror submit a price quotation so low that it is not a realistic reflection of the objective cost of performance of the associated technical proposal, this may be considered by the Purchaser to be an unrealistic offer and may be determined to be non-compliant.

4.3.5.2 Indicators of an unrealistically low Quotation may include, but are not limited to, the following:

4.3.5.2.1 Labour Costs that, when amortised over the expected or proposed direct labour hours, indicate average labour rates far below those prevailing in the Offeror locality for the types of labour proposed.

4.3.5.2.2 Direct Material costs that are considered to be too low for the amounts and types of material proposed, based on prevailing market prices for such material.

4.3.5.2.3 Numerous Line Item prices for supplies and services that are provided at no cost or at nominal prices.

4.3.5.3 If the Purchaser has reason to suspect that a Offeror has artificially debased its prices in order to secure contract award, the Purchaser will request clarification of the Quotation in this regard and the Offeror shall provide explanation on one of the following basis:

4.3.5.3.1 An error was made in the preparation of the Price Quotation. In such a case, the Offeror must document the nature of the error and show background documentation concerning the preparation of the Price Quotation that makes a convincing case that a mistake was made by the Offeror. In such a case, the Offeror shall petition the Purchaser to both remain in the competition and accept the Contract at the offered price, or to withdraw from the competition.

4.3.5.3.2 The Offeror has a competitive advantage due to prior experience or industrial/technological processes that demonstrably reduce the costs of Offeror performance and therefore the price offered is realistic. Such an argument must support the technical proposal offered and convincingly and objectively describe the competitive advantage and the net savings achieved by this advantage over standard market practices and technology.

4.3.5.3.3 The Offeror recognises that the submitted Price Quotation is unrealistically low compared to its cost of performance and, for business reasons, the Offeror is willing to absorb such a loss. Such a statement can only be made

by the head of the business unit submitting the Quotation and will normally be made at the level of Chief Operating Officer or Chief Executive Officer. In such a case, the Offeror shall estimate the potential loss and show that the financial resources of the Offeror are adequate to withstand such reduction in revenue

4.3.5.4 If an Offeror fails to submit a comprehensive and compelling response on one of the basis above, the Purchaser may determine the Quotation submitted as non-compliant. If the Offeror responds on the basis of the above and requests to withdraw from the competition, the Purchaser may, depending on the nature and gravity of the mistake, allow the Offeror to withdraw.

4.3.5.5 If the Purchaser accepts the Offeror's explanation of mistake in Paragraph 4.3.5.3.1 and allows the Offeror to accept the Contract at the offered price, or the Purchaser accepts the Offeror's explanation pursuant to Paragraph 4.3.5.3.3 above, the Offeror shall agree that the supporting pricing data submitted with its Quotation will be incorporated by reference in the resultant Contract. The Offeror shall agree as a condition of Contract signature, that the pricing data will be the basis of determining fair and reasonable pricing for all subsequent negotiations for modifications of or additions to the Contract and that no revisions of proposed prices will be made.

4.3.5.6 If the Offeror presents a convincing rationale pursuant to Paragraph 4.3.5.3.2 above, no additional action will be warranted. The Purchaser, however, reserves its right to reject such an argument if the rationale is not compelling or capable of objective analysis. In such a case the Quotation may be determined to be non-compliant.

4.4 TECHNICAL CRITERIA

4.4.1 Upon determination of the lowest-priced Quotation as described above, the Quotation shall be evaluated to confirm compliance with the following technical criteria associated with the respective sections of the Technical Proposal.

4.4.2 1) Technical Proposal Table of Contents and Cross Reference Compliance Matrix

4.4.2.1 **Aim** – The purpose of this criterion is to ensure the Offeror has provided a Technical Proposal containing a Table of Contents and Cross Reference/Compliance Table.

4.4.2.2 **Criterion** – The Offeror shall ensure that its Technical Proposal includes and a Table of Contents and Cross Reference/Compliance Table which meets the requirements specified in the Document References below.

4.4.2.3 Document References

4.4.2.3.1 Bidding Instructions 3.5.2.1

4.4.2.3.2 Bidding Instructions 3.5.2.2

4.4.2.3.3 Bidding Instructions Annex E

4.4.2.4 Pass/Fail Criteria

4.4.2.4.1 Pass – The Offeror's Technical Proposal has provided a Table of Contents and Cross Reference/Compliance Table which meets the requirements specified in the Document References above.

4.4.2.4.2 Fail – The Offeror's Technical Proposal has not provided a Table of Contents and or a Cross Reference/Compliance Table which meets the requirements specified in the Document References above.

4.4.3 2) PIP Sections 1 and 2

4.4.3.1 **Aim** – The purpose of this criterion is to ensure the Offeror has provided a Technical Proposal containing a Project Overview (PIP Section 1) and a list of documents/standards used in the PIP (PIP Section 2).

4.4.3.2 **Criterion** – The Offeror shall ensure that its Technical Proposal includes a Project Overview and list of documents/standards used in the PIP which meets the requirements specified in the Document References below.

4.4.3.3 Document References

4.4.3.3.1 Bidding Instructions 3.5.2.3.1

4.4.3.3.2 Bidding Instructions 3.5.2.3.2

4.4.3.4 Pass/Fail Criteria

4.4.3.4.1 Pass – The Offeror's Technical Proposal has provided a Project Overview and list of documents/standards used in the PIP which meets the requirements specified in the Document References above.

4.4.3.4.2 Fail – The Offeror's Technical Proposal has not provided a Project Overview and or a list of documents/standards used in the PIP which meets the requirements specified in the Document References above.

4.4.4 3) Project Management

4.4.4.1 **Aim** – The purpose of this criterion is for the Purchaser to understand the Offeror's approach to delivering the Project Management requirements of the Project Management Plan (PMP).

4.4.4.2 **Criterion** – At no longer than ten (10) pages in length, the Offeror shall provide a PIP section 3 Project Management Plan explaining how the requirements specified in the Document References below shall be met.

4.4.4.3 Document References

4.4.4.3.1 Bidding Instructions 3.5.2.3.3

4.4.4.3.2 SOW 3.2.4

4.4.4.4 Pass/Fail Criteria

4.4.4.4.1 Pass – The Offeror's Technical Proposal contains a PIP section 3 which clearly explains how the requirements specified in the Document References above shall be met by the Offeror.

4.4.4.4.2 Fail – The Offeror has not submitted a response to this criterion, or the Offeror's Technical Proposal does not contain a PIP section 3 explaining how the requirements specified in the Document References above shall be met by the Offeror.

4.4.5 4) System Design, Integration and Implementation

4.4.5.1 **Aim** – The purpose of this criterion is for the Purchaser to understand the Offeror's approach to delivering the System Design, Integration and Implementation requirements of the Project Implementation Plan (PIP).

4.4.5.2 **Criterion** – At no longer than ~~fifteen~~ thirty (~~15~~30) pages in length, the Offeror shall provide a PIP section 4 and System Design Specification explaining how the requirements specified in the Document References below shall be met.

4.4.5.3 **Document References**

4.4.5.3.1 Bidding Instructions 3.5.2.3.4
4.4.5.3.2 SSS CLIN 3 and CLIN 4
4.4.5.3.3 SOW 3.2.5
4.4.5.3.4 SOW 4.4
4.4.5.3.5 SOW 4.5
4.4.5.3.6 SOW 4.6
4.4.5.3.7 SOW 4.7

4.4.5.4 Pass/Fail Criteria

4.4.5.4.1 Pass – The Offeror's Technical Proposal contains a PIP section 4 which clearly explains how the requirements specified in the Document References

above shall be met by the Offeror. The Offeror' PIP section 4 clearly demonstrates how the work under PIP section 4 shall be delivered; indicates how the components and quantities of equipment and licences in the SSS, alongside the four Forensic Capabilities (OCF, SCF, PRADE and MDA) as well as how the corresponding software and services are deployed in the Offeror's design.

4.4.5.4.2 Fail – The Offeror has not submitted a response to this criterion, or the Offeror's Technical Proposal does not contain a PIP section 4 explaining how the requirements specified in the Document References above shall be met by the Offeror.

4.4.6 5) Integrated Logistics Support (ILS)

4.4.6.1 **Aim** – The purpose of this criterion is for the Purchaser to understand the Offeror's approach to delivering the ILS requirements of the Project Implementation Plan (PIP).

4.4.6.2 **Criterion** – At no less than ten (10) pages and not more than thirty (30) pages in length, the Offeror shall provide a PIP section 5 explaining how the requirements specified in the Document References below shall be met.

4.4.6.3 Document References

4.4.6.3.1 Bidding Instructions 3.5.2.3.5

4.4.6.3.2 SOW 3.2.6

4.4.6.3.3 SOW 5.1

4.4.6.3.4 SOW 5.2

4.4.6.3.5 SOW 5.3

4.4.6.3.6 SOW 5.4

4.4.6.3.7 SOW 5.5

4.4.6.3.8 SOW 5.7

4.4.6.3.9 SOW 5.8

4.4.6.4 Pass/Fail Criteria

4.4.6.4.1 Pass – The Offeror's Technical Proposal contains a PIP section 5 which clearly explains how the requirements specified in the Document References above shall be met by the Offeror.

4.4.6.4.2 Fail – The Offeror has not submitted a response to this criterion, or the Offeror's Technical Proposal does not contain a PIP section 5 explaining how the requirements specified in the Document References above shall be met by the Offeror.

4.4.7 6) Configuration Management

4.4.7.1 **Aim** – The purpose of this criterion is for the Purchaser to understand the Offeror's approach to delivering the Configuration Management requirements of the Project Implementation Plan (PIP).

4.4.7.2 **Criterion** – At no less than three (3) pages and not longer than ten (10) pages in length, the Offeror shall provide a PIP section 6 explaining how the requirements specified in the Document References below shall be met.

4.4.7.3 Document References

4.4.7.3.1 Bidding Instructions 3.5.2.3.6

4.4.7.3.2 SOW 3.2.7

4.4.7.3.3 SOW 7.4 - 7.13

4.4.7.4 Pass/Fail Criteria

4.4.7.4.1 Pass – The Offeror's Technical Proposal contains a PIP section 6 which clearly explains how the requirements specified in the Document References above shall be met by the Offeror.

4.4.7.4.2 Fail – The Offeror has not submitted a response to this criterion, or the Offeror's Technical Proposal does not contain a PIP section 6 explaining how the requirements specified in the Document References above shall be met by the Offeror.

4.4.8 7) Quality Assurance and Control

4.4.8.1 **Aim** – The purpose of this criterion is for the Purchaser to understand the Offeror's approach to delivering the Quality Assurance and Control requirements of the Project Implementation Plan (PIP).

4.4.8.2 **Criterion** – At not less than three (3) pages and not longer than ten (10) pages in length, the Offeror shall provide a PIP section 7 explaining how the requirements specified in the Document References below shall be met.

4.4.8.3 Document References

4.4.8.3.1 Bidding Instructions 3.5.2.3.7

4.4.8.3.2 SOW 3.2.8

4.4.8.3.3 SOW 6.3

4.4.8.3.4 SOW 6.4

4.4.8.4 Pass/Fail Criteria

4.4.8.4.1 Pass – The Offeror's Technical Proposal contains a PIP section 7 which clearly explains how the requirements specified in the Document References above shall be met by the Offeror.

4.4.8.4.2 Fail – The Offeror has not submitted a response to this criterion, or the Offeror's Technical Proposal does not contain a PIP section 7 explaining how the requirements specified in the Document References above shall be met by the Offeror.

4.4.9 8) Documentation

4.4.9.1 **Aim** – The purpose of this criterion is for the Purchaser to understand the Offeror's approach to delivering the Documentation and Project Portal requirements of the Project Implementation Plan (PIP).

4.4.9.2 **Criterion** – At no longer than ten (10) pages in length, the Offeror shall provide a PIP section 8 explaining how the requirements specified in the Document References below shall be met.

4.4.9.3 Document References

4.4.9.3.1 Bidding Instructions 3.5.2.3.8

4.4.9.3.2 SOW 3.2.9

4.4.9.3.3 SOW 3.6

4.4.9.4 Pass/Fail Criteria

4.4.9.4.1 Pass – The Offeror's Technical Proposal contains a PIP section 8 which clearly explains how the requirements specified in the Document References above shall be met by the Offeror.

4.4.9.4.2 Fail – The Offeror has not submitted a response to this criterion, or the Offeror's Technical Proposal does not contain a PIP section 8 explaining how the requirements specified in the Document References above shall be met by the Offeror.

4.4.10 9) Training

4.4.10.1 **Aim** – The purpose of this criterion is for the Purchaser to understand the Offeror's approach to delivering the Training requirements of the Project Implementation Plan (PIP).

4.4.10.2 **Criterion** – At no longer than five (5) pages in length, the Offeror shall provide a PIP section 9 explaining how the requirements specified in the Document References below shall be met.

4.4.10.3 Document References

4.4.10.3.1 Bidding Instructions 3.5.2.3.9

4.4.10.3.2 SOW 3.2.10

4.4.10.3.3 SOW 5.6 in the context of SOW 5.

4.4.10.4 Pass/Fail Criteria

4.4.10.4.1 Pass – The Offeror's Technical Proposal contains a PIP section 9 which clearly explains how the requirements specified in the Document References above shall be met by the Offeror.

4.4.10.4.2 Fail – The Offeror has not submitted a response to this criterion, or the Offeror's Technical Proposal does not contain a PIP section 9 explaining how the requirements specified in the Document References above shall be met by the Offeror.

4.4.11 10) Testing and Acceptance

4.4.11.1 **Aim** – The purpose of this criterion is for the Purchaser to understand the Offeror's approach to delivering the Testing and Acceptance requirements of the Project Implementation Plan (PIP).

4.4.11.2 **Criterion** – At no longer than twenty (20) pages in length, the Offeror shall provide a PIP section 10 explaining how the requirements specified in the Document References below shall be met.

4.4.11.3 Document References

4.4.11.3.1 Bidding Instructions 3.5.2.3.10

4.4.11.3.2 SOW 3.2.11

4.4.11.3.3 SOW 8.1.13

4.4.11.3.4 SOW 8.3.28

4.4.11.4 Pass/Fail Criteria

4.4.11.4.1 Pass – The Offeror's Technical Proposal contains a PIP section 10 which clearly explains how the requirements specified in the Document References above shall be met by the Offeror.

4.4.11.4.2 Fail – The Offeror has not submitted a response to this criterion, or the Offeror's Technical Proposal does not contain a PIP section 10 explaining how the requirements specified in the Document References above shall be met by the Offeror.

4.4.12 11) Project Master Schedule (PMS)

4.4.12.1 **Aim** – The purpose of this criterion is for the Purchaser to understand the Offeror's approach to delivering the PMS requirements of the Project Implementation Plan (PIP) by the dates provided in the Schedule of Supplies and Services (SSS).

4.4.12.2 **Criterion** – The Offeror shall provide PIP section 11 containing a preliminary PMS and explain how the requirements and deadlines specified in the Document References below shall be met.

4.4.12.3 Document References

4.4.12.3.1 Bidding Instructions 3.5.2.3.11

4.4.12.3.2 SSS (column J "Delivery Schedule")

4.4.12.3.3 SOW3.2.12

4.4.12.4 Pass/Fail Criteria

4.4.12.4.1 Pass – The Offeror's Technical Proposal contains a PIP section 11 which provides a preliminary PMS clearly explaining how the requirements specified in the Document References above shall be met and delivered by the Offeror by the dates provided in the SSS.

4.4.12.4.2 Fail – The Offeror has not submitted a response to this criterion, or the Offeror's Technical Proposal does not contain a PIP section 11 which provides a preliminary PMS clearly explaining how the requirements specified in the Document References above shall be met and delivered by the Offeror by the dates provided in the SSS.

4.4.13 12) Project Work Breakdown Structure (WBS)

4.4.13.1 **Aim** – The purpose of this criterion is for the Purchaser to understand the Offeror's approach to delivering the WBS requirements of the Project Implementation Plan (PIP) by the dates provided in the Schedule of Supplies and Services (SSS).

4.4.13.2 **Criterion** – The Offeror shall provide PIP section 12 containing a preliminary WBS and explain how the requirements and deadlines specified in the Document References below shall be met.

4.4.13.3 Document References

4.4.13.3.1 Bidding Instructions 3.5.2.3.12

4.4.13.3.2 SSS (column J "Delivery Schedule")

4.4.13.3.3 SOW 3.2.13

4.4.13.4 Pass/Fail Criteria

4.4.13.4.1 Pass – The Offeror's Technical Proposal contains a PIP section 12 which provides a preliminary WBS clearly explaining how the requirements specified in the Document References above shall be met and delivered by the Offeror by the dates provided in the SSS.

4.4.13.4.2 Fail – The Offeror has not submitted a response to this criterion, or the Offeror's Technical Proposal does not contain a PIP section 12 which provides a preliminary WBS clearly explaining how the requirements specified in the Document References above shall be met and delivered by the Offeror by the dates provided in the SSS.

4.4.14 13) Corporate Experience

4.4.14.1 **Aim** – The purpose of this criterion is to provide confidence to the Purchaser that the Offeror has the necessary corporate experience of delivering successfully similar requirements to those in section 4.1 to 4.7 in the Statement of Work (SOW).

4.4.14.2 **Criterion** – At no longer than two (2) pages in length, the Offeror shall detail its corporate experience of delivering similar requirements (as a prime or subcontractor) in a similar environment in the last five (5) years.

4.4.14.3 **Document References**

4.4.14.3.1 Bidding Instructions 3.5.2.4

4.4.14.3.2

4.4.14.3.3 SOW 4.1 to 4.7

4.4.14.4 Pass/Fail Criteria

4.4.14.4.1 Pass – The Offeror's Technical Proposal contains at least one (1) example of successfully delivering a similar requirement in a similar environment (as a prime or subcontractor) in the last five (5) years.

4.4.14.4.2 Fail – The Offeror has not submitted a response to this criterion, or the Offeror's Technical Proposal does not demonstrate any previous experience in delivering similar requirements (as a prime or subcontractor) in a similar environment in the last five (5) years.

4.4.15 <u>14) Project Manager's Experience</u>

4.4.15.1 **Aim** – The purpose of this criterion is to provide confidence to the Purchaser that the Offeror's Project Manager has the necessary experience in managing similar projects and can meet the requirements defined in the Statement of Work.

4.4.15.2 **Criterion** – At no longer than two (2) pages in length, the Offeror shall provide a CV for their offered Project Manager detailing their individual experience in accordance with the requirements specified in the Document Reference below.

4.4.15.3 Document Reference

4.4.15.3.1 Bidding Instructions 3.5.2.5.1

4.4.15.3.2 SOW 3.1.2.7

4.4.15.4 Pass/Fail Criteria

4.4.15.4.1 Pass – The Offeror's Technical Proposal contains a Project Manager's CV which clearly explains how the requirements specified in the Document Reference above shall be met by the Offeror.

4.4.15.4.2 Fail – The Offeror has not submitted a response to this criterion, or the Offeror's Technical Proposal does not contain a Project Manager's CV which clearly explains how the requirements specified in the Document Reference above shall be met by the Offeror.

4.4.16 <u>15) Technical Lead's Experience</u>

4.4.16.1 **Aim** – The purpose of this criterion is to provide confidence to the Purchaser that the Offeror's Technical Lead has the necessary experience of delivering similar requirements and can meet the requirements defined in the Statement of Work.

4.4.16.2 **Criterion** – At no longer than two (2) pages in length, the Offeror shall provide a CV for their offered Technical Lead detailing their individual experience in accordance with the requirements specified in the Document Reference below.

4.4.16.3 Document Reference

4.4.16.3.1 Bidding Instructions 3.5.2.5.2

4.4.16.3.2 SOW 3.1.2.8

4.4.16.4 Pass/Fail Criteria

4.4.16.4.1 Pass – The Offeror's Technical Proposal contains a Technical Lead's CV which clearly explains how the requirements specified in the Document Reference above shall be met by the Offeror.

4.4.16.4.2 Fail – The Offeror has not submitted a response to this criterion, or the Offeror's Technical Proposal does not contain a Technical Lead's CV which clearly explains how the requirements specified in the Document Reference above shall be met by the Offeror.

4.4.17 16) Purchaser Furnished Equipment (PFE) Management

4.4.17.1 **Aim** – The purpose of this criterion is for the Purchaser to understand the Offeror's approach to preventing projects from stalling and mitigate losses/costs following delay in the provision of PFE.

4.4.17.2 **Criterion** – At no longer than two (2) pages in length, the Offeror shall detail its corporate approach to proactively progressing and meeting the aims/requirements of projects and mitigating losses/costs following delays in providing PFE.

4.4.17.3 **Document Reference**

4.4.17.3.1 Bidding Instructions 3.5.2.6

4.4.17.4 Pass/Fail Criteria

4.4.17.4.1 Pass – The Offeror has detailed their corporate approach to collaboratively and proactively meet the aims/requirements of projects following delays in providing PFE by discussing how the Project schedule can be re-profiled, how losses are mitigated and costs reduced.

4.4.17.4.2 Fail – The Offeror has not provided a response to this criterion.

4.4.18 Any content provided over the page limit specified for each question will not be subject to evaluation.

4.4.19 If an Offeror's Technical Proposal is awarded a 'Fail' for any of the criteria listed in section 4.4 above, their Proposal will be deemed technically non-compliant.

ANNEX A – Clarification Request Forms

INSERT COMPANY NAME HERE

INSERT SUBMISSION DATE HERE

ADMINISTRATIVE/CONTRACTUAL				
Serial Nr	**RFQ Section Ref.**	**OFFEROR'S QUESTION**	**NCI AGENCY ANSWER**	**Status***
A.1				
A.2				
A.3				

* Status: Is Amendment to RFQ required as a direct result of the Clarification Request?

INSERT COMPANY NAME HERE

INSERT SUBMISSION DATE HERE

PRICE				
Serial Nr	**RFQ Section Ref.**	**OFFEROR'S QUESTION**	**NCI AGENCY ANSWER**	**Status***
P.1				
P.2				
P.3				

* Status: Is Amendment to RFQ required as a direct result of the Clarification Request?

INSERT COMPANY NAME HERE

INSERT SUBMISSION DATE HERE

TECHNICAL				
Serial Nr	**RFQ Section Ref.**	**OFFEROR'S QUESTION**	**NCI AGENCY ANSWER**	**Status***
T.1				
T.2				
T.3				

* Status: Is Amendment to RFQ required as a direct result of the Clarification Request?

ANNEX B-1

CERTIFICATE OF LEGAL NAME OF OFFEROR

This Quotation is prepared and submitted on behalf of the legal corporate entity specified below:

FULL NAME OF CORPORATION: _____

DIVISION (IF APPLICABLE): _____
SUB DIVISION (IF APPLICABLE): _____

OFFICIAL MAILING ADDRESS: _____

_____

_____

E-MAIL ADDRESS: _____

FAX NO.: _____

BOA NO.: _____

POINT OF CONTACT (POC) REGARDING THIS QUOTATION:

NAME: _____
POSITION: _____
TELEPHONE: _____
E-MAIL ADDRESS: _____

ALTERNATIVE POC:

NAME: _____
POSITION: _____
TELEPHONE: _____
E-MAIL ADDRESS: _____

_____ _____
DATE SIGNATURE OF AUTHORISED REPRESENTATIVE

_____
PRINTED NAME

_____
TITLE

ANNEX B-2

CERTIFICATE OF INDEPENDENT DETERMINATION

1. Each Offeror shall certify signing this Quotation shall also certify that:

Each Offeror shall certify that in connection with this procurement:

a. This quotation has been arrived at independently, without consultation, communication or agreement, for the purpose of restricting competition, with any other Offeror or with any competitor;

b. The contents of this Quotation have not been knowingly disclosed by the Offeror and will not knowingly be disclosed by the Offeror prior to award, directly or indirectly to any other Offeror or to any competitor, and;

c. No attempt has been made, or will be made by the Offeror to induce any other person or firm to submit, or not to submit, a Quotation for the purpose of restricting competition.

2. Each person signing this Quotation shall also certify that:

a. They are the person in the Offeror's organisation responsible within that organisation for the decision as to the quotation and that they have not participated and will not participate in any action contrary to 1(a) through 1(c) above, or;

b. (i) They are not the person in the Offeror's organisation responsible within that organisation for the quotation but that they have been authorised in writing to act as agent for the persons responsible for such a decision in certifying that such persons have not participated, and will not participate in any action contrary to 1(a) through 1(c) above, and as their agent does hereby so certify, and;

(ii) They have not participated and will not participate in any action contrary to 1(a) through 1(c) above.

…..
Date

…..
Signature of Authorised Representative

…..
Printed Name and Title

…..
Company

NOTE: IF THE OFFEROR DELETES OR MODIFIES SUBPARAGRAPH (1B) OF THIS ANNEX, THE OFFEROR MUST FURNISH WITH ITS QUOTATION A SIGNED STATEMENT SETTING FORTH IN DETAIL THE CIRCUMSTANCES OF THE DISCLOSURE.

ANNEX B-3

CERTIFICATE OF QUOTATION VALIDITY

I, the undersigned, as an authorised representative of the firm submitting this quotation, do hereby certify that the pricing and all other aspects of our Quotation will remain valid for a period of six (6) months from the Quotation Closing Date of this Request for Quotation.

…….
Date

…….
Signature of Authorised Representative

…….
Printed Name and Title

…….
Company

ANNEX B-4

CERTIFICATE OF UNDERSTANDING

I certify that

.....
.....*(Company Name)* has read and fully understands the requirements of this Request for Quotation (RFQ) and that the Quotation recognises these requirements in total.

I also certify to the best of my expert knowledge that this Quotation is within the "state of art" boundaries as they exist at the time of quotation for this project.

…….
Date

…….
Signature of Authorised Representative

…….
Printed Name and Title

…….
Company

ANNEX B-5

CERTIFICATE OF EXCLUSION OF TAXES, DUTIES AND CHARGES

I hereby certify that the prices offered in the price quotation of this Quotation exclude all taxes, duties and customs charges from which the Purchaser has been exempted by international agreement.

.....	.....
Date	Signature of Authorised Representative
	.....
	Printed Name and Title
	.....
	Company

ANNEX B-6

ACKNOWLEDGEMENT OF RECEIPT OF RFQ AMENDMENTS

I confirm that the following Amendments to Request for Quotation No RFQ-CO-115009-FIT have been received and the Quotation as submitted reflects the content of such Amendments:

Amendment Number	Date of Issue by the Purchaser	Date of Receipt by the Offeror

…….
Date

…….
Signature of Authorised Representative

…….
Printed Name and Title

…….
Company

ANNEX B-7

DISCLOSURE OF REQUIREMENTS FOR NCI AGENCY EXECUTION OF SUPPLEMENTAL AGREEMENTS

I, the undersigned, as an authorised representative of …… ……..……*(Company Name)*, certify the following statement (*Check the applicable statement below*):

- ☐ I do not have any supplemental agreements to disclose for the performance of this contract [*cross out points 1 to 6 of this certificate*].

- ☐ I do have supplemental agreements to disclose for the performance of this contract (*complete points 2 and 3 below in a separate attachment to this certificate*).

1. All supplemental agreements, defined as agreements, documents and/or permissions outside the body of the Contract but required by my Government, and the governments of my sub-Contractors, to be executed by the NCIA as a condition of my firm's performance of the Contract, have been identified, as part of the Quotation.

2. Examples of the terms and conditions of these agreements are attached hereto. The anticipated restrictions to be imposed on NATO, if any, have been identified in our offer along with any potential conflicts with the terms, conditions and specifications of the Prospective Contract, see …….. *(complete, if any)*. These anticipated restrictions and potential conflicts are based on our knowledge of and prior experience with such agreements and their implementing regulations. We do not certify that the language or the terms of these agreements will be exactly as we have anticipated.

3. The processing time for these agreements has been calculated into our delivery and performance plans and contingency plans made in the case that there is delay in processing on the part of the issuing government(s), see …….. *(complete, if any)*.

4. We recognise that additional supplemental agreements, documents and permissions presented as a condition of Contract performance or MOU signature after our firm would be selected as the successful Offeror may be cause for the NCIA to determine the submitted quotation to be non-compliant with the requirements of the RFQ.

5. We accept that should the resultant supplemental agreements issued in final form by the government(s) result in an impossibility to perform the Contract in accordance with its schedule, terms or specifications, the Contract may be terminated by the Purchaser at no cost to either Party.

…..
Date

…..
Signature of Authorised Representative

…..
Printed Name and Title

…..
Company

ANNEX B-8

CERTIFICATION OF NATO MEMBER COUNTRY ORIGIN OF DELIVERED EQUIPMENT, SERVICES, MATERIALS AND INTELLECTUAL PROPERTY RIGHTS

The Offeror hereby certifies that, if awarded the Contract pursuant to this solicitation, it will perform the contract subject to the following conditions:

(a) none of the work, including project design, labour and services shall be performed other than by firms from and within participating NATO member countries;

(b) no material or items of equipment down to and including identifiable sub-assemblies shall be manufactured or assembled by a firm other than from and within a participating NATO member country (a sub-assembly is defined as a portion of an assembly consisting of two or more parts that can be provided and replaced as an entity)*; and

(c) the intellectual property rights to all design documentation and related system operating software shall reside in NATO member countries, and no license fees or royalty charges shall be paid by the Contractor to firms, individuals or governments other than within the NATO member countries.

…….
Date

…….
Signature of Authorised Representative

…….
Printed Name and Title

…….
Company

*This definition purposely excludes components and/or parts (as defined in AcodP-1), which are not subject to this certification.

ANNEX B-9

COMPREHENSION AND ACCEPTANCE OF CONTRACT GENERAL AND SPECIAL PROVISIONS

The Offeror hereby certifies that it has reviewed the Contract Special Provisions set forth in the Prospective Contract, Book II of this Request for Quotation (RFQ) and the Contract Provisions set forth in the Basic Ordering Agreement signed with the NCI Agency. The Offeror hereby provides its confirmation that it fully comprehends the rights, obligations and responsibilities of the Contractor as set forth in the Articles and Clauses of the Prospective Contract. The Offeror additionally certifies that the Quotation submitted by the Offeror is without prejudice, qualification or exception to any of the Terms and Conditions and it will accept and abide by the stated Special Contract Provisions if awarded the contract as a result of this RFQ.

…….
Date

…….
Signature of Authorised Representative

…….
Printed Name and Title

…….
Company

ANNEX B-10

LIST OF PROSPECTIVE SUB-CONTRACTORS/CONSORTIUM MEMBERS[1]

Name and Address of Sub-Contractor, incl. country of origin/registration	Primary Location of Work	Items/Services to be Provided	Estimated Value of Sub-Contract

If no sub-Contractors/consortium members are involved, state this here:
……..
……
……
……

…….....
Date

…….....
Signature of Authorised Representative

…….....
Printed Name and Title

…….....
Company

[1] In accordance with section 3.4.15 of Book I, the Offeror shall identify in this Certificate any subcontractors whose estimated value of the subcontract is expected to equal or exceed €125,000.00.

ANNEX B-11

CERTIFICATE OF AQAP 2110 OR ISO 9001:2015 COMPLIANCE

I hereby certify that …… *(Company Name)* is fully compliant with the AQAP 2110 or ISO 9001:2015 Quality Assurance Standards and Procedures and is currently so certified.

A copy of the quality certification is **attached herewith**.

…….
Date

…….
Signature of Authorised Representative

…….
Printed Name and Title

…….
Company

ANNEX B-12

LIST OF KEY PERSONNEL

Name	Position
	Project Manager
	Technical Lead

ANNEX B-13

Disclosure of Involvement of Former NCI Agency Employment

The Offeror hereby certifies that, in preparing its Quotation, the Offeror did not have access to solicitation information prior to such information been authorized for release to Offerors (e.g., draft statement of work and requirement documentation).

The Offeror hereby acknowledges the post-employment measures applicable to former NCI Agency Personnel as per the NCI Agency Code of Conduct.

The Offeror hereby certifies that its personnel working as part of the company's team, at any tier, preparing the Quotation:

- Have not held employment with NCI Agency within the last two years.
- Has obtained a signed statement from the former NCI Agency personnel below, who departed the NCI Agency within the last two years, that they were not previously involved in the project under competition (as defined in the extract of the NCI Agency Code of Conduct provided below):

Employee Name	Former NCIA Position	Current Company Position

The Offeror also hereby certifies that it does not employ and/or receive services from former NCI Agency Personnel at grades A5 and above or ranks OF-5 and above, who departed the NCI Agency within the last 12 months. This prohibitions covers negotiations, representational communications and/or advisory activities.

_____
Date

_____
Signature of Authorised Representative

_____
Printed Name

_____
Title

_____
Company

Excerpt of NCI Agency AD. 05.00, Code of Conduct dated May 2017

Article 14 PROCUREMENT AND CONTRACTORS

14.1 NCI Agency Personnel are required to maintain unquestionable integrity and impartiality in relation to procurements initiated by the NCI Agency.

14.2 NCI Agency Personnel shall not disclose any proprietary or contract related information regarding procurement directly or indirectly to any person other than a person authorized by the NCI Agency to receive such information. NCI Agency Personnel shall not disclose any documentation related to a procurement action to any third party without a need to know1 (e.g., draft statement of work, statement of requirements) unless this is expressly provided under NATO Procurement Regulations or authorized in writing by the Director of Acquisition. During an on-going selection, NCI Agency Personnel shall not disclose any information on the selection procedure unless authorized by the Chairman of the award committee/board. The NCI Agency Personnel concerned will ensure that proper access controls are put in place to prevent disclosure of procurement information that has not yet been authorized for release for outside distribution, including draft statements of work and requirement documentations.

14.3 NCI Agency Personnel will not participate in a source selection if an offer has been provided by a friend, family member, a relative, or by a business concern owned, substantially owned, or controlled by him/her or by a friend, family member or a relative. NCI Agency Personnel appointed as part of an evaluation shall report such links to the Director of Acquisition immediately upon becoming aware of it.

14.4 Contractors and consultants shall not be allowed to participate in the drafting of the statement of work or in the source selection process unless they and their company/employer will be excluded from competition of the related contract. The same will apply to contractors and consultants involved in the definition and development of requirements.

14.5 Contractors will be given specific and coherent statements of work, providing precise explanation of how she/he is going to be employed. Tasks to be performed and minimum qualifications are to be well defined from the start. In addition, supervisors will ensure that contractors do not occupy managerial positions within the Agency.

14.6 NCI Agency Personnel shall not enter into authorized commitments in the name of NCI Agency or NATO unless specifically authorized. NCI Agency Personnel must abstain from making promises or commitment to award or amend a contract or otherwise create the appearance of a commitment from the NCI Agency unless properly authorized by the NCI Agency.

14.7 NCI Agency Personnel shall not endorse directly or indirectly products from industry. Therefore, NCI Agency Personnel shall not name or make statements endorsing or appearing to endorse products of specific companies.

14.8 Industry partners will need to abide with the post-employment measures under this Directive upon submission of their Quotations / proposals to the NCI Agency. As part of the selection process, industry will be requested to agree with an ethical statement.

15 INDUSTRY INITIATIVES

15.1 Industry initiatives may include loans, displays, tests or evaluation of equipment and software, requesting NCI Agency speakers at industry gatherings and conferences, inviting speakers from industry to NCI Agency events, consultancy or studies of technical or organizational issues, etc. These initiatives are usually at no cost to the NCI Agency and take place at a pre-contractual phase or before the development of requirements and specifications. While there are benefits associated with the early involvement of industry in the definition of requirements and specifications, this also raises the potential for unfair treatment of potential competitors.

15.2 Industry initiatives which go beyond routine interaction in connection with on-going contracts must be reported to and coordinated by the NCI Agency Acquisition Directorate for approval. Industry initiatives shall be properly documented and governed by written agreements between the NCI Agency and the company concerned where relevant. Such agreements may contain provisions describing the nature of the initiative, the non-disclosure of NCI Agency/NATO information, NCI Agency ownership of any resulting work, the NCI Agency's right to release such work product to future competitors for any follow-on competition or contract, the requirement that any studies must provide non-proprietary solutions and/or an acknowledgement that the participating companies will not receive any preferential treatment in the contracting process.

15.3 Any authorized industry initiatives must be conducted in such a way that it does not confer an unfair advantage to the industry concerned or create competitive hurdles for potential competitors.

16 POST EMPLOYMENT MEASURES

17.1 The NCI Agency will not offer employment contracts to former NCI Agency Personnel who departed less than 2 years earlier, unless prior approval by the General Manager has been received.

17.2 Former NCI Agency Personnel will not be accepted as consultants or commercial counterpart for two (2) years after finalization of their employment at NCI Agency, unless the General Manager decides otherwise in the interest of the Agency and as long as NATO rules on double remuneration are observed. Such decision shall be recorded in writing. Commercial counterparts include owners or majority shareholders, key account managers, or staff member, agent or consultant of a company and/or subcontractors seeking

business at any tier with the NCI Agency in relation to a procurement action in which the departing NCI Agency staff member was involved when they were under the employment of the NCI Agency. As per the Prince 2 Project methodology, a Project is defined as a "temporary organization that is created for the purpose of delivering one or more business products according to an agreed business case". For the purpose of this provision, involvement requires (i) drafting, review or coordination of internal procurement activities and documentation, such as statement of work and statement of requirement; and/or (ii) access to procurement information that has not yet been authorized for release for outside distribution, including draft statements of work and requirement documentations; and/or (iii) being appointed as a representative to the Project governance (e.g., Project Board) with access to procurement information as per (ii) above; and/or (iv) having provided strategic guidance to the project, with access to procurement information as per (ii) above.

17.3 In addition to Section 17.2 above, former NCI Agency Personnel at grades A5 and above or ranks OF-5 and above are prohibited during twelve months following the end of their employment with the NCI Agency to engaging in negotiations, representational communications and/or advisory activities with the NCI Agency on behalf of a private entity, unless this has been agreed in advance by the NCI Agency General Manager and notified to the ASB.

17.4 NCI Agency Personnel leaving the Agency shall not contact their former colleagues in view of obtaining any information or documentation about procurement activities not yet authorized' release. NCI Agency Personnel shall immediately report such contacts to the Director of Acquisition.

17.5 The ASB Chairman will be the approving authority upon recommendation by the Legal Adviser when the NCI Agency Personnel concerned by the above is the NCI Agency General Manager and will notify the ASB.

17.6 NCI Agency Personnel leaving the Agency shall sign a statement that they are aware of the post-employment measures set out in this Directive.

17.7 The post-employment measures set out in this Directive shall be reflected in the NCI Agency procurement documents, such as IFBs, and contract provisions.

ANNEX B-14

OFFEROR BACKGROUND IPR

The Offeror Background IPR specified in the table below will be used for the purpose of carrying out work pursuant to the Contract.

ITEM	DESCRIPTION

The Offeror has and will continue to have, for the duration of the Contract, all necessary rights in and to the Background IPR specified above.

The Background IPR stated above complies with the terms specified in Article 30 of the NCI Agency, Part III - General Provisions.

ANNEX B-15

LIST OF SUBCONTRACTOR IPR

The Subcontractor IPR specified in the table below will be used for the purpose of carrying out work pursuant to the Contract.

ITEM	DESCRIPTION

The Offeror has and will continue to have, for the duration of the Contract, all necessary rights in and to the IPR specified above necessary to perform the Offeror's obligations under the Contract.

The Subcontractor IPR stated above complies with the terms specified in Article 30 of the NCI Agency, Part III - General Provisions.

ANNEX B -16

Quotation Guarantee - Standby Letter of Credit

Standby Letter of Credit Number:

Issue Date: _____

Beneficiary: NATO CI Agency,
Financial Management Resource Centre,
Boulevard Léopold III,
B-1110 Brussels,
Belgium

Expiry Date: _____

1. We, (issuing bank) hereby establish in your favour our irrevocable standby letter of credit number {number} by order and for the account of (NAME AND ADDRESS OF OFFEROR) in the original amount of:

Schedule A: € 155,000.00 (One Hundred and Fifty Five Thousand Euros). We are advised this Guarantee fulfils a requirement under Invitation for Quotation RFQ-CO-115009-FIT dated _____.

2. Funds under this standby letter of credit are available to you upon first demand and without question or delay against presentation of a certificate from the NATO CI Agency Contracting Officer that:

a) (NAME OF OFFEROR) has submitted a Quotation and, after Quotation Closing Date (including extensions thereto) and prior to the selection of the lowest priced, technically compliant Quotation, has withdrawn his Quotation, or stated that he does not consider his Quotation valid or agree to be bound by his Quotation, or

b) (NAME OF OFFEROR) has submitted a Quotation determined by the Agency to be the lowest priced, technically compliant Quotation, but (NAME OF OFFEROR) has declined to execute the Contract offered by the Agency, such Contract being consistent with the terms of the Invitation for Quotation, or

c) The NATO CI Agency has offered (NAME OF OFFEROR) the Contract for execution but (NAME OF OFFEROR) has been unable to demonstrate compliance with the security requirements of the Contract within a reasonable time, or

d) The NATO CI Agency has entered into the Contract with (NAME OF OFFEROR) but (NAME OF OFFEROR) has been unable or unwilling to

provide the Performance Guarantee required under the terms of the Contract within the time frame required.

3. This Letter of Credit is effective the date hereof and shall expire at our office located at (Bank Address) on _____. All demands for payment must be made prior to the expiry date.

4. It is a condition of this letter of credit that the expiry date will be automatically extended without amendment for a period of sixty (60) calendar days from the current or any successive expiry date unless at least thirty (30) calendar days prior to the then current expiry date the NATO CI Agency Contracting Officer notifies us that the Letter of Credit is not required to be extended or is required to be extended for a shorter duration.

5. We may terminate this letter of credit at any time upon sixty (60) calendar days' notice furnished to both (NAME OF OFFEROR) and the NATO CI Agency by registered mail.

6. In the event we (the issuing bank) notify you that we elect not to extend the expiry date in accordance with paragraph 4 above, or, at any time, to terminate the letter of credit, funds under this credit will be available to you without question or delay against presentation of a certificate signed by the NATO CI Agency Contracting Officer which states

"The NATO CI Agency has been notified by {issuing bank} of its election not to automatically extend the expiry date of letter of credit number {number} dated {date} pursuant to the automatic renewal clause (or to terminate the letter of credit). As of the date of this certificate, no suitable replacement letter of credit, or equivalent financial guarantee has been received by the NATO CI Agency from, or on behalf of (NAME OF OFFEROR), and the NATO CI Agency, as beneficiary, hereby draws on the standby letter of credit number _____ in the amount of € (Amount up to the maximum available under the LOC), such funds to be transferred to the account of the Beneficiary number _____ (to be identified when certificate is presented)."

Such certificate shall be accompanied by the original of this letter of credit and a copy of the letter from the issuing bank that it elects not to automatically extend the standby letter of credit, or terminating the letter of credit.

7. The Beneficiary may not present the certificate described in paragraph 6 above until 20 (twenty) calendar days prior to a) the date of expiration of the letter of credit should {issuing bank} elect not to automatically extend the expiration date of the letter of credit, b) the date of termination of the letter of credit if {issuing bank} notifies the Beneficiary that the letter of credit is to be terminated in accordance with paragraph 6 above.

8. Multiple drawings are allowed.

9. Drafts drawn hereunder must be marked, “Drawn under {issuing bank} Letter of Credit No. {number} and indicate the date hereof.

10. This letter of credit sets forth in full the terms of our undertaking, and this undertaking shall not in any way be modified, amended, or amplified by reference to any document, instrument, or agreement referred to herein (except the International Standby Practices (ISP 98) hereinafter defined) or in which this letter of credit is referred to or to which this letter of credit relates, and any such reference shall not be deemed to incorporate herein by reference any document, instrument, or agreement.

11. We hereby engage with you that drafts drawn under and in compliance with the terms of this letter of credit will be duly honoured upon presentation of documents to us on or before the expiration date of this letter of credit.

12. This Letter of Credit is subject to The International Standby Practices-ISP98 (1998 Publication) International Chamber of Commerce Publication No.590.

ANNEX B -17

Vendor Supply Chain Security Self-Attestation Statement

I hereby as [*Insert Company Name*] affirm that the security of the supply chain for the product [*list the product(s) below*]

has been assessed and assessed against the requirements laid down in directive AC/322-D(2017)0016 (INV), named "NATO SUPPLY CHAIN SECURITY REQUIREMENTS FOR COMMERCIAL OFF THE SHELF COMMUNICATION AND INFORMATION SYSTEMS SECURITY ENFORCING PRODUCTS".

I endorse this supply chain security statement for the product listed in the first paragraph of this certificate which covers the following items:

- Supply Chain Security Program Governance
- Security in Manufacturing and Operations
- Security in Logistics
- NATO Information Protection
- Vendor Physical and Personnel Security
- Security in Service Management
- Security in Incident Management
- 3rd Party Supplier Management

I can supply supporting evidence if required.

_____ _____

Date Signature of Authorised Representative

_____

Printed Name

_____

Title

_____

Company

Annex C – Bidding Sheets

[Provided under separate MS Excel File:

"RFQ-CO-115009-FIT – Book I Annex C – Bidding Sheets"

Annex D – Instructions for the Preparation of Bidding Sheets

1. Offerors are required, in preparing their Price Quotation to utilise the Bidding Sheets following the instructions detailed in Section III – Quotation Preparation Instructions and CLIN Bidding Sheet instructions within the Bidding Sheets itself.

2. The Offeror must complete and submit the Bidding Sheets with their Price Breakdown per CLIN – one (1) sheet is required for each Major CLIN (1, 2, 3, etc.).

3. The prices entered on the Bidding Sheets shall reflect the total items required to meet the contractual requirements.

4. The total price shall be indicated in the appropriate columns and in the currency quoted.

5. The total evaluated price shall be the price of the basic Contract.

6. If the price of a CLIN is expressed in different currencies, these shall be identified, and there shall be as many bidding sheets for that CLIN as there are currencies.

7. In preparing the Price Quotation, the Offeror shall ensure that the prices of the Sub-items total the price of the major item of which they constitute a part. Pricing for lower level items shall add to the total for the Sub-CLINs, and the Sub-CLIN totals shall add to the CLIN total. The Purchaser in its favour may resolve ambiguous computation of prices. The Offeror shall identify the sub-CLIN, per line item, in each detailed Bidding Sheet section, i.e. Materials, Labour, Subcontract Labour, Travel etc., that is being priced.

8. Prices shall not include any provision for taxes or duties for which the Purchaser is exempt.

9. The Offeror shall not introduce any changes or deviations to the Schedule of Supplies and Services (SSS) as Published by the Purchaser.

ANNEX E – Compliance Table

Offeror shall complete column "QUOTATION REFERENCE" with Quotation references that locate the technical proposal documentation required by the RFQ, e.g. section, paragraph, table (if applicable), page number etc. One copy each of the duly completed Cross Reference/Compliance Table is to be included in the Quotation Technical Proposal package. The Quotation shall follow the instructions in section 3.5, and will be evaluated according to the instructions in section 4.4.

Bidding Instructions Requirement Ref.	SOW Requirement Ref	REQUIREMENT DESCRIPTION	Evaluation Criterion Ref.	QUOTATION REFERENCE
3.5.2.1 Table of Contents	N/A	The Offeror shall compile a detailed Table of Contents which lists not only section headings but also major sub-sections, and topic headings required set forth in these Instructions or implicit in the organisation of the Technical Proposal.	4.4.2	***Offeror to complete***
3.5.2.2 Cross-Reference / Compliance Table	N/A	The Offeror shall include the completed Technical Proposal Cross-Reference Table at Annex E of Book I. The Offeror shall complete the Column marked "QUOTATION REFERENCE" of the Table, citing the appropriate section of the Technical Proposal that corresponds to each paragraph of these Instructions for the Preparation of the Technical Proposal. The completed Table serves as an index for the Purchaser's Technical Evaluation Panel and also as an aide memoire to the Offeror to ensure that all the required information has been provided in the Technical Proposal.	4.4.2	

Bidding Instructions Requirement Ref.	SOW Requirement Ref	REQUIREMENT DESCRIPTION	Evaluation Criterion Ref.	QUOTATION REFERENCE
3.5.2.3 3.5.2.3.1 PIP Section 1 – Project Overview	3.2.2	The Offeror shall submit a preliminary Project Implementation Plan in accordance with the requirements of Section 3 of the Statement Of Work (SOW) for the Forensics and Investigative Tools (FIT) (Book II Part IV), which clearly describes how the Offeror intends to implement the totality of the project in compliance with the contractual requirements and the following specific requirements. The Offeror shall provide the Project Overview which shall provide an executive summary overview of the offered capability. The Project Overview shall also summarise the main features of each of the sections of the Technical Proposal and shall indicate in broad detail how the Project will be executed during the full lifetime of the Project.	4.4.3	
3.5.2.3.2 PIP Section 2 – Applicable Documents	3.2.3	The Offeror shall list all documents or standards referenced by the other sections of the PIP.	4.4.3	
3.5.2.3.3 3.5.2.3.3.1 PIP Section 3 – Project Management Plan (PMP)	3.2.4	The Offeror shall describe how the Offeror intends to manage this project from contract signature through Final System Acceptance and throughout any warranty periods. The PMP shall consider all aspects of project management and control detailed in the section 3.2.4 of the SOW and demonstrate how all the critical dates defined in the contract will be met.	4.4.4	

Bidding Instructions Requirement Ref.	SOW Requirement Ref	REQUIREMENT DESCRIPTION	Evaluation Criterion Ref.	QUOTATION REFERENCE
3.5.2.3.4 PIP Section 4 – System Design and Implementation	3.2.5 4	The Offeror shall describe how the FIT capability and underlying components will be implemented with sufficient technical detail for the Purchaser to determine compliance with the SOW. For this purpose the Offeror shall provide in its Quotation a draft System Design Specification (SDS) which shall demonstrate compliance with the Requirements as specified under section 4.2 of the SOW and indicate how the components and quantities of equipment and licenses in the SSS are to be deployed.	4.4.5	
3.5.2.3.5 PIP Section 5 – Integrated Logistics Support	3.2.6 5	The Offeror shall describe the Integrated Logistics Support (ILS) aspects of the Quotation including an exhaustive description of the proposed Integrated Logistics Support offering. This description shall address, with an adequate level of details, the following: Contractor's ILS Organisation, Roles, Responsibilities and Procedures; Maintenance Concept; LSA & RAMT; Technical Documentation and Data, Supply Support, Support and Test Equipment Lists; Training, including Manpower and Personnel Requirements; Planning and execution of Packaging, Handling, Storage and Transportation; Warranty; and Planning of Supply Chain Security as set forth in section 5 of the SOW and in accordance with the applicable Standards and Specifications required in SOW section 2. The description shall provide sufficient evidence to confirm that the Offeror will be able to meet the timelines in accordance with the requirements of the Schedule of Supplies and Services and the SOW.	4.4.6	

Bidding Instructions Requirement Ref.	SOW Requirement Ref	REQUIREMENT DESCRIPTION	Evaluation Criterion Ref.	QUOTATION REFERENCE
3.5.2.3.6 PIP Section 6 – Configuration Management	2 3.2.7 7	In this Section, the Offeror shall describe how it can meet the Configuration Management requirements as specified in section 3.2.7 and section 7 of the SOW. In conformance with the required Standards and Specifications required in SOW section 2, this shall include a description of the unique Configuration Management framework, Baselines, the Product Lifecycle Management (PLM) tool, and the Configuration Management DataBase (CMDB).	4.4.7	
3.5.2.3.7 PIP Section 7 – Quality Assurance and Control	2 3.2.8 6	The Offeror shall describe the Quality Assurance and Control aspects of their proposal including how the contents of SOW section 3.2.8 and SOW section 6 shall be met alongside adherence to the applicable Standards and Specifications required in SOW section 2. The description shall include the general processes, methods and procedures in place in the Contractor organization to deliver quality work, artefacts, studies and documents as required in the SOW, including sub-Contractors and COTS elements management and integration.	4.4.8	
3.5.2.3.8 PIP Section 8 – Documentation	2 3.2.9	Here, the Offeror shall describe their Documentation Pack and proposed Project Portal as required in SOW section 3 and in accordance with applicable Standards and Specifications detailed on SOW section 2 (including but not limited to ISO9001:2015). The Contractor shall provide details on when and how the documents will be delivered.	4.4.9	
3.5.2.3.9 PIP Section 9 – Training	3.2.10 5.6	The Offeror shall in this section demonstrate how it can meet the Training requirements as specified in section 3.2.10 and section 5.6 of the SOW.	4.4.10	

Bidding Instructions Requirement Ref.	SOW Requirement Ref	REQUIREMENT DESCRIPTION	Evaluation Criterion Ref.	QUOTATION REFERENCE
3.5.2.3.10 PIP Section 10 – Testing and Acceptance	2 3.2.11 4.12 5 8	The Offeror shall in this section demonstrate how it can meet the FIT testing requirements and its methodology for conducting all related activities as detailed in section 2, section 3.2.11, section 4.13, section 5 and section 8 of the SOW. This includes the development of all test documentation required under this Contract, the conduct of all testing, the evaluation and documentation of the tests results by an Independent Verification and Validation (IV&V) as specified in section 2, section 3.2.11, section 4.13, section 5 and section 8 of the SOW.	4.4.11	
3.5.2.3.11 PIP Section 11 – Project Master Schedule (PMS):	3.2.12	The Offeror shall provide a PMS that contains all contract events and milestones for the Project. As described in section 3.2.12 of the SOW, the PMS shall show all contractual deliverables, their delivery dates, and the tasks associated with them, including the Purchaser's review stages. The PMS shall for each task identify the start and finish dates, duration, predecessors, constraints, and resources. The PMS shall provide network, milestone, and Gantt views, and identify the critical path for the overall project. Any PMS which does not align with the dates provided in the SSS may be determined to be non-compliant.	4.4.12	
3.5.2.3.12 PIP Section 12 – Project Work Breakdown Structure (WBS)	3.2.13	The Offeror shall provide a WBS that contains the critical work elements (tasks) of the project and illustrate their relationships to each other and to the project as a whole, as described in section 3.2.13 of the SOW	4.4.13	

Bidding Instructions Requirement Ref.	SOW Requirement Ref	REQUIREMENT DESCRIPTION	Evaluation Criterion Ref.	QUOTATION REFERENCE
3.5.2.4 Corporate Experience	3 4 5 6 7 8	The Offeror shall provide at least one (1) executive summary describing the successful delivery of a similar project in a similar environment during the last five (5) years. For each project, the Contractor shall describe: - The domain or area (ideally the customer name), the size (contract value range), duration and challenges encountered with remediation; - The scope of work, demonstrating its capability to implement Forensic Capabilities similar to the requirements defined in section 4.1 to 4.7 of the Statement of Work.	4.4.14	
3.5.2.5 Key Personnel CVs	3.1.2	The Offeror shall provide the CV of the proposed Project manager and the Technical Lead. - For the Project Manager, the Offeror shall provide details about the qualifications, evidence of six (6) years' experience of successfully delivering requirements of a similar scope, duration, complexity and value and experience of applying formal project management methodologies (such as PRINCE2). - For the Technical Lead, the Offeror shall provide details about the qualifications, evidence of seven (7) years' experience in engineering positions associated with the review, design, development, evaluation, planning and operation of electrical or electronic components, subsystems, or systems for government or commercial use, membership of a recognised professional body and evidence of three (3) years' experience in system design and integration of networking and communication component parts similar to those detailed in the Statement of Work.	4.4.15 4.4.16	

Bidding Instructions Requirement Ref.	SOW Requirement Ref	REQUIREMENT DESCRIPTION	Evaluation Criterion Ref.	QUOTATION REFERENCE
3.5.2.6 Purchaser Furnished Equipment (PFE) Management:	4.8 4.12	In accordance with SOW section 4.8, the Offeror shall provide details on approach to preventing projects from stalling and mitigate losses/costs following delay in the provision of PFE.	4.4.17	

RFQ-CO-115009-FIT-AMD4

CYBER SECURITY COMPUTER FORENSICS AND INVESTIGATIVE TOOLS

(TECHNOLOGY REFRESH)

NATO Communications and Information Agency
Agence OTAN d'information et de communication

BOOK II, SECTION IV

STATEMENT OF WORK

TABLE OF CONTENTS

SECTION 1 – INTRODUCTION

1.1 Requirements and Activity Overview

1.1.1 This Statement of Work (SOW) describes requirements the Purchaser is seeking in the acquisition and deployment of cybersecurity forensics capabilities to replace obsolete equipment and refresh the analyst platforms. This project is referred to as Forensics and Investigative Tools (FIT). As this is a critical project with strict deadlines, time is of the essence for completion by April 2021.

1.1.2 The scope of activity within this document can be summarised as follows :

1.1.2.1 Replace the existing Online Computer Forensics (OCF) software in two security domains in existing virtual machine environments and replace/deploy associated endpoint agent software.

1.1.2.2 Upgrade the existing Standalone Computer Forensics (SCF) network to 10Gbps, including switching and existing systems' network interfaces.

1.1.2.3 Replace the existing SCF analyst workstations with new hardware.

1.1.2.4 Refresh the existing software licences and support for SCF tools on analyst workstations, including migrating/installing software on new workstations.

1.1.2.5 Deploy a new SCF virtualization host to support analysis of virtual machine images.

1.1.2.6 Update the existing mobile device analysis and password recovery hardware and software to support a range of modern platforms and device types.

1.1.2.7 Provide miscellaneous tools, connectors, and other sundries to support forensic investigations.

1.1.2.8 Provide all necessary installation and configuration services, training, and documentation in relation to the above activities.

1.1.3 The Contractor shall be responsible for the totality of the implementation of the schedule, which meets the requirements set forth in this SOW, including overall installation and integration, testing and acceptance throughout the Contract's Period of Performance.

1.1.4 The main elements within this project are deployed and operated from within the NCIRC central (Tier-2) infrastructure at the Supreme Headquarters Allied Powers Europe (SHAPE), Mons, Belgium. OCF endpoint agent(s) are deployed in both central and remote

(Tier-3 sites) infrastructures deployed across various NATO sites, as listed under section 4.4.4.7.

1.2 Standards for interpretation of the SOW

1.2.1 Context information supporting the requirements definition are provided using the term “may”. “Shall” statements are contractually binding; “May” statements are non-mandatory, or they imply intent on the part of the Purchaser.

1.2.2 The order of the SOW requirements is not intended to specify the order in which they must be carried out unless explicitly stated. The SOW defines all the activities the Contractor’s process shall cover, i.e. the Contractor’s process description and plans shall include where and when these occur.

1.2.3 Within this SOW, the term "including" is never meant to be limiting.

1.3 Background Information

1.3.1 NATO Cybersecurity Forensics

1.3.1.1 The NATO Computer Incident Response Capability (NCIRC) – Full Operational Capability (FOC) includes forensics capabilities covering both online/on-demand endpoint investigation plus traditional, post-incident investigation, in addition to related mobile device analysis and password recovery.

1.3.1.2 Online Computer Forensics (OCF) is deployed across various networks of different classifications, giving analysts the ability to interrogate, extract, and analyse forensic data from endpoint systems such as workstations and servers. Central command consoles interact directly with endpoints, or in the case of remote sites across Wide Area Networks (WANs), command and control may be performed against a remote server which mediates and manages endpoints at its location to reduce the burden on WAN bandwidth.

1.3.1.3 Standalone Computer Forensics (SCF) is deployed within an isolated enclave, and provides analysts with the platforms and tools necessary to inspect disk images, extract and analyse data, and perform deeper investigations into cybersecurity incidents. The SCF environment also has tools to recover passwords from a variety of file and container formats, plus related data and metadata – within the context of this project we refer to this as Password Recovery and Associated Data Extraction (PRADE). A facility for analysis of mobile devices is also part of the SCF environment, allowing teams to inspect phones, tablets and other devices suspected to be involved in an internal security incident or to analyse devices recovered as part of allied missions in-theatre – within the context of this project we refer to this as Mobile Device Analysis (MDA).

1.3.1.4 The current Standalone Computer Forensics (SCF) solution is split into Frontend and Backend services. Backend SCF services are provided on the NS environment by two dedicated blade servers running in the physical servers chassis in the SHAPE Bunker. One server runs VMware and includes SCF domain server and update server (Windows Update Services & McAfee AV). The second server contains a physical Windows 2008 R2 server with an attached DAS storage blade (D2200) giving 10TB of usable storage via a file share. The SCF backend network has the capability of accessing NCIRC's central Tier 2 services via the core firewalls. The SCF Frontend services are connected to the NCIRC Area switch in a dedicated VLAN which will only route to the Backend SCF services. SCF contains a dedicated backup solution utilising Symantec Netbackup and a fibre channel connected tape library. The tape library is connected via Fibre Channel to a dedicated port group on Brocade switches enabling backup functions.

SECTION 2 – REFERENCES

NATO Standardization Agreements (STANAGs) and Publications

2.1 STANAG 2506 – Allied Joint Movement and Transportation doctrine

2.2 STANAG 4107 Ed. 9, Mutual Acceptance of Government Quality Assurance and Usage of the Allied Quality Assurance Publications – and underpinning AQAPs

2.3 STANAG 4159, NATO Materiel Configuration Management Policy and Procedures for Multinational Joint Projects.

2.4 STANAG 4280 - NATO Levels of Packaging

2.5 STANAG 4281 Ed. 3 – NATO Standard Marking for Shipment and Storage

2.6 STANAG 4427 Ed. 3 - Configuration Management in System Life Cycle Management – and underpinning ACMPs

2.7 STANAG 4728 Ed. 2 – System Life Cycle Management

2.8 ALP-10 Ed. 3 – Allied Logistics Publications

2.9 STANAG 6001, Language Proficiency Levels.

NATO Security Documents

2.10 C-M(2002)49 Security Within the North Atlantic Treaty Organisation COR 1 -142, 14 September 2015

2.11 AC/35-D/2004-REV3 Primary Directive on CIS Security, 15 November 2013

2.12 AC/35-D/2005-REV3 Management Directive on CIS Security, 12 October 2015

2.13 AC/35-D/1021-REV3 Guidelines for the Security Accreditation of Communication and Information Systems (CIS), 31 January 2012

2.14 AC/35-D/1017-REV3 Guidelines for Security Risk Management (SRM) of Communication and Information Systems (CIS), 29 June 2017

2.15 AC/35-D/1014-REV3 Guidelines for the Structure and Content of Security Operating Procedures (SecOPs) for CIS, 31 January 2012

2.16 AC/322-D/0030-REV5, INFOSEC Technical & Implementation Directive for the Interconnection of Communication and Information Systems (CIS), 23 February 2011

2.17 AC/322-D(2017)0016 (INV) Technical and Implementation Directive on Supply Chain Security for COTS CIS Security Enforcing Products, 30 March 2017

2.18 AC/322-D(2004)0024-REV2-ADD1 NATO Public Key Infrastructure (PKI) Certificate Policy, 2 March 2010

2.19 AC/322-D/0048-REV3. Technical and Implementation Directive on CIS Security, 18 November 2019

International Standards and Specifications

2.20 ISO 9001:2015 – Quality Management Systems

2.21 ISO 10007:2017 – Configuration Management in Systems Life Cycle Management

2.22 ISO 15288:2015 – System and Software Engineering

2.23 ASD S1000D – International Specification for the Procurement and Production of Technical Publications

2.24 ASD S2000M – International Specification for Material Management
2.25 ASD S3000L – International Procedure Specification for Logistic Support Analysis (LSA)

MIL Standards and Handbooks

2.26 MIL-STD-882E – Systems Safety
2.27 MIL-HDBK-338B – Electronic Reliability Design Handbook

NCSC Security Settings Guides

2.28 Configuration Catalogue, v.1.12, March 2019 (or newer version available at time of Contract Award)

NCIRC Documentation

2.29 NCIRC Service Delivery Plan for “Service Update Acceptance”.

NCIRC documentation for Security Accreditation

2.30 NATO Computer Incident Response Capabiltiy (NCIRC) description (*the latest available*)
2.31 NATO Security Accreditation Plan (SAP) for NATO Computer Incident Response Capability (NCIRC) (*the latest available*)
2.32 Security Risk Assessment (SRA) Report for NATO Computer Incident Response Capability (NCIRC) (*the latest available*)
2.33 System-specific Security Requirement Statement (SSRS) for NATO Computer Incident Response Capability (NCIRC) (*the latest available*)
2.34 NATO Computer Incident Response Capability (NCIRC) Security Operating Procedures (SecOPs) (*the latest available*)
2.35 Security Test and Verification Plan (STVP) for NATO Computer Incident Response Capability (NCIRC) (*the latest available*)
2.36 Template of “Local Statement of Compliance for NCIRC Tier-3 site” (*the latest available*)

SECTION 3 – PROJECT MANAGEMENT

3.1 Project Organisation

3.1.1 Purchaser Project Organisation and Responsibilities

3.1.1.1 The Project will be managed and subject to review by the Purchaser who will be represented by the Purchaser's Project Management Team (PMT). The PMT will include Purchaser functional resources, including the Acquisition (ACQ) Contracting Officer (CO) and ILS Officer. It will be chaired by the Purchaser Project Manager (PM).

3.1.1.2 The PMT will be responsible for reviewing the deliverables for the supervision of the implementation and for acceptance of the system. The PMT will constitute the interface with the Contractor.

3.1.2 Contractor's Responsibilities, Organisation and Personnel

3.1.2.1 The Contractor shall establish a project management organisation for the purpose of performing and managing the efforts necessary to satisfactorily discharge his responsibilities under this Contract.

3.1.2.2 The Contractor shall also provide the necessary manpower and resources to conduct and support the management and administration of his operations to meet the overall objectives of the contract.

3.1.2.3 The Contractor shall apply the PRINCE2 project management methodology (or equivalent) to the planning and delivery of the system under this Contract.

3.1.2.4 During project implementation, the project shall be controlled in accordance with the approved Project Implementation Plan (PIP) and the Schedule of Supplies and Services (SSS). As part of the monitoring and control function, the Contractor shall advise the Purchaser at all times of potential risks and issues.

3.1.2.5 Both the PM and Technical Lead identified below shall be considered as Key Personnel in accordance with the Special Provisions of this Contract. Because of their role in coordinating with the Purchaser, all Key Personnel must be fluent in English.

3.1.2.6 Any documentation delivered by the Contractor under this Contract shall contain no reference to, name, logo or branding of the Contractor.

3.1.2.7 Contractor Project Manager (PM)

3.1.2.7.1 The Contractor shall designate a PM, who will direct and coordinate the activities of the Contractor's project team.

3.1.2.7.2 The PM shall be the Contractor's primary contact for the Purchaser's PM and shall coordinate the delivery of this SOW.

3.1.2.7.3 The PM shall be prepared at all times to present and discuss the status of Contract activities with the Purchaser's PM, Contracting Officer, or Technical Lead.

3.1.2.7.4 **Contractor PM Qualifications**

3.1.2.7.4.1 The PM shall have at least six years' experience as the PM for an effort of similar scope, duration, complexity and cost, including the application of a formal project management methodology such as PRINCE2.

3.1.2.8 **Contractor Technical Lead**

3.1.2.8.1 The Contractor shall designate a Technical Lead for the project. The Technical Lead shall lead the analysis, design, development, integration, and follow-on efforts of the Contractor.

3.1.2.8.2 **Contractor Technical Lead Qualifications**

3.1.2.8.2.1 The Technical Lead shall possess a background and degree/certification in engineering or computer science. Have at least seven years' in engineering positions associated with the review, design, development, evaluation, planning and operation of electrical or electronic components, subsystems, or systems for government or commercial use. The Technical Lead shall be a member of recognized professional body, such as British Computer Society (BCS). Within the seven years required experience, at least three years' in system design and integration of networking and communication component parts similar to those being utilized for the purpose of this contract.

3.1.2.9 **Test Director**

3.1.2.9.1 The Contractor shall designate a Test Director for all Test, Verification and Validation activities conducted under this Contract. Test Director shall direct test planning, design and tools selection. The Test Director shall establish guidelines for test procedures and reports. The Test Director shall also co-ordinate with the Purchaser on test support requirements and manage Contractor test resources.

3.1.2.9.2 **Test Director Qualifications**

3.1.2.9.2.1 The Test Director shall have at least five years' experience in the design and execution of communication information systems tests.

3.1.2.10 **Quality Assurance Manager**

3.1.2.10.1 The Contractor shall designate a qualified individual to serve as the Quality Assurance Manager for activities under this Contract. The Quality Assurance Manager shall report to a separate manager within the Contractor's organization at a level equivalent to or higher than the PM.

3.1.2.10.2 **Quality Assurance Manager Qualifications**

3.1.2.10.2.1 The Quality Assurance Manager shall have at least seven years' experience in working with quality control methods and tools and have a broad knowledge of NATO Standards (e.g. STANAG 4107 Ed. 9), processes and procedures applicable to Quality Assurance (QA) and Quality Control (QC) in the industry. In the industry the QA manager shall be independent from the project team and be involved in any project review, acceptance and delivery.

3.1.2.11 **Integrated Logistic Support (ILS) Manager**

3.1.2.11.1 The ILS Manager shall have at least ten years' experience in Supportability Engineering for hardware/software intensive Systems, preferably in the in Defense and Electronic sector.

3.1.2.11.2 **ILS Manager Qualifications**

3.1.2.11.2.1 The ILS Manager shall have a Systems Engineering background or Supportability Engineering equivalent certification and broad knowledge of the ILS related NATO standards, handbooks, ISO Standards and the ASD Suite (S1000D, S2000M, S3000L) and tools. The ILS manager shall have at least 7 years' experience experience in all the fields of ILS (e.g. LSA, Reliability, Availability, Maintainability and Testability (RAMT), Training, Documentation, Supply Support etc.) and Configuration Management standards and procedures (e.g. STANAG 4427 Ed. 3 and ISO 10007).

3.2 Project Implementation Plan (PIP)

3.2.1 **Scope of the PIP**

3.2.1.1 The Contractor shall submit an initial PIP that describes how the Contractor shall implement project/contract administration, including details of the controls that shall be applied to supervise Sub-contractor performance. The plan shall also define the details of liaison amongst the Purchaser, the Contractor and any Sub-contractors. The initial PIP furnished with the quotation and its related documentation shall be the primary guideline in developing the PIP to be provided in accordance with the requirements set forth therein. The requirements of the Contract supersede any element of the PIP in case of any conflict, ambiguity or omission.

3.2.1.2 The PIP shall consider all project implementation aspects, which include management provisions, facilities, schedules, personnel assignments, external relationships and project control. Based on the information provided in the PIP, the Purchaser shall assess the Contractor's plans and capabilities in implementing the entire project in conformance with the requirements specified. The PIP to be prepared by the Contractor shall include as a minimum the following sections:

Section 1:	Project Overview
Section 2:	Applicable Documents
Section 3:	Project Management
Section 4:	System Design, Integration and Implementation
Section 5:	Integrated Logistics Support

Section 6:	Configuration Management
Section 7:	Quality Assurance and Control
Section 8:	Documentation
Section 9:	Training
Section 10:	Testing and Acceptance
Section 11:	Project Master Schedule
Section 12:	Project Work Breakdown Structure
Section 13:	Exit Plan

3.2.2 **Project Overview**

3.2.2.1 Section 1 of the PIP shall contain a Project Overview, which shall provide an executive summary overview of the Forensics and Investigative Tools (FIT) capability, summarise the main features of each of the PIP sections and indicate how the Project will be executed during the full lifetime of the Project.

3.2.3 **Applicable Documents**

3.2.3.1 Section 2 of the PIP shall contain the list of documents or standards referenced by the other sections of the PIP.

3.2.4 **Project Management**

3.2.4.1 Section 3 of the PIP shall provide the Project Management Plan (PMP). The PMP shall include:

3.2.4.1.1 The management structure of the Contractor's team.

3.2.4.1.2 A list of all personnel assigned to the Contractor's team and their respective roles, responsibilities and authority.

3.2.4.1.3 The PMP shall identify all major Contractor operating units and any Sub-contractors and Suppliers involved in the deliverance of the capability, and a description of the portion of the overall effort or deliverable item for which they are responsible.

3.2.4.2 The PMP shall also include the following:

3.2.4.2.1 Details of the Contractor's methodology for Project Control, including Project Reporting and Project Meetings (refer to SOW Section 3.4).

3.2.4.2.2 Details of the Contractor's Risk Management methodology explaining how the Contractor shall manage the project risks during the period of performance.

3.2.4.2.3 Details of the Contractor's Issue Management approach explaining how the Contractor shall manage the issues during the period of performance.

3.2.5 **System Design, Integration and Implementation**

3.2.5.1 Section 4 of the PIP shall cover the System Design, Integration and Implementation aspects of the Project.

3.2.5.2 Section 4 of the PIP shall include all the areas as detailed in Section 4 of this SOW and shall present how the functional, performance and technical specifications will be met.

3.2.5.3 Section 4 of the PIP shall include at least two diagrams, one depicting relationships of the hardware components and connectivity between them as proposed in the BOM referred in section 3.2.5.5, the other depicting software functionality and key information / data flows.

3.2.5.4 Section 4 of the PIP shall include a preliminary design package listing the major hardware and software elements that the Contractor will incorporate in the proposed Solution.

3.2.5.5 The illustrative design package shall include a BOM, hierarchically structured, and shall provide, for each item, the functional description, the model, the technical specifications and quantities of each type of equipment such as CPU, Memory, Network, Storage, protocols supported, etc.

3.2.6 **Integrated Logistics Support**

3.2.6.1 Section 5 of the PIP shall cover the Integrated Logistics Support (ILS) aspects of the Project.

3.2.6.2 This Section shall detail the Contractor's approach to meeting the ILS requirements, as specified in Section 5 of this SOW.

3.2.6.3 Section 5 of the PIP shall include the Integrated Logistics Support Plan (ILSP, refer to SOW Section 5.1).

3.2.7 **Configuration Management**

3.2.7.1 Section 6 of the PIP shall cover the Configuration Management aspects of the Project.

3.2.7.2 This Section shall include the Configuration Management Plan, as specified in Section 7 of this SOW.

3.2.8 **Quality Assurance and Control**

3.2.8.1 Section 7 of the PIP shall cover the Quality Assurance and Control aspects of the Project, as specified in Section 6 of this SOW.

3.2.8.2 This Section of the PIP shall include the QA Plan (QAP), with details of how the Contractor shall establish, execute, document and maintain an effective Quality Assurance (QA) program, throughout the Contract lifetime.

3.2.9 **Documentation**

3.2.9.1 Section 8 of the PIP shall describe the Contractor's Documentation Plan (DP) for all of the deliverable documents, including details of when and how these will be provided, as specified in this SOW.

3.2.9.2 The Contractor's Documentation Plan shall include the portal to be used and the description of key processes such as access management, content management, roles and responsibilities, etc.

3.2.10 **Training**

3.2.10.1 Section 9 of the PIP shall describe the Contractor's Training Plan (TP), as specified in Section 5.6 of this SOW.

3.2.11 **Testing and Acceptance**

3.2.11.1 Section 10 of the PIP shall define the Contractor's Test and Acceptance Plan (TAP), as specified in Section 8 of this SOW. The TAP shall include a description of the allocation of personnel and the time schedule to accomplish all the Purchaser's review stages for test plans and the test and acceptance activities, up to and including Final System Acceptance (FSA), as specified in Section 8 of this SOW.

3.2.11.2 The Contractor shall comply with and implement the detailed IV&V requirements available in Section 8 of this SOW.

3.2.12 **Project Master Schedule (PMS)**

3.2.12.1 In Section 11 of the PIP, the Contractor shall establish and maintain a Project Master Schedule (PMS) that contains all contract events and milestones for the Project.

3.2.12.2 The PMS shall show all contractual deliverables, the work associated with them, the Purchaser's review stages and their delivery dates.

3.2.12.3 The PMS shall not be cluttered with events or tasks internal to the Contractor, unless they are of major importance to the Project.

3.2.12.4 The PMS shall also be traceable to performance and delivery requirements of this SOW. The PMS shall be linked to Contractor resources to enable assessment of changes to staff, facilities, event dates, and system requirements.

3.2.12.5 The PMS shall be provided in Microsoft Project format. For each task, the PMS shall identify the start and finish dates, duration, predecessors, constraints, and resources.

3.2.12.6 The PMS shall provide network, milestone, and Gantt views, and identify the critical path for the overall project which shall be completed no later than April 2021.

3.2.12.7 The Contractor shall update the PMS ahead of any Project Review Meeting.

3.2.13 **Project Work Breakdown Structure (WBS)**

3.2.13.1 Section 12 of the PIP shall also include a Project Work Breakdown Structure (WBS) that shall contain the critical work elements (tasks) of the project and illustrate their relationships to each other and to the project as a whole.

3.2.13.2 The WBS shall break the work down to the lowest task level and shall correspond directly to the main events and milestones in the PMS.

3.2.13.3 The WBS shall also be traceable to performance and delivery requirements of this SOW. The WBS shall be linked to Contractor resources to enable assessment of changes to staff, facilities, event dates, and system requirements.

3.2.13.4 The WBS shall be provided in Microsoft Project format. For each task, the WBS shall identify the start and finish dates, duration, predecessors, constraints, and resources.

3.2.13.5 The Contractor shall update the WBS ahead of any Project Review Meeting.

3.2.14 **Exit Plan**

3.2.14.1 Section 13 of the PIP shall also include an Exit Plan.

3.2.14.2 The Contractor shall develop a preliminary Exit Plan that sets out the Contractor's proposed overall methodology for achieving an orderly transfer of all, and any part, of one or more of the Contractor Deliverables from the Contractor to the Purchaser and for achieving a wind-down of all or part of the Contractor Deliverables.

3.2.14.3 The preliminary Exit Plan shall be delivered to the Purchaser no later than twelve (12) weeks following the Effective Date of Contract (EDC) with the final Exit Plan delivered twenty (20) weeks following EDC.

3.2.14.4 The Contractor shall ensure that the Exit Plan is designed so that the Contractor Deliverables are capable of being transferred to the Purchaser without disruption to the provision of the Contractor Deliverables to, and use of the Contractor Deliverables by, the Purchaser

3.2.14.5 The deliverables shall be compliant and include what is required in Section 5 (ILS), Section 7 (CM) and any other specific document/data (for design, delivery, installation, setting, integration, testing, operation, maintenance, support, configuration etc.) required in this SOW.

3.3 PIP changes

3.3.1 The initial PIP shall be updated following Kick Off Meeting to form revised PIP no later than 4 (four) weeks following EDC. The PIP may be modified as required to make further changes in the plan, to correct any errors or inconsistencies detected, especially after the site survey and design phases, during the project execution or to reflect any technical or contractual changes necessary as a result of any supplemental agreement made to the Contract. Any change in the PIP that is not a result of change in the Scope Of Work (see Section 4 of this SOW) shall be at no additional cost to the Purchaser.

3.3.2 The PIP changes in no way relieves the Contractor from his responsibilities to achieve the contractual and technical requirements of this Contract. The requirements of the Contract supersede any statement in the PIP in case of any conflict, ambiguity or omission.

3.3.3 Changes to the PIP shall be mutually agreed by the Purchaser and Contractor.

3.4 Project Controls

3.4.1 Project Status Reports (PSR)

3.4.1.1 During the period of performance, the Contractor shall provide, no later than the third working day of each month, a Project Status Report (PSR).

3.4.1.2 The PSR shall summarise activities, including:

3.4.1.2.1 Summary of Contract activities during the preceding month, including the status of current and pending activities

3.4.1.2.2 Progress of work and schedule status, highlighting any changes since the preceding report

3.4.1.2.3 Update on the ILS and Configuration Management related activities and deliverables.

3.4.1.2.4 Description of any identified issues and high risk areas with proposed solutions and corrective actions, including safety related issues

3.4.1.2.5 Test(s) conducted and results

3.4.1.2.6 Provisional financial status and predicted expenditures

3.4.1.2.7 Changes in the PIP

3.4.1.2.8 Summary of any change (Change Request, Engineering Change Proposals) requested or approved

3.4.1.2.9 Plans for activities during the following reporting period

3.4.1.2.10 QA overview: Quality Assurance Manager to report any identified issue.

3.4.1.2.11 Measurement on metrics for performance of the systems (to be included after installations have started)

3.4.1.3 The Project Status Report shall be subject to the following specific review process:

3.4.1.3.1 The Purchaser will issue comments no later than five (5) working days after receipt of the document.

3.4.1.3.2 The Contractor shall issue answers to those comments within five (5) working days after their receipt. No comment received within that timeframe means that the Contractor agrees to the comments issued by the Purchaser.

3.4.2 **Project Meetings**

3.4.2.1 General

3.4.2.1.1 Except otherwise stated in the Contract, the following provisions shall apply to all meetings to be held under the Contract.

3.4.2.1.2 Unless otherwise stated by the Purchaser, meetings shall take place at the Purchaser's premises in Mons, Brussels or The Hague.

3.4.2.1.3 The Contractor shall take Minutes of Meeting (MoM), submit them in draft version to the Purchaser for approval within three (3) working days of the meeting, post the final version of them on the Project Portal, within three (3) working days of receipt of Purchaser approval, and notify the Purchaser by email.

3.4.2.1.4 The participants shall not regard these minutes as a mechanism to change the terms, conditions or specifications of the Contract, or as a vehicle to alter the design or configuration of equipment or systems. Any such changes shall only be made by agreement, amendment or by authorised mechanisms as set forth in the Contract.

3.4.2.1.5 Any documentation, even in draft format, that may be useful to the Purchaser in preparing for meetings and ensuring efficient discussions during the meetings shall be provided to the Purchaser no later than ten (10) working days before the meeting.

3.4.2.1.6 The Contractor shall deliver a draft agenda before each meeting.

3.4.2.1.7 Before each Project meeting the Contractor shall deliver the final signed version of the MoM of previous meeting.

3.4.2.1.8 The Contractor shall maintain the Action Items list.

3.4.3 **Project Kick-Off Meeting**

3.4.3.1 This is the first meeting, organized no later than two (2) weeks after EDC, where the Contractor's and the Purchaser's teams meet, introduce themselves and review key elements of the project (objectives, planning, roles/responsibilities). The main purpose of this meeting is for the Contractor to present how they will deliver the SOW/ SSS and shall result in a revised PIP no later than two (2) weeks after the meeting (EDC + 4 weeks). This meeting shall be held at the Purchaser's facility and arranged by the Purchaser.

3.4.3.2 From the Contractor's team, at least the Project Key Personnel and their ILS specialist shall be present. From the Purchaser's side, the Project Management Team (PMT) shall be present. The PMT will include Purchaser functional resources, including: technical specialist(s), CO and ILS Officer.

3.4.4 **Project Review Meetings (PRM)**

3.4.4.1 The Contractor shall coordinate and hold Project Review Meetings (PRM) with the Purchaser.

3.4.4.2 The PRMs shall be held at least once a month throughout the Contract period of performance. These meetings, as much as possible, shall be held in conjunction with other already planned meetings.

3.4.4.3 Five working days (5) before each PRM, the Contractor shall provide a Project Status Report (PSR).

3.4.4.4 Problems shall be identified and discussed with the Purchaser PM promptly, and shall not be held until PRMs.

3.4.4.5 The PRMs shall be conducted in one of the Purchaser's sites or the Contractor's site and the location shall be subject to the Purchaser's PM's approval. By default, NCIA Mons shall be considered as the location to conduct PRMs. However, the location may vary and, where possible, be scheduled with other Project Meetings.

3.4.5 **Gate Acceptance Meeting**

3.4.5.1 The Contractor shall coordinate and hold the Gate Acceptance Meetings (GAM) with the Purchaser

3.4.5.2 The GAMs shall be held after each project phase throughout the Contract period of performance.

3.4.5.3 Ten (10) working days before each GAM, the Contractor shall provide all deliverables from the gate for the Purchaser to review.

3.4.6 **Other Meetings**

3.4.6.1 The Purchaser shall host all other meetings unless there is a specifically agreed need to review material, witness technical demonstrations or testing, or perform any other activity outside of the Purchaser's premises, as part of the meeting.

3.4.6.2 The Contractor shall identify to the Purchaser's PM any other meetings with Purchaser's personnel required to support this Contract.

3.4.6.3 Upon approval by the Purchaser's PM, the Contractor shall schedule, organise, and conduct such meetings. These meetings, if required, will be at no cost to the Purchaser and, where possible, be scheduled with other Project Meetings.

3.5 Independent Verification and Validation (IV&V)

3.5.1 The Purchaser will engage an internal IV&V function for this project. The main objective of the IV&V activity will be the evaluation of the performance of the Contractor and the

verification of the work being performed under the related effort, in particular an evaluation, based on contract requirements, of Contractor deliverables.

3.5.2 The IV&V shall also monitor, assess, and report on the Contractor's performance in order to identify, as early as possible, perceived problem areas.

3.5.3 The Contractor shall transfer to the IV&V all information deemed necessary to perform the IV&V activities, on his own initiative or on request by the IV&V or the Purchaser.

3.5.4 The Contractor shall comply with and implement the detailed IV&V requirements available in Section 8 of this SOW.

3.6 Project Portal

3.6.1 The Contractor shall maintain a NATO RESTRICTED Project Portal (provided by the Purchaser) on which all relevant (classified up to and including NATO RESTRICTED) CO-115009-FIT project documentation and datasets shall be maintained. The NATO RESTRICTED Project Portal can be created on the NATO RESTRICTED network at NCIA by the Purchaser, and accessed by the Contractor using the Purchaser provided REACH laptop(s) (***See Annex B of the Contract Special Provisions***) or any other approved device/mechanism for the exchange of NATO RESTRICTED information.

3.6.2 The Contractor shall make available to the Purchaser access to the MoM, Action Items List, Issue Log, Risk Log, Project Master Schedule, and other datasets and tools required by this SOW on the Project Portal.

3.6.3 The Contractor shall make available the Project Portal to allow the Purchaser access to the finished and in-progress items, including design specifications and documentation. The Contractor shall use version control for all documentation published in the Project Portal.

3.6.4 The Contractor shall include all vendor-provided technical documentation in the Project Portal.

3.6.5 The Contractor shall include in the Project Portal any other documents as directed by the Purchaser's PM or CO.

3.6.6 The Contractor shall clearly indicate for each document in the Project Portal whether it is part of a baseline.

3.6.7 The Contractor shall keep the portal up to date, in support of access by the users, or the Purchaser, through the warranty period, and any subsequent extensions.

SECTION 4 – SCOPE OF WORK

4.1 Contractor Activities and Deliverables

4.1.1 This section defines the general requirements for services and supplies provided under Schedule A of this Contract. Specific performance requirements will be defined as part of this Schedule. Where necessary, the Contractor shall work collaboratively with other companies/contractors/consultants delivering services at the Purchaser's site(s).

4.2 Forensic Capabilities and Deployments

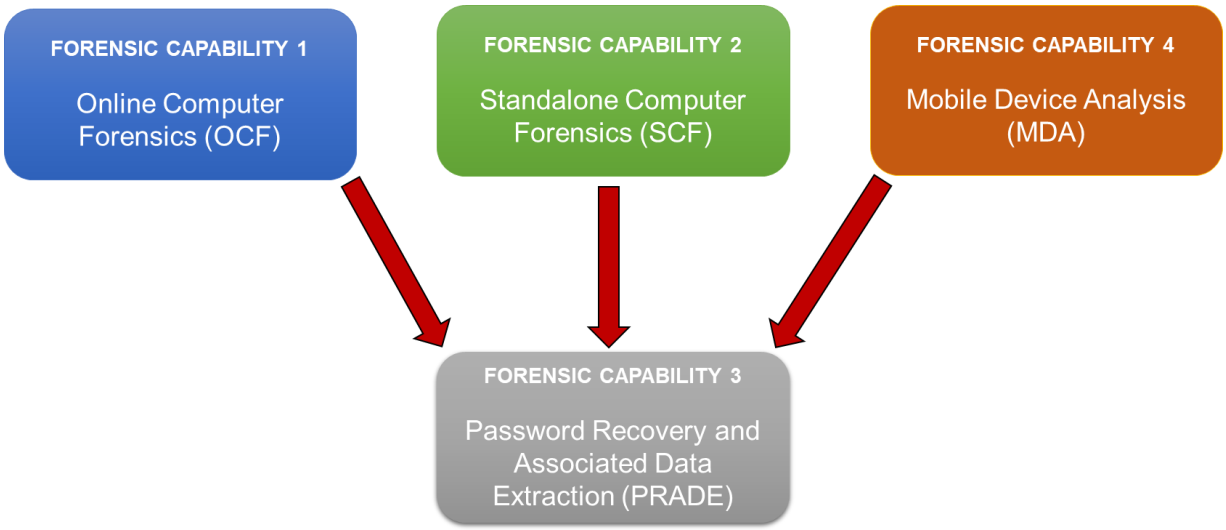
4.2.1 Overview

4.2.1.1 Owing to the replication of some requirements in different domains, and in order to provide clarity of the overall scope of the work to be performed (including the tools/services that the Contractor is to provide for each domain), Schedule A is comprised of four (4) Forensic Capabilities (FC).

4.2.1.2 The four Forensic Capabilities are as follows:

- Forensic Capability 1: Online Computer Forensics (OCF)
- Forensic Capability 2: Standalone Computer Forensics (SCF)
- Forensic Capability 3: Password Recovery and Associated Data Extraction (PRADE)
- Forensic Capability 4: Mobile Device Analysis (MDA).

4.2.1.3 To illustrate the grouping of the Forensic Capabilities, the following diagram shows, if password-protected files are encountered during a forensic investigation within the OCF, SCF, or MDA, how the forensic analyst may need to make use of the PRADE.



4.2.2 Deployments

4.2.2.1 Different instances of the Forensic Capabilities are distributed across various classification domains according to need. There are five (5) distinct deployments across two (2) levels of security classification.

4.2.2.2 The first deployment is in the live production environment NATO RESTRICTED (NR). This is the Online Computer Forensics (OCF) solution addressed by the requirements in Forensic Capability 1. This deployment covers the NU/NR networks/domains, and may include sites operating across network links with significant bandwidth constraints. Where an investigation in the NR OCF results in password protected artefacts that are to be subjected to password analysis, these artefacts are to be imported into the PRADE solution within the NS SCF environment.

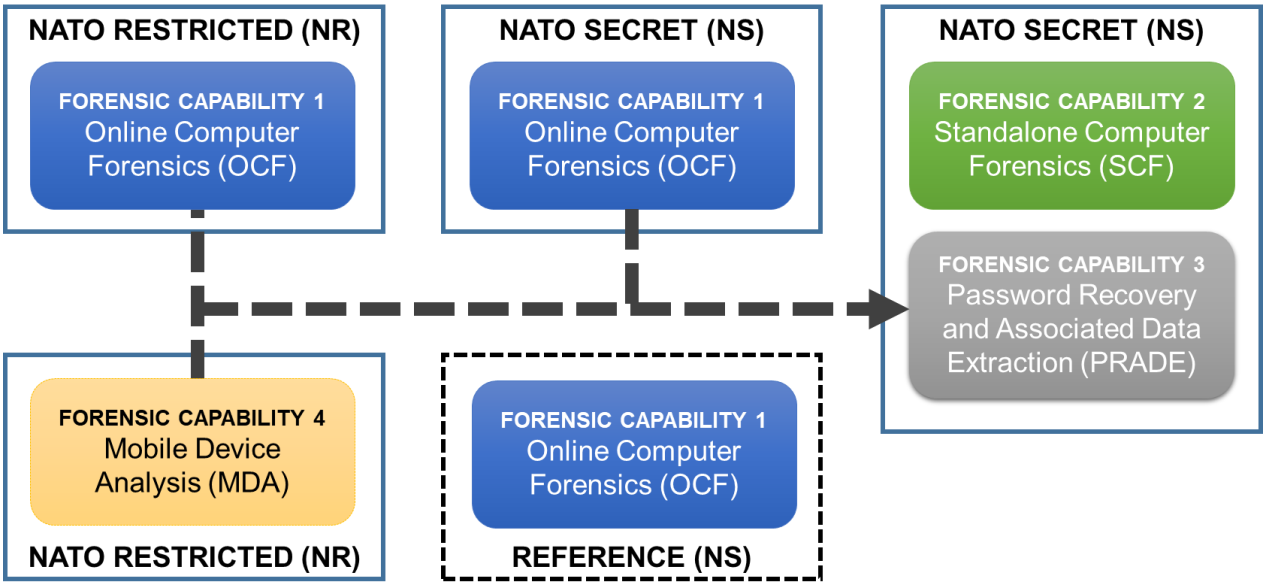
4.2.2.3 The second deployment is in the live production domain classified at NATO SECRET (NS). This is the Online Computer Forensics (OCF) solution addressed by the requirements in Forensic Capability 1. This deployment covers the NS network/domain, and may include sites operating across network links with significant bandwidth constraints. Where an investigation in the NS OCF results in password protected artefacts that are to be subjected to password analysis, these artefacts are to be imported into the PRADE solution within the NS SCF environment.

4.2.2.4 The third deployment is in the NODCERS Reference System (RS) which is classified at NATO SECRET. This is the Online Computer Forensics (OCF) solution addressed by the requirements in Forensic Capability 1. This deployment is in a test and reference system which is reprensentative of the live production deployment of OCF. This deployment is to include all components and functionality of a live system with a smaller number of monitored endpoints.

4.2.2.5 The fourth deployment is in NATO SECRET (NS). This is the Standalone Computer Forensics (SCF) solution addressed by the requirements in Forensic Capability 2 combined with the requirements in Forensic Capability 3 (PRADE). This deployment provides the SCF capability for the NS network/domain, NU/NR networks/domains, plus external and affiliated networks including in-theatre mission support such as Allied Operations and Missions (AOM). The SCF solution sits within an isolated enclave within the NS domain, disconnected from the main NS network. An assumption has been made that artefacts that are imported into the SCF environment are not reintroduced to their originating environment once forensic analysis has been completed. The SCF environment provides the PRADE solution that delivers the password cracking/recovery capabilities for all deployed solutions within this project.

4.2.2.6 The fifth deployment is in NATO RESTRICTED (NR). This is the Mobile Device Analysis (MDA) solution addressed by the requirements in Forensic Capability 4. Whilst officially part of the Standalone Computer Forensics (SCF) capability, MDA has been isolated into its own NR enclave owing to security considerations around potential cellular/wireless connectivity and the the need to be able to reintroduce lower-classified mobile devices back into their originating networks post-analysis.

4.2.2.7 The following diagram shows the five (5) different deployments of the various Forensic Capabilities:



4.3 Reference Tables

4.3.1 To aid clarity and to avoid unnecessary repetition across a number of individual requirements, this sub-section contains tables for commonly referenced elements such as file formats, file system types, and applications.

4.3.2 These reference tables are not exhaustive of all common fields/types/formats/devices in their respective categories. In every case, the list in the tables shall be the minimum expectation of the fields/formats/types/devices to be included by the requirements that reference them.

4.3.3 File System Types

4.3.3.1 Common file system types including but not limited to the following:

File Allocation Table (FAT) – All variants including ExFAT and FAT32
New Technology File System (NTFS)
Hierarchical File System Plus (HFS+)
Apple File System (APFS)
Unix/Fast File System (UFS/FFS) – All versions
Extended File System (EXT) – All variants including ext3 and ext4
Encrypting File System (EFS)
Optical disc formats including ISO 9660 and Universal Disk Format (UDF)

4.3.4 File Formats

4.3.4.1 Common file formats including but not limited to the following:

Microsoft Office Documents (DOC, DOCX, XLSX, etc)
Portable Document Format (PDF)
OpenDocument File Types (ODP, ODS, etc)
Graphics/Images (JPG, PNG, BMP, etc)
Windows Event Log (EVT, EVTX)

4.3.5 Compressed Formats / Archives

4.3.5.1 Common compression file formats and archive types including but not limited to the following:

ZIP
RAR
ARJ
ACE
7ZIP

4.3.6 Disk Images and Containers

4.3.6.1 Common disk image and container types including but not limited to the following:

Apple Disk Image (DMG)
CD/DVD-ROM Image (ISO)

4.3.7 Executable Binary Formats / Images

4.3.7.1 Common executable binary file formats / image types including but not limited to the following:

Portable Executable (PE / PE32+)
Executable and Linkable Format (ELF)
Mach Object (Mach-O) [OPTIONAL]

4.3.8 Web Browsers

4.3.8.1 Common web browser applications including but not limited to the following:

Microsoft Internet Explorer 11 and newer
Microsoft Edge 40 and newer
Mozilla Firefox 68 and newer
Google Chrome 80 and newer
Google Chromium 71 and newer
Opera 66 and newer

4.3.9 Email Clients

4.3.9.1 Common email client applications including but not limited to the following:

Microsoft Outlook -all versions incl. Express
Windows Mail (versions shipped with Windows Vista onwards)
Mozilla Thunderbird 68 and newer

4.3.10 Database Applications

4.3.10.1 Common database applications including but not limited to the following:

Microsoft SQL Server (2012 and newer)
Oracle Database (10g and newer)
PostgreSQL (version 9 and newer)
MySQL (version 8 and newer)
Microsoft Access (2013 and newer)

4.3.11 Mobile Device Types

4.3.11.1 Common mobile device types including but not limited to the following:

Smart Phones
Tablets
GPS Devices
Smart Watches

4.3.12 Mobile Device Platforms

4.3.12.1 Common mobile device platforms including but not limited to the following:

Apple iOS (version 10 and newer)
Android (version 5.0 and newer)
RIM BlackBerry (BlackBerry 10 and Android-based versions from 2013 onwards)
Windows Mobile Operating Systems (all variants from 2014 onwards)

4.3.13 Threat Intelligence Indicators of Compromise (IOC)

4.3.13.1 Common IOC objects including but not limited to the following:

Filename String (full or partial match)
Digests / hashes (functions including MD5, SHA-1, SHA-256, SHA-384, SHA-512)
Windows Registry keys and/or values
E-mail Addresses
E-mail Subject Lines
Network Connection Information (matching some or all parts of network 5-tuple data – Source Address, Source Port, Destination Address, Destination Port, Protocol)
Fully Qualified Domain Names (FQDNs)
Uniform Resource Locators (URLs)

4.3.14 Cloud-based Data Sources

4.3.14.1 Common sources of data in the cloud including but not limited to the following:

Facebook
Telegram
WhatsApp (Google drive)
WhatsApp (iCloud backup)
WhatsApp (iCloud)
Twitter
Gmail
Google Location History
Google My Activity
Google Photos
Google Calendar
Google Contacts
Google Drive
Google Bookmarks
Google Search history
Google Tasks
Google Password
Google Account
Chrome – Autofill
OneDrive
Instagram
VK
Yahoo Mail (IMAP)
Outlook Mail (IMAP)
iCloud App
iCloud Location
iCloud Calendar
iCloud Contacts
iCloud Drive
iCloud Photos
iCloud Notes
iCloud Reminder
iTunes Purchases

Safari Search history (iCloud Backup)
Safari bookmark (iCloud Backup)
Call logs (iCloud Backup)
Viber (iCloud Backup)
Dropbox

4.4 Schedule A – Forensic Capability 1: Online Computer Forensics (OCF)

4.4.1 OCF General Requirements

4.4.1.1 Where “OCF solution” is stated in these requirements, this refers to each OCF solution in separate deployments. All requirements apply equally to all domains.

4.4.1.2 The Contractor shall deliver, install, and configure three (3) deployments of an Online Computer Forensics (OCF) solution that is each comprised of one or more products integrated to provide the totality of the requirements described in this Forensic Capability.

4.4.1.3 The Contractor shall deploy one (1) OCF solution in the NATO RESTRICTED (NR) domain, one (1) OCF solution in the NATO SECRET (NS) domain, and one (1) OCF solution in the Reference System (RS) domain.

4.4.1.4 Each element of the Contractor-delivered OCF solution shall be fully licensed for one (1) year in each domain and include the highest level of support offered by the manufacturer.

4.4.1.5 The OCF solution shall not require access to the internet nor any public cloud-based services in order to perform its functions.

4.4.1.6 The Contractor shall ensure that each deployment of the OCF solution shall be able to operate completely and independently of one another.

4.4.1.7 The Contractor shall ensure that each deployment of the OCF solution contains identical product components, version, and configurations, excepting those elements that are specific to the domains in to which the OCF solution has been deployed (e.g. network addressing, domain names, user authentication configuration, etc).

4.4.1.8 The OCF solution shall not require more than two OCF-related agents (client) software on each of the monitored endpoints.

4.4.1.9 If any element of the OCF solution management components (including back-end servers, staging servers, brokers, or controllers) require installation on a Commercial Off The Shelf (COTS) operating system, then the Contractor shall ensure that it is compatible with either Microsoft Windows or Red Hat Linux and use the latest version of the operating system from the NATO Approved Fielded Products List (AFPL).

4.4.1.10 The Contractor shall integrate the OCF solution in each domain with the Purchaser’s existing SolarWinds monitoring solution in each domain.

4.4.1.11 The Contractor shall deliver each OCF solution having 99.5% Inherent Availability (Ai) based on a usage rate of 24 hours a day, seven (7) days a week (Annual Operating Rate – AOR – equal to 1).

4.4.1.12 The Contractor shall be responsible for delivering a combination of hardware, software, Services and their Support (see Section 5) so that 99.5% Operational Availability (Ao) can be achieved for each OCF solution.

4.4.2 OCF Solution Scalability Requirements

4.4.2.1 The OCF solution shall be able to manage up to 100,000 endpoints across a minimum of 150 sites per domain.

4.4.2.2 The OCF solution's storage shall be expandable by the addition of hardware.

4.4.3 OCF Connectivity Requirements

4.4.3.1 The OCF solution shall be able to manage intermittently connected endpoints, whereby commands can be issued to the endpoints and those tasks continue to execute on the endpoint should the link between the central management software and the endpoint be severed. Notifications and job/task status updates are to be resumed upon reconnection.

4.4.3.2 The OCF solution shall be able to manage endpoints across Wide Area Network (WAN) links with round-trip response latency of at least 500 milliseconds and with no more than 512kbps (kilobits per second) of bandwidth.

4.4.4 OCF Deployment Requirements

4.4.4.1 The Contractor shall install and configure all Contractor delivered hardware/software and perform all integration services at the sites agreed with the Purchaser in the System Design.

4.4.4.2 Depending on the OCF solution System Design agreed with the Purchaser, the hardware/software for the management/back-end (i.e. non-endpoint agent) elements of the OCF solution shall be deployed in central infrastructure (Tier-2, hosted in SHAPE, Mons, Belgium), remote sites (Tier-3, different geographical sites), or a combination thereof in order to achieve the required functionality.

4.4.4.3 The Contractor shall deploy endpoint agents to all sites listed in Section 4.4.4.77. These may be accessible remotely by the Contractor from facilities at SHAPE or require site visits (Section 4.4.4.88) by the Contractor to undertake the work.

4.4.4.4 The Contractor shall de-install existing OCF management/server/back-end components and install the new OCF management/server/back-end components on all sites (Section 4.4.4.77) and all domains as agreed with the Purchaser in the System Design.

4.4.4.5 The Contractor shall de-install existing OCF endpoint agent(s) and install the new OCF endpoint agent(s) on all sites (Section 4.4.4.77) on all domains as agreed with the Purchaser in the System Design.

4.4.4.6 The Contractor shall perform Site Visits to any sites as required for the complete deployment of the OCF solution, including the deployment of endpoint software agent(s).

4.4.4.7 The OCF sites are listed in the table below (note that the site number in this table is for purpose of convienience in this project only and is not an official NATO identifier/code).

Site Number	Description	City/Locale	Country	NR OCF	NS OCF
1	NATO HQ	Brussels	Belgium	Y	Y
2	SHAPE	Mons	Belgium	Y	Y
3	NATO Cyber Security Centre (NCSC)	Mons	Belgium	Y	Y
4	NODCERS Reference System	Mons	Belgium		Y
5	NATO Helicopter Management Agency (NAHEMA)	Aix-en-Provence	France	Y	
6	NATO Airborne Early Warning (NAEW)	Geilenkirchen	Germany	Y	Y
7	NATO Eurofighter Typhoon Management Agency (NETMA)	Munich	Germany	Y	
8	NATO School	Oberammergau	Germany	Y	Y
9	AIRCOM	Ramstein	Germany	Y	Y
10	Combined Air Operations Centre (CAOC)	Uedem	Germany	Y	Y
11	NATO Airlift Management Agency (NAMA)	Papa	Hungary	Y	Y
12	Centre for Maritime Research and Experimentation (CMRE)	La Spezia	Italy	Y	Y
13	Joint Force Command (JFC)	Lago Patria	Italy	Y	Y
14	Deployable Air Command and Control Centre (DACCC)	Poggio Renatico	Italy	Y	Y
15	NATO Defence College	Rome	Italy	Y	Y
16	NATO Supply Procurement Agency (NSPA)	Betzdorf	Luxembourg	Y	Y
17	NATO Supply Procurement Agency (NSPA)	Capellen	Luxembourg	Y	Y
18	Joint Warfare Centre (JWC)	Stavanger	Norway	Y	Y
19	Joint Force Training Centre (JFTC)	Bydgoszcz	Poland	Y	Y
20	Joint Analysis Lessons Learned Centre (JALLC)	Monsanto	Portugal	Y	Y
21	NCIA Academy	Oeiras	Portugal	Y	Y
22	Combined Air Operations Centre (CAOC)	Torrejon	Spain	Y	Y
23	Joint Force Command (JFC)	Brunssum	The Netherlands	Y	Y
24	NATO AWACS Programme Managament Agency (NAPMA)	Brunssum	The Netherlands	Y	
25	NATO Communications and Information Agency (NCIA)	The Hague	The Netherlands	Y	Y
26	LANDCOM	Izmir	Turkey	Y	Y
27	MARCOM	Northwood	United Kingdom	Y	Y
28	Allied Command Transformation (ACT)	Norfolk	USA	Y	Y

4.4.4.8 The Contractor shall perform vists to the following sites listed in the table below in order to perform deployments of the OCF solution, as these sites are not centrally managed from SHAPE (note that the site number in this table is for purpose of convienience in this project only and is not an official NATO identifier/code).

Site Number	Description	City/Locale	Country	NR OCF	NS OCF
5	NATO Helicopter Management Agency (NAHEMA)	Aix-en-Provence	France	Y	
6	NATO Airborne Early Warning (NAEW)	Geilenkirchen	Germany	Y	Y
7	NATO Eurofighter Typhoon Management Agency (NETMA)	Munich	Germany	Y	
11	NATO Airlift Management Agency (NAMA)	Papa	Hungary	Y	Y
12	Centre for Maritime Research and Experimentation (CMRE)	La Spezia	Italy	Y	Y
16	NATO Supply Procurement Agency (NSPA)	Betzdorf	Luxembourg	Y	Y
17	NATO Supply Procurement Agency (NSPA)	Capellen	Luxembourg	Y	Y
24	NATO AWACS Programme Managament Agency (NAPMA)	Brunssum	The Netherlands	Y	

4.4.4.9 The Contractor shall achieve 100% deployment of all OCF solution back-end/management elements in all sites and all domains agreed by the Purchaser in the System Design.

4.4.4.10 The Contractor shall achieve a minimum of 95% deployment to all endpoints within each domain at each site for all necessary endpoint software agents. For the avoidance of doubt, if the OCF solution requires two (2) agents, then both shall be required to be deployed to each endpoint.

4.4.4.11 The Contractor shall demonstrate and document, as per requirements set in sections 5.5.2 and 5.6 of this SOW, the available installation methods for each piece of OCF endpoint agent software, including how to integrate the agent deployment with Microsoft SCCM and perform manual installation of each agent through command line or script files in order to allow Purchaser's personnel to perform future additional deployments.

4.4.4.12 The endpoint agent software used in the OCF solution shall be deployable via a variety of flexible installation mechanisms supporting both centralised, enterprise methods (e.g. Microsoft SCCM) and manual, ad-hoc installation (e.g. installer executable with command line switches).

4.4.4.13 The endpoint agent software used in the OCF solution shall have a minimal installation footprint on each endpoint, with no more than 250 Megabytes of disk space required for each piece of OCF solution endpoint software.

4.4.4.14 The endpoint agent software used in the OCF solution shall have a minimal impact on endpoint performance, with no more than 512 Megabytes of Random Access Memory (RAM) used for each piece of OCF solution endpoint software during nomal monitoring of the system.

4.4.5 OCF Endpoint Agent Compatibility Requirements

4.4.5.1 The endpoint agent software used in the OCF solution shall be capable of installation and operation in both physical and virtual environments.

4.4.5.2 The endpoint agent software used in the OCF solution shall support Intel-compatible 32-bit and 64-bit editions of Microsoft Windows desktop operating systems from Windows 7 through to the latest version.

4.4.5.3 The endpoint agent software used in the OCF solution shall support Intel-compatible 32-bit and 64-bit editions of Microsoft Windows server operating systems from Windows Server 2003 through to the latest version.

4.4.5.4 The endpoint agent software used in the OCF solution shall support Intel-compatible 32-bit and 64-bit editions of major Linux operating systems including those based on Red Hat Enterprise Linux and Debian Linux using releases from year 2008 through to the latest versions.

4.4.5.5 The endpoint agent software used in the OCF solution shall be able to co-exist with agent software from other vendors, including McAfee ENS, Microsoft SCCM, and Splunk Universal Forwarders.

4.4.6 OCF Solution Security Requirements

4.4.6.1 The OCF solution shall implement secure communication between components (including endpoints to management servers, and users to the OCF user interfaces) using mutually authenticated Transport Layer Security (TLS) with configurable cipher suites.

4.4.6.2 Where the OCF solution utilizes certificate-based authentication, this shall be based on key material issued by the NATO PKI.

4.4.6.3 The OCF solution endpoint agents shall not store forensic artefacts on the endpoint, except when caching data during periods of network unavailability between the endpoint and its controlling management server(s).

4.4.6.4 The OCF solution shall implement authentication and authorization against Microsoft Active Directory based environments.

4.4.6.5 The Contractor shall configure the OCF solution to utilize the Purchaser's existing Active Directory or LDAPS infrastructure for the authentication and authorization of OCF solution user accounts.

4.4.6.6 The OCF solution shall require users to successfully login in order to perform any administrative or analytical function.

4.4.6.7 The OCF solution shall deliver configurable Role Based Access Control (RBAC) to provide separation of duties between OCF analyst users (day-to-day querying and investigation of endpoints) and OCF administrators (abilities to add/remove user accounts, change audit policies etc). The RBAC shall also allow administrators to designate which users have permission to execute playbook actions on endpoints.

4.4.6.8 The OCF solution shall deliver auditing of analyst and administrator user activities, including:

- Adding, removing, or modifying OCF analyst or administrator accounts
- Adding, removing, or modifying OCF playbooks and actions
- Execution of OCF playbooks and actions
- Querying, interrogating or extracting data from OCF endpoints
- Generating, exporting, or saving OCF reports

4.4.7 OCF Solution File Transfer Requirements

4.4.7.1 The Contractor shall integrate each OCF solution with the Purchaser's existing data diode file transit mechanism to support the secure, one-way transfer of forensic artefacts (including files and disk images) from both the NR and NS OCF solutions into the Forensic Capability 3: Password Recovery and Associated Data Extraction (PRADE) within the NS SCF environment. The Purchaser's approval for the solution design is required prior to implementation.

4.4.7.2 The Contractor shall document the transfer workflow of the data diode file transit mechanism to support users transferring files from the OCF solution in each domain into the PRADE solution within the SCF environment.

4.4.8 OCF Solution Management and Monitoring Requirements

4.4.8.1 The OCF solution shall deliver centralised consoles for performing administrative and analytical tasks in each domain.

4.4.8.2 The OCF solution product user interface(s) shall be accessible through an installed client application compatible with Microsoft Windows 10 or through either the Microsoft Internet Explorer or Mozilla Firefox web browsers on the NATO Approved Fielded Products List (AFPL).

4.4.8.3 The OCF solution shall deliver warnings, alerts, and notifications to the central console in each domain.

4.4.8.4 The OCF solution shall be able to be configured to send warnings, alerts, and notifications via email to individual or groups of email addresses in each domain.

4.4.8.5 The OCF solution shall be able to be configured to send warnings, alerts, and notifications via syslog messages in each domain.

4.4.8.6 The OCF solution shall be able to be enroll/register, manage, update, group, query, and perform all other OCF functions on each endpoint independent of any Microsoft Windows domain membership. An OCF endpoint being in a different Windows Domain to that of the OCF management server shall not negatively impact any functionality.

4.4.8.7 The OCF solution shall deliver the ability to define and edit custom tags and categories for enrolled/registered endpoints and assets in each domain.

4.4.8.8 The OCF solution shall deliver remote installation of updates and upgrades to the OCF endpoint agent software via the central management software in each domain.

4.4.9 OCF Solution User Concurrency Requirements

4.4.9.1 The OCF solution shall enable a minimum of five (5) concurrent analyst users logged into the central management software and performing any OCF functions in each domain.

4.4.10 OCF Solution Backup and Restore Requirements

4.4.10.1 The OCF solution shall enable full and partial backups of the configuration of the OCF central management software including the configuration and policies for all associated OCF endpoint agent software.

4.4.10.2 The OCF solution shall enable restoration of the OCF central management software including the configuration and policies for all associated OCF endpoint agent software from backups.

4.4.10.3 The Contractor shall integrate the OCF solution with the Purchaser's existing Symantec NetBackup backup solution in each domain.

4.4.11 OCF Solution Interoperability and Integration Requirements

4.4.11.1 The OCF solution shall implement an Application Programming Interface (API) for all of the management and OCF analyst functions.

4.4.11.2 The OCF solution Application Programming Interface (API) shall implement network communication secured with Transport Layer Security (TLS) using key material issued by the NATO PKI.

4.4.11.3 The OCF solution shall be able to be integrated with the Purchaser's deployment of Splunk.

4.4.11.4 The OCF solution shall implement the capability to export memory dumps in a format compatible with the open-source Volatility Framework for memory analysis.

4.4.11.5 The OCF solution shall implement integration with multiple sources Indicators of Compromise (IOCs) from commercial, open source, and custom in-house feeds including:

- OpenIOC
- YARA
- Malware Information Sharing Platform (MISP)

4.4.11.6 The OCF solution shall implement matching extracted files and data against fields commonly found in Indicators of Compromise (IOCs), including those listed in Reference Table 4.3.13, from sources listed in Section 4.4.11.5.

4.4.12 OCF Solution Collection and Analysis Functionality Requirements

4.4.12.1 The OCF solution shall implement the execution of tasks, collections, and analysis on sweeps/batches of varying sizes up to and including all site endpoints within the OCF instance on a domain at a time. For example, running a analysis task on 500 agents within the NR domain.

4.4.12.2 The OCF solution shall implement running tasks, collections, and analysis with rate limiting / throttling against batches of endpoints.

4.4.12.3 The OCF solution shall allow silent operation of all tasks, collections, and analysis without notifying the endpoint user of the activity that is taking place.

4.4.12.4 The OCF solution shall enable running tasks, collections, and analysis on-demand (ad-hoc) by an analyst user.

4.4.12.5 The OCF solution shall enable running tasks, collections, and analysis on an automated basis through a user-configurable schedule.

4.4.12.6 The OCF solution shall enable the collection of data from endpoints with deferred analysis (data extracted but to be analysed at a later time).

4.4.12.7 The OCF solution shall enable scheduled collection of data or interrogation of endpoints which are offline or uncontactable.

4.4.12.8 The OCF solution shall enable the ability for analysts to define pre-filters for data acquisition based on configurable criteria (e.g. severity, alerts, notification, custom defined categories/tags).

4.4.12.9 The OCF solution shall enable the ability to export data from OCF endpoints in a raw format (bit-for-bit copy).

4.4.12.10 The OCF solution shall enable the ability to export data from OCF endpoints in a format compatible with E01 (EnCase Image File).

4.4.12.11 The OCF solution shall enable the ability to filter data for analysis using common operations and logic, including writing queries using a suitable Domain Specific Language (DSL) within the search input field.

4.4.12.12 The OCF solution shall enable the ability for analysts to visually inspect data in raw hexadecimal format.

4.4.12.13 The OCF solution shall enable the ability for analysts to visually inspect and compare multiple files and data (side-by-side).

4.4.12.14 The OCF solution shall enable the capture, viewing, analysis, and export in full or in part (specified by volume or region) of raw memory from OCF endpoints.

4.4.12.15 The OCF solution shall enable the capture, viewing, analysis, and export in full or in part (specified by volume or region) of any or all attached storage volumes from OCF endpoints.

4.4.12.16 The OCF solution shall enable the capture, viewing, analysis, and export in full or in part (specified by volume or region) of the Master Boot Record (MBR) from OCF endpoints.

4.4.12.17 The OCF solution shall enable the capture, viewing, analysis, and export in full or in part (specified by volume or region) of the GUID Partition Table (GPT) from OCF endpoints.

4.4.12.18 The OCF solution shall enable the capture, viewing, analysis, and export in full or in part (specified by volume or region) of all common file system types from OCF endpoints, including those in Reference Table 4.3.3.

4.4.12.19 The OCF solution shall enable the capture, viewing, analysis, and export of OCF endpoint information, including:

- System BIOS information (including BIOS version/revision)
- Firmware information (where available)
- Serial number
- Asset tag (where available)
- Operating System Type (e.g. Windows, Linux)
- Operation System Edition and Version (e.g. “Server 2012 R2”)
- Attached storage devices (including USB storage media)
- Network interfaces and all associated address/gateway/routing information
- List of installed service packs and patches
- List of installed software packages (including vendor and version information)
- CPU Usage
- Memory Usage

4.4.12.20 The OCF solution shall enable the capture, viewing, analysis, and export of volatile data from OCF endpoints, including:

- Handles
- Mutexes
- Running Applications/Processes/Services/Daemons, including image ownership and image path
- Windows Registry Keys and/or Values
- Threads
- Loaded Drivers
- Loaded Kernel Modules
- Open Sockets
- Network Traffic

4.4.12.21 The OCF solution shall enable the capture, viewing, analysis, and export of user logins and user activities from OCF endpoints.

4.4.12.22 The OCF solution shall enable the capture, viewing, analysis, and export of Registry keys and/or values from Microsoft Windows-based OCF endpoints.

4.4.12.23 The OCF solution shall enable the identification, capture, viewing, analysis, and export of common file formats from OCF endpoints, including those in Reference Table 4.3.4.

4.4.12.24 The OCF solution shall enable the identification, capture, viewing, analysis, and export of common compressed files and archives from OCF endpoints, including those in Reference Table 4.3.5.

4.4.12.25 The OCF solution shall enable the identification, capture, viewing, analysis, and export of common executable files from OCF endpoints, including those in Reference Table 4.3.7.

4.4.13 OCF Solution Endpoint Action Requirements

4.4.13.1 The OCF solution shall deliver the ability to assemble playbooks consisting of one or more actions that are to be executed on endpoint(s).

4.4.13.2 The OCF solution shall deliver the ability to modify the execution of playbooks using data collected from endpoint(s).

4.4.13.3 The OCF solution shall deliver the ability to create a playbook action to execute any of the collection or analysis functionality detailed in the OCF requirements section.

4.4.13.4 The OCF solution shall deliver the ability to execute defined playbooks of actions on individual or selected groups of endpoints, either manually (on-demand by an analyst user) via the product(s) user interface(s) or automatically (in response to an appropriate API call).

4.4.13.5 The OCF solution shall deliver the ability to create a playbook action to execute the following file-related operations:

- Open
- Create
- Modify
- Rename
- Delete
- Execute
- Permission/mode change

4.4.13.6 The OCF solution shall deliver the ability to create a playbook action to execute the following process/service/daemon/application-related operations:

- Create
- Terminate
- Code Injection

4.4.13.7 The OCF solution shall deliver the ability to create a playbook action to execute the following user session-related operations:

- Terminate session (e.g. stop an SSH or RDP session)
- Forcibly log out a user

4.4.13.8 The OCF solution shall deliver the ability to create a playbook action to isolate the endpoint from the network (terminating all network access capability).

4.4.13.9 The OCF solution should permit the ability to create a playbook action to isolate the endpoint from the network whilst retaining analyst control and ability to execute further actions and investigation on the endpoint.

4.4.13.10 The OCF solution shall deliver the ability to create a playbook action to execute scripts of the following types (dependent on endpoint platform environment):

- Windows Batch Files
- Windows PowerShell
- UNIX Shell (bash, sh, etc)
- Python scripts

4.4.13.11 The OCF solution shall deliver the ability to create a playbook action to remotely mount any or all of the target endpoint's storage media (e.g. hard disks or attached USB storage devices) or memory (system RAM) as an accessible read-only volume (e.g. Server Message Block (SMB) share or Network File System (NFS) drive) to copy data.

4.4.14 OCF Solution Reporting Requirements

4.4.14.1 The OCF solution shall deliver the ability to produce a variety of management and operational reports.

4.4.14.2 The OCF solution shall deliver the ability to produce reports in a variety of formats including Portable Document Format (PDF), Hyper Text Markup Language (HTML) and Comma Separated Values (CSV).

4.4.14.3 The OCF solution shall deliver the ability to produce reports of the OCF endpoints enrolled/registered for a range of use cases including overall total, grouped by type (e.g. Operating System), and by user-defined endpoint categories/tags.

4.4.14.4 The OCF solution shall deliver the ability to produce a report of the number of actively connected OCF endpoints for a range of use cases including overall total, grouped by type (e.g. Operating System), and by user-defined endpoint categories/tags.

4.4.14.5 The OCF solution shall deliver the ability to produce a report of the number of inactive/disconnected/offline OCF endpoints for a range of use cases including overall total, grouped by type (e.g. Operating System), and by user-defined endpoint categories/tags.

4.4.15 OCF Training Requirements

4.4.15.1 The Contractor shall provide training on each element of the delivered OCF solution as per Section 5.6.

4.5 Schedule A – Forensic Capability 2: Standalone Computer Forensics (SCF)

4.5.1 SCF General Requirements

4.5.1.1 The Contractor shall install and configure all Contractor delivered hardware/software and perform all integration services at the Purchaser's site in SHAPE, Mons, Belgium.

4.5.1.2 The Contractor shall deliver, install, and configure a Standalone Computer Forensics (SCF) solution that is comprised of one or more products integrated to provide the totality of the requirements described in this Forensic Capability.

4.5.1.3 The Contractor shall deploy one (1) SCF solution in the NATO SECRET (NS) domain.

4.5.1.4 Each element of the Contractor-delivered SCF solution shall be fully licensed for one (1) year with the highest level of support offered by the manufacturer.

4.5.1.5 The SCF solution shall not require access to the internet nor any public cloud-based services in order to perform its functions.

4.5.1.6 The Contractor shall deliver the SCF solution having 99.5% Inherent Availability (Ai) based on a usage rate of 24 hours a day, seven (7) days a week (Annual Operating Rate – AOR – equal to 1).

4.5.1.7 The Contractor shall be responsible for delivering a combination of hardware, software, Services and their Support (see Section 5) so that 99.5% Operational Availability (Ao) can be achieved for the SCF solution.

4.5.2 SCF Network Infrastructure Upgrade Requirements

4.5.2.1 The Contractor shall deliver, install and configure one (1) rack-mounted network switch with the following specification:

- 48 usable SFP+ network ports supporting 1Gbps and 10Gbps operation
- Support for switch stacking with 480Gbps throughput
- Support for stacking power
- Dual, redundant power supplies
- Redundant fans
- Support the addition of module(s) to add a minimum of two (2) QSFP+ ports

4.5.2.2 The Contractor shall remove the existing network switch and hand to Purchaser for disposal.

4.5.2.3 The Contractor shall supply and install all 10Gbps SFP+ transceivers and suitable cabling, and perform all related configuration, installation, and migration for connection of all 10Gbps network interface ports the following systems/devices to the Contractor-delivered network switch:

- New Virtual Machine Forensics Platform (VMFP, as per Section 4.5.3)

- New Forensic Analyst Workstations (FAWs, as per Section 4.5.4), each with dual 10Gb network adapters.
- Two (2) existing HP BL465c Gen7 Server Blades. each with integrated NC551i Dual Port FlexFabric 10Gb Converged Network Adapter.
- One (1) existing SuperMicro workstation with dual 10Gb network adapters.
- One (1) existing TALINO KA-701X Forensic Workstation with 10Gb network adapter.

4.5.2.4 The Contractor shall ensure that where the systems/devices in Section 4.5.2.3 have network interface cards with more than one (1) 10Gbps network port, that all ports are connected to the Contractor-delivered 10Gbps switch unless requested by the Purchaser.

4.5.2.5 The Contractor shall ensure that the Contractor-delievered 10Gbps network switch is configured with the latest release versions of the switch vendor's firmware and software applicable to that model.

4.5.2.6 The Contractor shall confirm the number of systems, quantity of ports, compatibility of network interface cards, and suitable cabling types during the System Design and agree this with the Purchaser.

4.5.2.7 The Contractor shall update existing site documentation to reflect the network infrastructure upgrade, including those documents mentioned in Section 5.

4.5.3 SCF Virtual Machine Forensics Requirements

4.5.3.1 The SCF solution shall include a Virtual Machine Forensics Platform (VMFP) to allow forensic analysts to run copies/clones of virtual machines and captured/extracted disk images for further analysis and investigation.

4.5.3.2 The Virtual Machine Forensics Platform (VMFP) shall support the native running of VMware format virtual machine images.

4.5.3.3 The Contractor shall install and configure VMware ESXi on the VMFP using licensing provided by the Purchaser through the Purchaser's existing VMware Enterprise Licensing Agreement.

4.5.3.4 The Contractor shall deliver, install, and configure a VMFP with the following minimum specification:

- Standard 19" rack mount server
- Intel-compatible x86 64-bit Instruction Set Architecture (ISA) supporting VMware ESXi
- Dual CPU each of minimum 2.4GHz, 24 Cores, 35.75M cache, with hyperthreading support
- Minimum 1 Terabyte ECC RAM
- Minimum two (2) power supplies
- Redundant Boot Optimized Storage with minimum 2 x 240G M.2 Drives (hardware RAID-1 mirror) for hypervisor, logs etc
- RAID Controller with minimum 2GB NV (Non-Volatile) cache

- Minimum of 20 Terabytes of usable local solid state storage for virtual machine images (Resilient to at least two simultaneous disk failures)
- Remote IP-based management card supporting console access and system BIOS/firmware maintenance
- Quad port SFP+ network interface supporting 10Gbps

4.5.3.5 The Purchaser shall retain any failed storage media, including hard drives. The Contractor shall ensure that replacement storage media are supplied under vendor support contract without obligation to return failed drives at no additional cost.

4.5.3.6 The Contractor shall configure the VMFP to access the Purchaser's existing network storage solution and ensure that boot images and installation media can be used with the VMFP.

4.5.3.7 The Contractor shall supply and install all necessary power, network, rack mounting hardware and ancillary cabling for the operation of the equipment.

4.5.3.8 The Contractor shall document, within the System Design Specifications, the design and configuration of the VMFP.

4.5.4 SCF New Workstation Requirements

4.5.4.1 The SCF solution shall include six (6) Forensic Analyst Workstations (FAW) for analysts to run tools and perform investigations. Five (5) of these are designated as NS FAW, one (1) is designated as NU/NR FAW.

4.5.4.2 The Contractor shall migrate data from the existing five (5) NCIRC FOC forensics workstations to the new FAW as agreed with the Purchaser.

4.5.4.3 The Contractor shall decommission the existing five (5) NCIRC FOC forensics workstations and hand them to the Purchaser for disposal.

4.5.4.4 The Contractor shall deliver, install, and configure each FAW with the following minimum specification:

- Mid/Tower form factor system
- Intel-compatible x86 64-bit Instruction Set Architecture (ISA)
- Dual CPU each of minimum 3.7GHz turbo, 14 Cores, 19M cache, with hyperthreading support
- 512GB RAM (ECC RDIMM 2666MHz)
- Nvidia GTX1070 or better graphics card with minimum 4GB RAM and two DisplayPort connections
- Optical disc burner compatible with writing BluRay/DVD/CD
- 2TB NVMe SSD for operating system and application files
- 2TB NVMe SSD for temporary/paging/swap/cache files
- 8TB NVMe SSD for locally-stored case file data
- Windows 10 Enterprise, latest version supported on the NATO Approved Fielded Products List (AFPL)

- Minimum of four (4) USB 3.1 Type A sockets, with at least two (2) mounted on front of system
- Minimum of two (2) USB 3.1 Type C sockets, with at least one (1) mounted on the front of system
- Dual 10GB Network interface
- Dual LCD IPS 4K Display Panels with DisplayPort, each minimum 27"
- Adjustable, desk-clamped monitor arms to support the dual display panels
- APC Smart-UPS with a sufficient power rating to keep FAW running at full operation for a minimum of five (5) minutes and configured to perform a graceful shutdown of the system after that time.

4.5.4.5 The Contractor shall ensure that the FAWs support distributed, hardware-accelerated password recovery as per Section 4.6.3.

4.5.4.6 The Contractor shall supply and install all necessary power, network, display, and ancillary cabling for the operation of the equipment.

4.5.4.7 The Purchaser shall retain any failed storage media, including hard drives. The Contractor shall ensure that replacement storage media are supplied under vendor support contract without obligation to return failed drives.

4.5.4.8 The Contractor shall document, within the System Design Specifications, the design and configuration of the FAW.

4.5.5 SCF Acquisition Tools Requirements

4.5.5.1 The Contractor shall deliver, install, and configure one (1) Tableau TX1 forensic imager device with all connectivity modules, cables, adapters, software, and power supplies. For the avoidance of doubt, this includes all modules, cables, adapters, software, and power supplies that Tableau manufacture for use with the TX1 forensic imager.

4.5.5.2 The Contractor shall deliver, install, and configure one (1) Atola TaskForce evidence acquisition tool with all connectivity modules, cables, adapters, software, and power supplies. For the avoidance of doubt, this includes all modules, cables, adapters, software, and power supplies that Atola manufacture for use with the TaskForce evidence acquisition tool.

4.5.5.3 The Contractor shall deliver, install, and configure one (1) Logicube Falcon-NEO forensic imager device with all connectivity modules, cables, adapters, software, and power supplies. For the avoidance of doubt, this includes all modules, cables, adapters, software, and power supplies that Logicube manufacture for use with the Falcon-NEO forensic imager.

4.5.5.4 The Contractor shall integrate all SCF tools/devices in this section with the Contractor-delivered 10Gbps network infrastructure as per Section 4.5.2.

4.5.6 SCF Software Upgrade / Support Requirements

4.5.6.1 The Contractor shall deliver, install, and configure the specified SCF software, licenses, and associated installation media for the products described in this section.

4.5.6.2 The Contractor shall deliver, install, and configure any necessary license management mechanism (for example, a hardware security dongle or license management server) necessary for the full operation of the software products.

4.5.6.3 The Contractor shall align new software licenses with any relevant existing product licenses using information provided by the Purchaser.

4.5.6.4 The Contractor shall ensure that all software licenses are assigned and named to NCIA NCIRC Service Desk as end-user

4.5.6.5 For the avoidance of doubt, the Contractor shall provide five (5) years of licensing for each instance of each of the products named in this section.

4.5.6.6 The Contractor shall confirm the location of the existing software installations and desired targets of the new software installations with the NCIRC team during the System Design.

4.5.6.7 The Contractor shall provide four (4) license renewals for X-Ways Forensics.

4.5.6.8 The Contractor shall provide two (2) license renewals for EnCase Forensics.

4.5.6.9 The Contractor shall provide three (3) license renewals for AccessData AD Lab.

4.5.6.10 The Contractor shall upgrade the Purchaser's existing single Magnet Axiom license to provide Magnet Automate with five (5) licensed Worker Nodes plus five (5) Magnet Axiom licenses and Axiom Cloud.

4.5.7 SCF Training Requirements

4.5.7.1 The Contractor shall provide training on each element of the delivered SCF solution as per Section 5.6.

4.6 Schedule A – Forensic Capability 3: Password Recovery and Associated Data Extraction (PRADE)

4.6.1 PRADE General Requirements

4.6.1.1 The Contractor shall install and configure all Contractor delivered hardware/software and perform all integration services at the Purchaser's site in SHAPE, Mons, Belgium.

4.6.1.2 The Contractor shall deliver, install, and configure a Password Recovery and Associated Data Extraction (PRADE) solution that is comprised of one or more products integrated to provide the totality of the requirements described in this Forensic Capability.

4.6.1.3 The Contractor shall deliver the PRADE solution having 99.5% Inherent Availability (Ai) based on a usage rate of 24 hours a day, seven (7) days a week (Annual Operating Rate – AOR – equal to 1).

4.6.1.4 The Contractor shall be responsible for delivering a combination of hardware, software, Services and their Support (see Section 5) so that 99.5% Operational Availability (Ao) can be achieved for the PRADE solution.

4.6.1.5 The Contractor shall deploy one (1) PRADE solution in the NATO SECRET (NS) domain.

4.6.1.6 Each element of the Contractor-delivered PRADE solution shall be fully licensed for one (1) year and include the highest level of support offered by the manufacturer.

4.6.1.7 The PRADE solution shall not require access to the internet nor any public cloud-based services in order to perform its functions.

4.6.1.8 The PRADE solution shall implement a variety of techniques for the recovery, cracking, discovery, or reverse engineering of targets in order to acquire the plaintext password used to encrypt or otherwise secure access to the target. For the purpose of the following requirements, the range and combinations of different techniques shall be referred to simply as "password recovery".

4.6.1.9 The PRADE solution shall implement a variety of techniques for the recovery, extraction, discovery, or reverse engineering of targets in order to acquire metadata and additional non-password data (including web browsing histories) stored within the target. For the purpose of the following requirements, the range and combinations of different techniques shall be referred to simply as "associated data extraction".

4.6.1.10 If any element of the PRADE solution requires installation on a Commercial Off The Shelf (COTS) operating system, then the Contractor shall ensure that it is compatible with either Microsoft Windows or Red Hat Linux and use the latest version of the operating system from the NATO Approved Fielded Products List (AFPL).

4.6.2 PRADE Recovery Method Requirements

4.6.2.1 The PRADE solution shall implement password recovery with brute force attacks (exhaustive key search).

4.6.2.2 The PRADE solution shall implement password recovery with dictionary attacks (known strings and partial keys) including ability to generate new or utilitse pre-existing computed key hashes (rainbow tables), and provide appropriate storage capacity to support these methods.

4.6.2.3 The PRADE solution shall implement password recovery with the use of a combination of both brute force and dictionary attacks as above.

4.6.3 PRADE Hardware Accelerated Recovery Requirements

4.6.3.1 The PRADE solution shall deliver the ability to perform hardware acceleration of password recovery with Graphics Processing Units (GPUs).

4.6.3.2 The PRADE solution shall deliver the ability to distribute password recovery workload across multiple systems, to make use of two or more FAWs as per Section 4.5.4.

4.6.3.3 Distributed hardware acceleration of password recovery workloads shall support the Nvidia GTX GPUs in the Contractor-supplied FAWs as per Section 4.5.4.

4.6.4 PRADE Target Requirements

4.6.4.1 The PRADE solution shall implement password recovery from common File System Types including those specifically listed in Section 4.3.3 where the file system supports the use of a password (e.g. Encrypting File System).

4.6.4.2 The PRADE solution shall implement password recovery from common File Formats including those specifically listed in Section 4.3.4, where the file format supports the use of a password (e.g. Portable Document Format).

4.6.4.3 The PRADE solution shall implement password recovery from common Compressed Formats / Archives including those specifically listed in Section 4.3.5, where the compressed / archive file format supports the use of a password (e.g .RAR archives).

4.6.4.4 The PRADE solution shall implement password recovery from common Disk Images and Containers including those specifically listed in Section 4.3.6, where the disk image or container supports the use of a password (e.g. Apple Disk Image).

4.6.4.5 The PRADE solution shall implement password recovery from common Web Browser software including those specifically listed in Section 4.3.8, for all password-related elements within the web browser context including:

- Saved website passwords
- Built-in password safe Master Password

4.6.4.6 The PRADE solution shall implement associated data extraction from common Web Browser software including those specifically listed in Section 4.3.8 including:

- Browsing history
- Saved Forms
- Stored Auto-completion Information

4.6.4.7 The PRADE solution shall implement password recovery from common E-Mail Client software including those specifically listed in Section 4.3.9, for all password-related elements within the e-mail client context including:

- Saved email account passwords
- Built-in password safe Master Password

4.6.4.8 The PRADE solution shall implement associated data extraction from common E-Mail Client software including those specifically listed in Section 4.3.9, for metadata elements including:

- Email account identities
- Email account server settings
- Cached emails, signatures, templates, and drafts

4.6.4.9 The PRADE solution shall implement password recovery from wireless packet captures in a standard Packet Capture (PCAP) format for the following:

- Wi-Fi Protected Access (WPA)
- Wi-Fi Protected Access II Pre-Shared Key (WPA2-PSK)

4.6.4.10 The PRADE solution shall implement password recovery of backup files taken from common mobile device types (Section 4.3.11) and platforms (Section 4.3.12), where the backup file format supports the use of a password.

4.6.4.11 The PRADE solution shall implement password recovery and/or resetting of passwords for database files from common database applications including those specifically listed in Section 4.3.10.

4.6.5 PRADE Training Requirements

4.6.5.1 The Contractor shall provide training on each element of the delivered PRADE solution as per Section 5.6.

4.7 Schedule A – Forensic Capability 4: Mobile Device Analysis (MDA)

4.7.1 MDA General Requirements

4.7.1.1 The Contractor shall install and configure all Contractor delivered hardware/software and perform all integration services at the Purchaser's site in SHAPE, Mons, Belgium.

4.7.1.2 The Contractor shall deliver, install, and configure a Mobile Device Analysis (MDA) solution that is comprised of one or more products integrated to provide the totality of the requirements described in this Forensic Capability.

4.7.1.3 The Contractor shall deploy one (1) MDA solution in the NATO RESTRICTED (NR) domain.

4.7.1.4 Each element of the Contractor-delivered MDA solution shall be fully licensed for one (1) year and include the highest level of support offered by the manufacturer.

4.7.1.5 The MDA solution shall not require access to the internet nor any public cloud-based services in order to perform its functions, except for where the functionality involves acquisition of forensic evidence from public cloud-based services including those listed in Reference Table 4.3.14.

4.7.1.6 The Contractor shall deliver the MDA solution having 99.5% Inherent Availability (Ai) based on a usage rate of 24 hours a day, seven (7) days a week (Annual Operating Rate – AOR – equal to 1).

4.7.1.7 The Contractor shall be responsible for delivering a combination of hardware, software, Services and their Support (see Section 5) so that 99.5% Operational Availability (Ao) can be achieved for the MDA solution.

4.7.2 MDA Access and Extraction Requirements

4.7.2.1 The MDA solution shall implement the ability to bypass and/or recover PINs (Personal Identification Numbers), passwords, or pattern locks on a range of devices (see Reference Table 4.3.11) and platforms (see Reference Table 4.3.12) in order to extract and analyse the data contents of the device and its attached storage.

4.7.2.2 The MDA solution shall implement the ability to perform forensically sound extractions of the intact, hidden, and deleted data within the physical, logical, and file system elements on a range of devices (see Reference Table 4.3.11) and platforms (see Reference Table 4.3.12) and any attached storage.

4.7.2.3 The MDA solution shall include all hardware (including device connectors, plugs, power supplies, and adapters) and software necessary to access and extract data from a range of devices (see Reference Table 4.3.11) and platforms (see Reference Table 4.3.12).

4.7.2.4 The MDA solution shall include all hardware (including device connectors, plugs, power supplies, and adapters) and software necessary to access and extract data from Subscriber Identity Module (SIM) cards in all size formats supported by common devices (see Reference Table 4.3.11), as per ISO/IEC 7816-2:2007 and ETSI TS 102 221 V16.1.0.

- Mini-SIM (2FF, aka Plug-in UICC)
- Micro-SIM (3FF, aka Mini-UICC)
- Nano-SIM (4FF)
- eUICC (embedded UICC)

4.7.3 MDA Decoding and Search Requirements

4.7.3.1 The MDA solution shall be able to reassemble and decode extracted/recovered device and application data into human-readable formats (including hexadecimal) to be displayed on-screen and exportable from the tool.

4.7.3.2 The MDA solution shall implement the ability to highlight data of interest selected by the user or found through use of a filter/search capability within the tool.

4.7.3.3 The MDA solution shall implement the ability to carve unallocated space from device memory in order to recover deleted media and data.

4.7.3.4 The MDA solution shall implement the ability to perform fuzzy matching and searches of device memory and extracted data.

4.7.3.5 The MDA solution shall implement the ability to consolidate data from various sources and formats into a single unified view for the analyst.

4.7.3.6 The MDA solution shall implement the ability to perform searching, matching, tagging, mapping, and time-lining of data.

4.7.4 MDA Automation and Scripting Requirements

4.7.4.1 The MDA solution shall implement the ability to create and execute custom scripts to process and analyse data using the Python programming language.

4.7.5 MDA Password Recovery Requirements

4.7.5.1 The MDA solution shall implement the recovery of passwords from common file formats and archives (including those listed in the Reference Tables in Section 4.3) extracted from target devices by interfacing with a password recovery solution as per Forensic Capability 3: Password Recovery and Associated Data Extraction (PRADE).

4.7.6 MDA Reporting Requirements

4.7.6.1 The MDA solution shall implement the ability to produce a variety of management and operational reports.

4.7.6.2 The MDA solution shall implement the ability to produce reports in a variety of formats including Portable Document Format (PDF).

4.7.6.3 The MDA solution shall implement the ability to produce a report of the artefacts extracted from a device.

4.7.6.4 The MDA solution shall implement the ability to produce a report of the targeted device information (including serial and model numbers).

4.7.7 MDA Training Requirements

4.7.7.1 The Contractor shall provide training on each element of the delivered MDA solution as per Section 5.6.

4.8 Purchaser Furnished Elements (PFE)

4.8.1 The Purchaser will provide hardware, software, licenses, access, and documentation as described in the table below.

#	PFEs	DELIVERY DATE
1	Site Passes	EDC + 1 week
2	Template – Site Survey Report	EDC +1 week
3	Key material (e.g. certificates) for components in each domain as required	EDC + 2 weeks
4	Provide REACH Laptop (including licenses and user credentials) to access NCIA Project Portal and in-house feeds	EDC + 3 weeks
5	Key material (e.g. certificates) for components in each domain as required	EDC + 3 weeks
6	VMware License	EDC + 3 weeks
7	Extant Site Installation Specification (SIS)	EDC + 3 weeks
8	Extant Site Installation and Cut over Plan (SICP)	EDC + 3 weeks
9	Extant Security Implementation Verification Procedures (SIVP)	EDC + 3 weeks
10	Extant System Design Specifications (SDS)	EDC + 3 weeks
11	Extant Site Activation Checklist	EDC + 3 weeks
12	Template - System Inventory	EDC + 3 weeks
13	Template & guidance - Test, Verification, Validation and Assurance (TVVA) process, document	EDC + 3 weeks
14	Template - The Project Master Test Plan (PMTP)	EDC + 3 weeks
15	Template - Test plans for individual test events including test design specifications	EDC + 3 weeks
16	Template - The Security Test & Verification Plans (STVP)	EDC + 3 weeks
17	Template - Any submitted test Waivers together with supporting material	EDC + 3 weeks
18	Template - The Test Cases/Scripts/Steps	EDC + 3 weeks
19	Template - Test Status Reports	EDC + 3 weeks
20	Template - Test Reports	EDC + 3 weeks
21	Template - Requirements Traceability Matrix (RTM) updated with test-related information	EDC + 3 weeks
22	Template - Verification Cross Reference Matrix (VCRM)	EDC + 3 weeks
23	Template - Test Harnesses, if applicable	EDC + 3 weeks
24	NetBackup Management (to configure additional Contractor-delivered NetBackup licenses)	EDC + 3 weeks
25	SolarWinds Management (to configure additional Contractor-delivered SolarWinds licenses)	EDC + 3 weeks

4.9 Schedule Implementation

4.9.1 The Contractor shall carry out all installation and implementation activities necessary to deliver the requirements at the specified site.

4.9.2 Schedule Implementation is made up of four (4) phases:

- Site Survey
- System Design
- Installation, Implementation and Testing
- Acceptance

4.9.3 The Contractor shall follow the phases in the order listed above.

4.9.4 The Contractor shall complete each phase in its entirety before advancing to the next Phase

4.10 Gates (general overview)

4.10.1 In the interest of assuring Schedule delivery quality, all activity will culminate in a Gate. The Purchaser will hold a Gate Acceptance Meeting at the end of each Phase.

4.10.2 The objective of the gate is to formally collate all deliverables and ensure they are completed and accepted by the Purchaser to the level contractually agreed between the Contractor and the Purchaser.

4.10.3 Each Gate will have entry criteria, and exit criteria.

4.10.4 Entry Criteria are defined in accordance with the deliverables of the associated activities. Once all the entry criteria has been achieved, the Contractor shall formally state their readiness for the gate to the Purchaser's Project Manager.

4.10.5 When planning their activities, the Contractor shall assume the Purchaser requires no less than ten (10) working days to review gates deliverables.

4.10.6 At the end of each phase, the Contractor shall be responsible for the production and submission of every deliverable.

4.10.7 The exit criteria is defined for each associated gate. Exit criteria consists of a subset of the deliverables for the associated gate being accepted by the Purchaser as meeting the requirements of this Statement of Work.

4.10.8 Until the Purchaser provides written acceptance of all the exit criteria deliverables, the gate will not be passed.

4.11 Site Survey

4.11.1 The objective of the Site Survey is for the Contractor to:

4.11.1.1 Familiarize with the existing infrastructure

4.11.1.2 Confirm the current baseline and identify the old equipment to be removed

4.11.1.3 Identify any deployment constraints (for example, mechanical, electrical, cooling, etc) for the correct planning of the on-site activities

4.11.1.4 Identify all the network interfaces (physical, logical), naming, addressing, switching/routing paths/rules etc.

4.11.1.5 Identify all the software interrelations, the involved CSCIs (including the Operating Systems), the active services, the dependencies, the activation order.

4.11.1.6 Get in touch with the local POCs for shipment, uninstallation, installation, integration, testing, acceptance, disposal/hand over of the new and old equipment, training and use.

4.11.2 The Contractor shall be responsible for the site survey activity, but the Purchaser must provide adequate passage and clearance onto and within the site.

4.11.3 The Contractor shall conduct the site survey with Purchaser representatives.

4.11.4 The Contractor shall provide the details of all equipment requested to be taken on site for the purposes of the site survey. The Contractor shall only take equipment on site for the site survey that has been cleared, following the process applicable at SHAPE-Mons.

4.11.5 The Contractor shall give at least ten (10) working-day notice to coordinate in advance with the Purchaser access to any classified spaces which require an escort.

4.11.6 As a minimum, the Contractor shall produce a site survey to highlight the following:

4.11.6.1 Co-ordination of site installation periods.

4.11.6.2 Survey of the physical plant (server rooms, site layout, networking elements, etc.) and identification if additional power or civil works are required.

4.11.6.3 Coordination of the installation with the site, identifying all responsibilities, tasks, their sequence and required resources (e.g., space, personnel, data).

4.11.6.4 Identification of the exact shipment addresses and NATO Points of Contact (POCs) for subsequent equipment delivery.

4.11.6.5 Identification and documentation of any minor elements not addressed in other project documentation.

4.11.6.6 Identification and documentation of training requirements and audience for the NCIRC staff.

4.11.6.7 Coordination of a proposed work schedule and migration strategy with the site, including identification of unique technical and design issues to be considered during implementation.

4.11.6.8 Identify all necessary deployment methodologies and capabilities, routing, firewall, Operating System (OS) and other entities that require changes to facilitate deployment.

4.11.6.9 The Contractor shall identify any and all equipment pertaining to the provision of FIT components as requested in this SOW.

4.11.7 Site Survey Phase Deliverables

4.11.7.1 The deliverables for the Site Survey Phase are:

- The Site Survey
- The Site Survey Report (SSR)

4.11.8 Site Survey Report Template

4.11.8.1 The Purchaser will provide the Contractor with the Site Survey Report Template structure and quality requirements following the Project kick-off and at least ten (10) working days before the beginning of any Site Survey.

4.11.9 Site Survey Report

4.11.9.1 The Contractor shall provide the SSR not later than five (5) working days following the completion of the Site Survey.

4.11.9.2 Facilities support risks and issues shall be highlighted in the Project Status Report for the month in which they are identified.

4.11.9.3 The SSR can only be deemed as complete and Accepted by the Purchaser when the Site Survey is complete and all requirements described in Sections 4.11.1 to 4.11.6 are met.

4.11.10 Site Survey Criteria

4.11.10.1 Site Survey Entry Criteria are:

- Site Survey Template provided by the Purchaser to the Contractor

4.11.10.2 Site Survey Exit Criteria are:

- Site Survey Report completed by the Contractor
- Requirements described in Sections 4.11.1.to 4.11.6 above are met

- Purchaser Accepts the SSR

4.12 System Design

4.12.1 The objective of the System Design phase is for the Purchaser, following the Site Survey, to review the design issued by the Contractor.

4.12.2 The Contractor shall verify the provided design and identify if there are any design or implementation issues which have not been documented or described.

4.12.3 The Design Phase is where the Contractor demonstrates his understanding of the totality of the requirements and their implementation in the proposed solution. Particular attention shall be paid by the Contractor to the requirements traceability, the interfaces (user and technical) and integration with the existing systems.

4.12.4 The System Design phase will have three sequential steps:

4.12.4.1 *The System Requirements Review (SRR)* where the Contractor shall demonstrate his understanding of all the requirements and the acceptance criteria to verify and validate each requirement. The result is the first version of the Initial Verification Cross Reference Matrix (VCRM) and the Requirements Traceability Matrix (RTM).

4.12.4.2 The Preliminary Design Review (PDR) where the Contractor will deliver the following:

4.12.4.2.1 Reviewed version of the Verification Cross Reference Matrix (VCRM), covering the requirements traceability

4.12.4.2.2 Initial Configuration Item (CI) trees (Allocated Baseline)

4.12.4.2.3 Interpretation of ambiguous requirements and clear-off of any inconsistency

4.12.4.2.4 Preliminary System Design Specifications (PSDS)

4.12.4.3 The Critical Design Review (CDR) where the Contractor will deliver the following:

4.12.4.3.1 Complete Verification Cross Reference Matrix (VCRM), covering the requirements traceability vs Allocated baseline including verification/validation methods

4.12.4.3.2 Detailed CI breakdown (Final Allocated Baseline and initial Product Baseline)

4.12.4.3.3 Complete Logistic Breakdown Structure

4.12.4.3.4 Final check on all requirements

4.12.4.3.5 Credentials to access Contractors' portals/support resources

4.12.4.3.6 Final System Design Specifications (FSDS)

4.12.5 The Contractor shall be responsible for the delivery of the SRR, PDR and CDR.

4.12.6 System Design Phase Deliverable

4.12.6.1 Following the Preliminary Design Review (PDR), the Contractor shall deliver the Preliminary System Design Specifications (PSDS)

4.12.6.2 Following the Critical Design Review (CDR), the Contractor shall deliver the Final System Design Specifications (FSDS)

4.12.7 System Design Criteria

4.12.7.1 System Design Entry Criteria are:

- All requirements fully captured by the Contractor

4.12.8 System Design Exit Criteria are:

- Requirements described in Sections 4.11.1 to 4.11.5 above are met
- Purchaser Accepts the PSDS and FSDS
- ILS elements and configuration delivered and accepted by purchaser as specified in Sections 5 and 7

4.13 Installation, Implementation and Testing

4.13.1 The objective of the Installation, Implementation and Testing activity is to deliver the operational schedule. This is formed of many subordinate yet high level tasks including:

- Delivery of the material (hardware and software) to SHAPE - Mons
- Material installation
- Material integration
- Based on the Test and Acceptance Plan (TAP):
  - Preliminary Testing
  - Site Acceptance Testing (SAT)
  - Post-implementation testing
- Move into Operations (Production)
  - Update of the existing support documentation
  - Handover/Takeover from Implementation to Operations

4.13.2 The Contractor shall conduct the following regarding SAT testing:

4.13.2.1 The Contractor shall perform testing to ensure that the new material is fully operational and integrated, as defined in the TAP.

4.13.2.2 The Contractor shall perform testing on the material to ensure disruption to users is minimised as agreed in the TAP.

4.13.2.3 The Contractor shall provide a draft SAT Report for Purchaser review immediately after the test execution.

4.13.2.4 In the event of failed tests, at the Contractor's expense, and at no additional cost to the Purchaser, the Contractor shall remediate all defects raised as a result of failed testing and complete subsequent retesting, remediation and resolution activities. All remediation and resolution activities shall be completed by the Contractor within four (4) working weeks following the failed test date.

4.13.2.5 The Contractor shall update System Design Specifications documentation to incorporate changes as a result of testing.

4.13.2.6 The Contractor shall execute post-implementation testing as defined in the Test and Acceptance Plan (TAP).

4.13.2.7 **Installation into Live Environments (NR and NS)**

4.13.2.7.1 The Live Environments into which the FIT shall be deployed are the NR and NS domains.

4.13.2.7.2 Implementation in the Live Environment will be managed under the Change Management Process.

4.13.2.7.3 All Implementation, either in part or whole, shall be followed by post-implementation Testing & Reporting.

4.13.2.7.4 The Contractor shall execute the post-implementation test in accordance with the Test and Acceptance Plan (TAP):

- Prove the functional capability of the intended update;
- Prove failover or resilience where the update pertains to offer such non-functional services.

4.13.2.7.5 The Contractor shall install and integrate FIT components and provide the related initial operational support. This includes, at least:

- Shipping all required supplies to the site;
- Unpacking, installing and integrating the supplies in Purchaser provided facilities. Removal of any residue packaging and materials.

4.13.2.7.6 The Contractor shall provide original equipment manufacturer manuals for all hardware and software installed. At least one hard copy and one soft copy shall be provided for each hardware and software CI delivered to a site.

4.13.2.7.7 Although the Purchaser will provide the facilities in which the FIT capability will be installed and the external systems to which it will be interfaced, the Contractor shall be responsible for timely and complete delivery and installation of all material provided under the Schedule.

4.13.2.7.8 The Contractor shall solve all integration and interface problems that may occur during the installation, and the responsibility for the system's operation, support, and performance rests solely with the Contractor.

4.13.2.8 **Delta Documentation**

4.13.2.8.1 As part of Installation, implementation and testing, minor deviations from planned design and installation specifications may occur.

4.13.2.8.2 The Contractor shall record all such deviations within a single copy of the approved documents during the implementation, referred to as Delta editions of the documentation.

4.13.2.8.3 Through the course of the Schedule Installation and Implementation phase, the Contractor shall record Delta editions of:

- Site Installation Specification (SIS)
- Site Installation and Cut over Plan (SICP)
- Security Implementation Verification Procedures (SIVP)
- System Design Specifications (SDS)
- Site Activation Checklist

The above extant documentation shall be provided as PFE in accordance with section 4.8 from the SOW.

4.13.2.8.4 The Contractor shall ensure the Delta editions are derived from the final approved products, agreed at the Site Survey phase for the particular site.

4.13.2.9 The deliverables in the Installation, Implementation and Testing phase are:

- Equipment delivery and incoming inspection on site
- Equipment installation and labelling
- Equipment configuration and integration
- SAT Testing
- Delta SIS
- Delta SICP
- Delta SIVP
- Delta SDS
- Delta Site Activation Checklist
- SAT Report
- Support Documentation, data and materials (as per the requirements of section 5 of this SOW)

4.13.2.10 **Installation, Implementation and Testing Criteria**

4.13.2.10.1 Entry Criteria are:

- System Design Specifications

- Test and Acceptance Plan
- Project Implementation Plan

4.13.2.10.2 Exit Criteria are:

- The Purchaser Accepts the deliverables described at 4.11.2.9

4.13.2.10.3 All Testing activities shall be performed in accordance with section 8 of this Statement of Work.

4.13.3 Acceptance

4.13.3.1 This phase will be owned and controlled by NATO Cyber Security Centre (NCSC).

4.13.3.2 Entry Criteria:

4.13.3.2.1 The Contractor shall meet all entry criteria as defined in the NCIRC Service Delivery Plan for “Service Update Acceptance”.

4.13.3.3 Exit Criteria:

4.13.3.3.1 The Contractor shall meet all exit criteria as defined in the NCIRC Service Delivery Plan for “Service Update Acceptance”.

4.13.3.4 **Provisional Site Acceptance (PSA)**

4.13.3.4.1 The PSA will only be granted with a successful completion of the Independent Verification and Validation (IV&V) and once all activities within the Installation, Implementation and Testing phase have been achieved along with the following check list:

- PSA protocol (status of all deliverables) delivered and accepted
- Installation, implementation and testing of the Site completed and accepted
- Test Data records signed
- Spare parts, consumables and tools for the sites delivered and accepted
- System, assemblies, components and spares labelled
- PCA (Physical Configuration Audit) completed and conforming with the PBL and LBS
- Technical Manuals (Operation, Maintenance, Support) delivered and accepted
- Software Licences and data delivered and accepted (Licences to end not earlier than EOW)
- Only minor deficiencies left for hardware, software, Documentation (fixes to be implemented during the period PSA-FSA)
- Training completed and accepted
- Configuration Management DataBase (CMDB) delivered and accepted
- LBS and Logistic Data delivered and accepted

- Services restored and accepted as per original SLA
- Obtaining at least Interim Security Accreditation

4.13.3.5 **Final System Acceptance (FSA)**

4.13.3.5.1 The objective of the FSA Activities is to close delivery for a site.

4.13.3.5.2 The Contractor shall commence FSA upon the acceptance by the Purchaser of all deliverables within PSA along with the following:

- FSA protocol (status of all PSAs) delivered and accepted
- Minor deficiencies dragged from PSAs and major deficiencies raised in the PSA-FSA period recorded and fixed
- Warranty claims (up to FSA) listed and status recorded with expected solution dates (list of all hardware failures and software flaws to be analysed with regard to datasheets/design RMA figures to identify latent design/coding defects)
- ECPs recorded and latest PBL delivered
- All training sessions completed and accepted
- If not yet delivered, obtaining full Security Accreditation

4.13.3.5.3 Deliverables:

4.13.3.5.4 The Contractor shall have completed all the site Installation, Implementation and Testing phase and provide evidence of their acceptance by the Purchaser.

4.13.3.5.5 The Contractor shall have completed the NCIRC Service Performance Review as defined in the NCIRC Service Delivery Plan.

4.13.3.5.6 The Contractor shall provide to the Purchaser the updated Projects baselines and all documentation of the project two (2) working weeks in advance of the FSA Meeting.

4.13.3.5.7 The Contractor shall conduct a two (2) working day FSA Project Service Performance Review (SPR), demonstrating via scenarios the updated services accepted at the respective site in accordance with the SPR. The Contractor shall deliver a SPR Report five (5) working days after the completion of the SPR for Purchaser review.

4.13.3.5.8 The Contractor shall provide to the Purchaser a Lessons Identified and Learned Report.

4.13.3.5.9 The Contractor shall conduct an FSA meeting, one (1) working day's duration, where Acceptance evidence of all activities, deliverables and services of the project will be provided for final review to the Purchaser for final Acceptance, therefore, to achieve Project Closure.

4.13.3.5.10 FSA Gate Entry Criteria:

4.13.3.5.11 The Contractor shall have completed all above deliverables defined in Section 4.11.3.5.3

4.13.3.5.12 FSA Gate Exit Criteria:

- Purchaser Acceptance of all Service Update Acceptance Gates of the project
- Purchaser Acceptance of final Project Baseline
- Purchaser Acceptance of FSA Project Service Performance Review Report
- Purchaser Acceptance of the Lessons Identified and Learned Report
- Purchaser Acceptance of the FSA Meeting Report

4.13.3.5.13 Approved Fielded Products List (AFPL) and Configuration Control Process (CCP)

4.13.3.5.13.1 The Contractor shall choose software products and applications which are compliant with the Purchaser's AFPL. If the products are not AFPL compliant, the Contractor shall complete the NCIA CCP process for the software or application to be implemented and included on to the NCIA AFPL. The Contractor shall be responsible in successfully achieving inclusion for any new software upgrade or new introduction of software to the NCIA AFPL.

4.13.3.6 All Testing activities shall be performed in accordance with section 8 of this Statement of Work

4.14 Security Accreditation

4.14.1 NCIRC currently possess valid security accreditation. Due to changes to be implemented by this project NCIRC will have to be re-accredited.

4.14.2 The Contractor shall update NCIRC documentation for security accreditation with exception of Security Accreditation Plan (SAP) (see Section 2) following guidance provided by the Purchaser (Accreditation Support Office (ASO)). The SAP will be updated by the Purchaser.

4.14.3 The Contractor shall update NCIRC Security Risk Assessment (SRA) done in NATO PILAR tool.

4.14.4 4.12.4 NCIRC documentation for security accreditation will be reviewed by NATO Security Accreditation Authority (SAA). The Contractor shall address all SAA comments related to changes of the content introduced by the Contractor. There can be multiple review rounds by the SAA.

SECTION 5 – INTEGRATED LOGISTICS SUPPORT

5.1 Introduction

5.1.1 This Section details all Integrated Logistics Support (ILS) requirements of this project, covering the Through-Life Supportability aspects, that the contractor shall implement for the FITcapability.

5.1.2 An ILS Plan shall be included as part of the PIP describing all aspects of Integrated Logistic Support (Supportability Engineering) and how the Contractor proposes to meet the ILS requirements.

5.1.2.1 The ILS Plan shall detail how the Contractor proposes to meet all ILS requirements throughout the entire period of performance of the contract including the warranty period as detailed in Section 5.8 below.

5.1.3 The Purchaser will verify that the activities, deliveries, analyses and documentation delivered by the Contractor(s) are integrated, coherent and consistent with the contractual requirements.

5.1.4 The Contractor shall not degrade the current inherent availability of the Systems and of the Services after the implementation of the proposed solution(s).

5.1.5 The Contractor shall be fully responsible for the delivery of the required processes, procedures and resources (skills, tools, spares and consumables if applicable) for the implementation of the requirements and full restoration of the systems and services affected by the activities required by this contract.

5.2 Maintenance and Support Concept

5.2.1 The Maintenance and Support definitions applicable to the project are defined and detailed in Annex A.

5.2.2 The Contractor shall design/deliver the system/elements and the Support/Maintenance documentation, instructions, and resources (skills, spares, tools/test equipment) in order to allow the purchaser to fully Operate the Systems, to perform HL1/2 and SL1/2 Maintenance and Support the System up to Level 3 (centralised) from the Provisional Site Acceptance (PSA).

5.2.3 The Contractor shall be fully responsible, in accordance with the above defined Maintenance Concept, to deliver all the resources (spares, repairs, training, documentation, tools, test equipment etc.), analyses, studies required to sustain the delivered System and meet the performance and functional requirements defined in this SOW until the end of the warranty.

5.2.4 All activities on-sites beyond Purchaser capabilities/skills (as per Maintenance Concept and Contractor delivered training and documentation) required to restore the System from a critical failure shall be carried on by the Contractor by dedicated on-site interventions in no more than 24 hours from purchaser request and including the required materials and tools (hardware/software).

5.3 Logistic Support Analysis (LSA) and Reliability, Maintainability and Availability (RMA)

5.3.1 The Contractor shall develop and document a detailed Logistic Support Analysis in accordance with the ASD S3000L Specification.

5.3.2 The Contractor shall propose to the Purchasers a tailoring of the S3000L Specification, in order to define as a minimum the following elements in accordance with the Maintenance and Support levels defined in Annex A and the Maintenance Concept defined in Section 5.2:

- Full Logistic Breakdown Structure (LBS)
- Level of Repair Analysis identifying the maintenance level of each individual element of the LBS, both for Preventative (PM) and Corrective Maintenance (CM)
- Full and detailed range of PM and CM tasks (including troubleshooting) and relevant durations, periodicities, resources (skills/trades, tools, materials), Safety data/procedures.

5.3.3 The tailoring of the S3000L specification, the minimum dataset and the formats of the data/deliverables shall be agreed no later than the PDR.

5.3.4 The ILS activities shall, as a minimum, generate the data, structures and deliverables required by this SOW, subject to Configuration Management as defined in Section 7 and under the Quality constraints defined in Section 6.

5.3.5 The Contractor shall define and design the Maintenance tasks and resources associated to the new/modified/upgraded equipment in order to allow 95% of the failures to be recovered and operations to be executed at Organizational Level (HL1/2 and SL1/2) by Purchaser personnel.

5.3.6 The Contractor shall be responsible, from PSA up to the end of the Warranty period, of the HL3/4 and SL3/4 activities, for the provision of HL1/2 repairs/spares and for the provision of remote and onsite technical assistance beyond the scope and capabilities of Organizational Level Maintenance.

5.3.7 The Organizational Level maintenance shall be executed on site and shall include Preventative Maintenance, Corrective Maintenance and related troubleshooting activities to be reflected in the training, training material and Operation and Maintenance (O&M) manuals that the Contractor shall provide.

5.3.8 The Contractor shall provide the following data/elements for the hardware (including firmware) and software delivered as part of this project, in conformance with the latest applicable Product baseline (PBL, see Section 7):

- Detailed hierarchical Logistic Breakdown Structure (LBS) down to the Maintenance Significant Item (MSI);

- MSIs category (Line Replaceable Unit - LRU, Insurance Item - II, Attaching Part - AP, Technical and/or non-Technical consumable, Next Higher Assembly - NHA, not-MSI);
- Full Configuration Management data (identification of Configuration Items - CIs, type of CI, relationships, dependencies) in accordance with STANAG 4427 Ed.3 (see Section 7);
- Maintenance Level (preventative, corrective, troubleshooting) associated to each individual item identified in the LBS;
- MTBF (Mean Time Between Failure) for each hardware element down to MSI level and relevant calculation method (predicted, allocated, field data, specification) and conditions (temperature, environment etc.);
- Failure modes, failure mode ratio and criticality number and categorization for each hardware element down to MSI level (simplified Failure Modes Effects and Criticality Analysis - FMECA, including hardware & software, using MIL-STD-1629A as guideline);
- MTTR (Mean Time to Repair) for each hardware element down to MSI;
- Preventative Maintenance periodicities and durations (Mean Time Between Preventative maintenance - MTBP and Mean Time To Preventive - MTTP as per guidelines given by MIL-HDBK-338B);
- Skills/Trades and numbers;
- Population at each MSI level and QEI (Quantity per End Item);
- SMR (Source, Maintenance, Recoverability) Coding down to MSI level in accordance with AR 700-82/SECNAVINST 4410.23/AFMAN 21-106;
- Safety instructions.

5.3.9 The Contractor's provided data/items Measures of Performance (MoP) (e.g. System RMA data) shall be equal or better than those associated to the items to be replaced/upgraded/updated and shall drive the Contractor's selection of the new hardware and software in order to reduce the Life Cycle Cost of the new equipment and ensure that the requirements in 4.4.1.11, 4.4.1.12, 4.5.1.6, 4.5.1.7, 4.6.1.3, 4.6.1.4, 4.7.1.6 and 4.7.1.7 are met.

5.3.10 The Contractor shall provide Operational and Maintenance Instructions, training and manuals (see Section 5.5.2) to enable the Purchaser to Support the System up to Level 3 (centralised) and Maintain it up to HL1/2-SL1/2 as per Maintenance/Support concept defined in Section 5.2.

5.3.11 The Operational instructions shall specify the tasks, the processes and the resources required at each Support Level (as per maintenance and support concept defined in Section 5.2) including the interaction/coordination with the Maintenance activities.

5.3.12 All LSA and RMA data shall be provided both as raw MS Excel tables and as summary reports (with supporting MS Excel data, calculation methods and applicable standards and handbooks), fully consistent with the LBS and the relevant PBL.

5.4 Supply Support

5.4.1 For all the activities delivering any customization, modification, change, deletion or addition or replacement to the Systems in the scope of this project, the appointed Contractor shall calculate and provide the required spares parts (LRUs, Insurance Items),

technical and non-technical consumables at PSA – four (4) working weeks in accordance with the requirements outlined below.

5.4.2 The proposed spare parts and consumables shall be coherent and consistent with the O&M concept defined in Annex A and in Section 5.2 and with the procedures reported in the Maintenance and Operation Manuals and Training Material.

5.4.3 The Contractor shall calculate the quantity of spare parts, sufficient to give 98% confidence level (non stock-out probability) of being able to replace any mission critical MSI failing at that site during any ninety (90) days Closed-Door-Operation (CDO) period after PSA.

5.4.4 The consumables provided and to be held at site shall be both technical and non-technical (if any) in sufficient quantities to allow ninety (90) days Closed-Door-Operation (CDO) at any time starting at PSA.

5.4.5 At PSA, the consumables and spare parts shall be transferred (title) to the Purchaser.

5.4.6 After PSA, re-supply of technical consumables and repair/replenishment of spares shall be the responsibility and cost of the Contractor as per Warranty arrangements (Section 5.8).

5.4.7 After PSA, re-supply of non-technical consumables (if any) shall be the responsibility of the Purchaser.

5.4.8 The Contractor shall describe his proposed spares and consumables models and analysis techniques at CDR

5.4.9 The Contractor shall provide at CDR + eight (8) working weeks to the Purchaser PM and ILS Officer the following data, in accordance with S2000M Spec., for each list of Spare Parts and Consumables candidates and for each set of calculated spares and consumables, including (but not limited to):

- Part Number
- NCAGE (NATO Commercial and Government Entity code)
- NCAGE Data (name, address, Point of Contact – POC, etc.)
- Description/nomenclature
- MSI type
- MTBF (for Spare parts – LRUs and Insurance Items only)
- Consumption Rate (for consumables)
- Quantity per End Item (QEI)
- Recommended quantity (RQTY)
- Unit Price (UP)
- Price Unit Of Measure (UOM)
- Minimum Order Quantity (MOQ)
- SMR Code
- Turn-Around-Time (TAT) or Lead Time (LT), coherent with the SMR Code

5.4.10 In accordance with the warranty Section (Section 5.8), the repairs or replenishment of all faulty items on site shall be under the responsibility and cost of the Contractor.

5.5 Technical Documentation and Data

5.5.1 In addition to the documentation/data listed and detailed in other sections of this SOW, the Contractor shall deliver what follows (details for content in the following sections):

- Manuals
- Logistic Data
- System Inventory
- As-Built Documentation and Interface Control Documents
- Contractors' support portals and Knowledge Base

5.5.2 **Manuals**

5.5.2.1 The Contractor shall propose, at the CDR, a tailoring of the S1000D specification in order to start the development of the manuals (Interactive Electronic Technical Publications) once the business rules have been agreed.

5.5.2.2 The Contractor shall deliver the following manuals (fully compliant with S1000D Spec.):

- HL1/2 and SL1/2 Maintenance Manuals, including (but not limited to):
  - System description, controls and indicators
  - Corrective, Preventative and Troubleshooting procedures down to MSI level
  - Illustrated Parts Catalogue
- Support Levels 1, 2 and 3 Instructions, including (but not limited to):
  - Operating Instructions
  - Hardware and software Monitoring
  - Network description and management
  - Software installation, policies management, fine tuning
  - Software troubleshooting, debugging, patching, re-installation
  - Software performance improvement procedures
  - System Administrator instructions
- COTS Manuals (in their original format, PDF)

5.5.2.3 The above listed manuals shall be delivered to the Purchaser's PM and ILS Officer as a preliminary version not later than PSA – twelve (12) working weeks and be ready, used and commented when the training sessions will occur.

5.5.2.4 The Contractor shall execute a desktop verification of the manuals content, structure and layout and usability S1000D fully compliant browser and shall be QA approved before such manuals are delivered to the Purchaser.

5.5.2.5 The Purchaser will validate the manuals and will collect comments to the manuals in different stages (including the training sessions) and will provide all the comments to the Contractor not later than PSA – 4 working weeks.

5.5.2.6 The Contractor shall deliver the original version (starting from the preliminary version including the implementation of all the comments) not later than PSA – one (1) working week.

5.5.2.7 The Manuals shall be delivered as an installation package to be viewed/browsed with a S1000D fully compliant browser for Windows 10 environment.

5.5.3 **Logistic and Configuration Data**

5.5.3.1 The Contractor shall deliver the logistic and configuration data requested in Sections 5.3 and 7 in accordance with the S3000L format and in Section 5.4 in accordance with S2000M format at CDR + eight (8) working weeks and anytime there are updates/upgrades (through ECP process) affecting such data and documentation.

5.5.3.2 The logistic and configuration data shall be delivered as formal documents (including the original raw data) to the Purchaser's PM and ILS officer for assessment, commenting and eventually re-issuance if needed.

5.5.3.3 The Contractor shall agree with the Purchaser, no later than the PDR, a tailoring of the above mentioned specifications, the mandatory fields and the format of the data to be delivered.

5.5.3.4 The Contractor is fully responsible of the data, their validity, correctness and overall quality and shall update the information any time major changes are required (e.g. implementation of an ECP (See Section 7) affecting the data, amendment of incorrect numbers, improvements due to field data, escalations etc.)

5.5.4 **System Inventory**

5.5.4.1 The Contractor shall provide the Purchaser with a System inventory at least ten (10) working days before equipment delivery.

- The system inventory shall be site specific and shall include all the items furnished under the project as follows:
- All items (both Commercial Off The shelf - COTS and developmental Items - DIs, both hardware and software) down to MSI level, hierarchically structured and conforming the LBS and Product baseline (PBL);
- All interconnecting equipment/elements, either special-to-type or standard, required to install, integrate or operate the System delivered in the frame of the project;
- All special-to-type and standard tools and test equipment(both hardware and software), required to operate and maintain the delivered System and conforming with the procedures reported in the Maintenance and Support manuals and in the training
- All spare parts (any MSI category)
- All documentation (manuals, training material/handbooks, as built drawings, plans, procedures, data records and any Contract Data Requirement List - CDRL in general).
- All the Software (see Section 5.7.13).

5.5.4.2 The Contractor shall provide the Inventories in accordance with the template(s) that will be provided by the Purchaser after Contract Award.

5.5.5 **As-Built Documentation and Interface Control Documents**

5.5.5.1 The Contractor shall deliver or modify a full set of As-Built documentation (ABDs) and Interface Control Documents (ICD), in electronic format, not later than PSA – 4 working weeks, to the Purchaser's PM and ILS Officer.

5.5.5.2 Should the ABDs require corrections, the Contractor shall take in charge all Purchaser comments and re-deliver the documentation within two (2) working weeks from the reception of Purchaser comments.

5.5.5.3 The title of each drawing plus all included text and annotations shall be in English.

5.5.5.4 The appropriate NATO classification shall be on the top and bottom of each drawing.

5.5.5.5 The number and scale of each drawing (where applicable) shall be clearly indicated, in addition to the issue number of each drawing. Definition(s) may be given on the drawing, where used, or a summary sheet, or sheets, at the front of the document.

5.5.5.6 All drawings (showing physical installations) shall be to a scale of not less than 1:50.

5.5.5.7 The as-built drawings shall provide full details of how all of the major assemblies of the supplied equipment have been physically installed and mechanically/electrically integrated. As- built drawings shall be self-sufficient and independent of any other documents.

5.5.5.8 The as-built drawings shall cover the following (whatever is applicable) for any item replaced, modified or integrated in the frame of the project in the existing System/site:

- All floor and wall plans to include the physical details of all installed equipment, apparatus and devices;
- Location plans with complete details of all cross-connection frames and patch panels.
- Physical and logical details of all cable racking and cable numbers and cable functions to include as appropriate all connections, connectors and sockets;
- Details covering all wiring termination points including wire numbers and colour coding, if applicable;
- Ancillary equipment details to include, as appropriate, connection points and termination points, patch panels etc.;
- The functions of all inter-connecting cables, including cross-site cabling with their codes/labels;
- Update of existing As-Built Drawings to reflect alteration works carried out by the Contractor to existing racks, elements, panels, rooms etc.

5.5.5.9 The Contractor shall provide the ABDs in electronic form and with file formats compatible with MS Visio (2016) and Autocad (latest version).

5.5.5.10 A copy of all the ABDs shall also be provided in PDF.

5.5.6 **Contractor's support portals and Knowledge base**

5.5.6.1 The Contractor shall provide access, from PSA until the end of Warranty, to the following facilities (including but not limited to):

- OEMs and Contractor's Support portals including knowledge base, forums, technical data sheets and technical data packages, known error DBs for any hardware, software and firmware delivered in the frame of the activities required in this SOW.
- OEMs and Contractor's Helpdesk, with 24/7 guaranteed presence and support via e-mail/phone call/chat.
- OEMs and Contractor's Support pages including new software/firmware patches/releases, drivers, scripts, installation packages etc.

5.5.6.2 The Contractor shall provide credentials to access the above listed facilities.

5.5.6.3 The number of credentials/users shall be agreed not later than CDR and shall as a minimum cover one Purchaser user per site for each type of hardware, software and firmware delivered/licensed without limitations for copy and printing.

5.6 Training

5.6.1 As part of the Systems/capabilities implemented in the scope of this project, including any modification to existing hardware/software on site by the appointed Contractor, the Contractor shall deliver a full training programme including planning, preparation/design, delivery/execution and assessment of the training activities.

5.6.2 The training programme shall cover all Maintenance, Operation and Support aspects relevant to the new system and modified systems/elements in accordance with the Maintenance and Support Concept defined in Section 5.2.

5.6.3 The Contractor shall deliver one (1) Operation, Maintenance and Support training course for each new delivered system/capability (OCF, SCF, PRADE, MDA) to allow the personnel to fully operate the new capability and to perform maintenance at level 1 and 2 and support at level 1 and 2 of the delivered systems/capabilities as per Support and maintenance concept defined in 5.2 and Annex A.

5.6.4 The Contractor shall deliver one (1) Administrator training course for each new delivered system/capability (OCF, SCF, PRADE, MDA) to allow the personnel to fully install, re-install, set-up, customize, troubleshoot, patch, update, upgrade, test and release and administer the new delivered systems/capabilities (HW, SW and FW), including automation, scripting and adaptations that may be required in the life of the systems/capabilities, in line with the Support level 3 and as per Support and maintenance concept defined in 5.2 and Annex A.

5.6.5 The Contractor shall deliver each training session to a maximum of 10 trainees (per session/course) that will have a basic starting knowledge on systems similar to the ones in the scope of this project.

5.6.6 The Contractor shall deliver the training considering a 50/50 percent blend of classroom and hands-on training.

5.6.7 The Contractor shall propose and, upon purchaser concurrence, make available at no additional cost for the purchaser the system or reference system or reference environment where the training will be executed in order to maximize the effectiveness of the training.

5.6.8 The Contractor shall deliver a draft Training Plan at PDR and a final Training Plan at CDR including all the comments provided by the purchaser on the draft version.

5.6.9 The Training Plan shall describe in detail the training programme that the Contractor will implement including the proposed duration for each session, sequence of the sessions, daily planning and any other information deemed important for the correct planning and execution of the trainings.

5.6.10 The Contractor's proposed duration of the trainings shall be accepted by the Purchaser and be adequate to the content, complexity and required knowledge to be transferred to the trainees in accordance with the requirements of this SOW and the Maintenance and support concept defined in 5.2 and Annex A.

5.6.11 The Contractor shall propose to the purchaser the formats and templates for the training data and material at CDR.

5.6.12 Upon review of the proposed format and templates for the training data and material, the purchaser will provide comments (if any) or acceptance within four (4) working weeks from the reception of Purchaser's proposed format and templates for the training data and material.

5.6.13 In case of comments of the purchaser, the Contractor shall provide an amended version of the format and templates for training not later than two (2) working weeks from the reception of Purchaser's comments.

5.6.14 The Contractor shall prepare/design the training data and material on the basis of the maintenance concept (Section 5.2), specialities (maintenance, support, operation, administration), levels and requirements defined in this SOW.

5.6.15 The training data and material shall be delivered to the PM and the ILS Officer in electronic format not later than eight (8) working weeks before the expected training for Purchaser review and acceptance before training start.

5.6.16 Upon review of the training data and material, the purchaser will provide comments (if any) or acceptance within four (4) working weeks.

5.6.17 In case of comments of the purchaser, the Contractor shall provide an amended version of the training data and material not later than two (2) working weeks from the reception of Purchaser's comments.

5.6.18 The Contractor shall be responsible for the timely provision on site of the following training data and material for each trainee:

- trainee guidebook;
- Training material, properly structured and organized, including (but not limited to) video/audio material, drawings and procedures, slides/presentations, COTS documentation etc.;
- Interactive Electronic Technical Publications (in accordance with S1000D Spec.);
- Final training test questionnaire;
- Completion certificates (upon successful completion of the final test).

5.6.19 The Contractor shall be responsible for the instructor material and tools (instructor's guidebook, laptop, portable projector etc.)

5.6.20 The Contractor shall be fully responsible for the quality, content, completeness and correctness of the training material and shall implement the modifications, corrections and improvements required by the Purchaser to achieve acceptance and deliver the training accordingly.

5.6.21 The training and training material shall be delivered in simplified English language and the instructor shall be English mother tongue or proficient and certified in English language (STANAG 6001 level 4333 at least).

5.6.22 Any training session/course shall be delivered by an instructor with a minimum of two (2) years's experience of the product/system/capability involved.

5.6.23 The Contractor shall deliver and complete (achieving full purchaser acceptance) all the training sessions before PSA is granted.

5.6.24 The level 1/2 training (Maintenance and Support) and the support Level 3 training sessions shall not be run in parallel.

5.6.25 At training start, the Contractor shall make available the draft version of the Interactive Electronic Technical Publications (IETPs) to be used as integral part of the training material and data during each session.

5.7 Packaging, Handling, Storage and Transportation (PHST)

5.7.1 The Contractor shall be fully responsible for the Packaging, Handling, Storage and Transportation of the equipment to the destination site.

5.7.2 The Contractor shall define the best method for the Packaging, fulfilling as a minimum the requirements of STANAG 4280 "NATO Levels of Packaging", NATO packaging level 4.

5.7.3 The Contractor shall ship all required supplies to the specified site within the Schedule.

5.7.4 The Contractor shall be fully responsible for the decision and the selection of the proper packaging, marking and transportation means (air, sea, land), making proper

considerations about and including (but not limited to) vibrations, shocks, management of Electrostatic Discharge (ESD) sensitive devices, altitude/pressure, temperature and humidity limits not to be exceeded during the PHST activities.

5.7.5 The Contractor shall unpack and install the supplies in Purchaser provided facilities.

5.7.6 Any malfunction/failure/defect at destination, assessed at incoming inspection, inventory or testing level shall be full responsibility of the Contractor, including remediation, at no additional cost for the purchaser.

5.7.7 In such circumstances, the Contractor shall immediately notify the provider of the malfunction/failure/defect and the estimated time for correction.

5.7.8 Within ten (10) working days, the Contractor shall follow up the initial notification with a confirmed time to correct the defect.

5.7.9 PHST costs including insurances, security, Customs duties (if any), manufacturing/ adaptations and/or purchase of commercial or special boxes/packages/containers for PHST activities (e.g. including interfaces for pulling, lifting, handling etc.) and the rent/purchase/lease/use of any tool and facility (crane, forklift, box, container, storage area etc.) including Safety arrangements, aids and instructions for Contractor personnel, shall be under the sole responsibility and cost of the Contractor.

5.7.10 The Contractor shall coordinate with the Purchaser and with the local authorities the access to the site and the proper Safety and Security procedures to be put in place for the PHST activities, for installation, integration and testing (if applicable).

5.7.11 **302 Forms**

5.7.11.1 The Contractor shall be responsible for the timely request of Customs Forms 302 which are required for duty free import/export of supplies between certain countries. Following receipt of the request by the Purchaser, normally a maximum of three (3) working days are required for the issue of the form.

5.7.11.2 These forms shall be originals and can therefore not be faxed but have to be mailed or sent by mail/express courier.

5.7.11.3 In case that an express courier has to be used to ensure that the form is available in time before shipment, the Contractor shall create an account with a Contractor's designated freight forwarder (e.g. DHL, FEDEX) that the Purchaser can use for this purpose. The purchaser will provide a template detailing the required information for completion of the forms and the ILS PoC to address the requests.

5.7.11.4 If a country refuses to accept the Form 302 and requires the payment of customs duties, the Contractor shall pay these customs duties and the Purchaser shall reimburse the Contractor at actual cost against presentation of pertaining documents. Should such an event occur, the Contractor shall immediately inform the Purchaser by the fastest means available and before paying, obtain from the Customs officer a written statement establishing that his Country refuses to accept the Form 302.

5.7.11.5 Forwarding agents shall be informed of the availability of Form 302 and how this form is utilised to avoid the payment of customs duties. This Form 302 shall be added to the shipping documents to be provided to the carrier.

5.7.12 **Physical Labelling**

5.7.12.1 The site within the Schedule will provide labels with the NATO coding schema compliant with STANAG 4329 and AAP-44, which the Contractor shall attach to the equipment immediately after the equipment has completed the tests and is ready to be PSA-ed.

5.7.13 **Software Delivery**

5.7.13.1 The Contractor shall provide a detailed Software Distribution List (SWDL), which details comprehensively all CSCIs and associated software, firmware or feature/performance licenses provided under this Contract.

5.7.13.2 The SWDL shall include, the following data/elements:

- Computer software Configuration Item (CSCI) identification number
- Nomenclature
- Version number
- License key (if applicable)
- License renewal date (if applicable)
- Warranty expiration date
- Date of distribution
- Distribution location (geographically)
- Distribution target (server/workstation/client identifier etc.)
- Hosting Platform (e.g. O/S, version etc.) of the software/hardware under license
- License Expiry date (next)
- Renewal periodicity (e.g. 3m, 6m, 1y etc.)
- License media (e.g. hardware Key, Dongle, software key, simple key etc.)
- EOL/EOS (End of Life/End of Support)
- Alternative version (if any)
- Minimum Order Quantity (MOQ) for renewal (if different from Quantity=1)
- Price per license (and eventually discounts by quantity)

5.7.13.3 The Contractor shall make sure that all licenses are registered with the NCIA NCIRC Service Desk as end-user.

5.7.13.4 All the software, related information and licences shall be maintained and made available in accordance with the warranty requirements (Section 5.8)

5.7.14 **Packing Lists**

5.7.14.1 The Contractor shall establish the packing lists in such a way as to permit easy identification of the items to be delivered to destinations.

5.7.14.2 These packing lists shall accompany the shipment.

5.7.14.3 Each individual container/box from a consignment shall have one packing list in weather-proof envelope affixed to the outside of each container/box which indicates exactly what is contained inside. One copy shall also be put inside each container/box.

5.7.14.4 All deliveries shall be notified by the Contractor through the issuance of a Notice of Shipment to the Purchaser's PM and ILS PoC, at least ten (10) working days in advance of each delivery.

5.7.14.5 The Contractor shall await for the Confirmation from the Purchaser of the availability of the destination site before shipment of the equipment takes place.

5.7.14.6 The Notice of Shipment shall be accompanied by a packing list.

5.7.14.7 The Packing list shall include the following data:

- the Purchaser's Contract Number
- the Purchaser’s project number
- names and addresses of the Contractor and the Purchaser
- names and addresses of the Carrier, Consignor and Consignee (if different from Contractor or Purchaser)
- final destination address and POC
- method of shipment
- for each item shipped:
- Schedule number as per the SSS (Scope of Supply and Services)
- nomenclature
- part number
- NCAGE (coherent with the part number)
- serial number (if applicable)
- quantity
- for each box, pallet and container:
- box/pallet/container/crate/transit case etc. identification number
- number of boxes/pallets/containers/crates/transit cases etc.
- Weight (metric)
- dimensions (metric)

5.7.14.8 Each individual box/pallet/container etc. shall have one packing list in weather-proof envelope affixed to the outside of each box/pallet/container etc. which indicates exactly what is contained inside.

5.7.14.9 One copy of the same packing list shall also be put inside each box/pallet/container or package.

5.7.15 **Notice of Shipment**

5.7.15.1 Where this Section applies, ten (10) working days before each shipment of supplies, the Contractor shall provide the Purchaser with a Notice of Shipment comprising the following details:

- Shipment Date

- Purchaser Contract Number
- Schedule number
- Consignor's and Consignee's name and address
- Number of Packages/Containers
- Gross weight
- Final/Partial Shipment
- Mode of Shipment (e.g. road…)
- Number of 302 Forms used

5.7.15.2 The Contractor shall ship all required software, documentation, and installation or testing tools to the locations designated by the Purchaser.

5.7.15.3 The Contractor shall be responsible for resolving any loss incurred in shipping.

5.8 **Warranty**

5.8.1 The activities described in this section shall start immediately after the Provisional Site Acceptance (PSA) is granted. PSA is granted after all the installations/integration and testing activities are completed and accepted, including (but not limited to) spares provision, training completion and requested documentation delivered and accepted.

5.8.2 After the PSA has been achieved, FSA will be granted once all major and minor deficiencies dragged from PSA have been solved. The time between the PSA and the FSA shall not be less than four (4) working weeks to provide the Contractor with enough time to rework hardware, software and/or documentation as required.

5.8.3 At PSA, the purchaser will take title of the equipment and will perform the Operation, Maintenance and Support Activities defined in the Maintenance Concept (Section 5.2).

5.8.4 The warranty period shall start at PSA and shall complete after 12 months from FSA, except for extensions due to the Contractor(s)' induced delays.

5.8.5 All activities required to keep the Site operational beyond the responsibilities of the Purchaser, as per Maintenance Concept, including the provision of materials/repairs/tools, shall be under the responsibility of the Contractor until the end of Warranty.

5.8.6 The warranty shall cover the installation and integration activities, workmanship, adaptations, changes, analyses, documentation, software, firmware, licences and the equipment specifically provided by the Contractor for the purposes of the current Project and shall exclude all other equipment provided as PFE or NFE.

5.8.7 The hardware and software licenses shall cover at least the entire warranty period (from PSA to one year after FSA) and shall be issued and registered under the NCI Agency name.

5.8.8 The Contractor shall warrant that all equipment and software delivered and all installation work performed under this Contract conform to the requirements and are free of any defect in material, code or workmanship during the warranty period.

5.8.9 Before PSA and prior to warranty start, the activities, equipment, artefacts (including COTS hardware/software) and documentation shall remain under full responsibility of the Contractor and shall be delivered to the Purchaser, free of major[1] deficiencies.

5.8.10 The Contractor shall manage and correct all major deficiencies as class I changes in accordance with the requirements defined in Section 7.

5.8.11 The Contractor shall manage and correct all minor deficiencies as class II changes in accordance with the requirements defined in Section 7.

5.8.12 The Contractor shall warrant that all equipment and software delivered under the Contract are genuine and free of any malicious components, firmware and software to ensure overall security of the System and its supply chain.

5.8.13 The Contractor shall warrant that documentation and training provided in the scope of the project reflects the system delivered.

5.8.14 If the documentation does not reflect the product, the Contractor shall provide the updated documentation within ten (10) working days upon Purchaser's request.

5.8.15 In case of failures of NFE/PFE items due to the execution of this project or failures of Contractor delivered items, the Contractor shall repair/replace the faulty items, at its own expenses and under its responsibility, with the highest priority allocated and shall be responsible to return the item to the destination site.

5.8.16 The repairs/replenishments under warranty condition shall be at no cost for the Purchaser.

5.8.17 If the updated/upgraded systems/services are unserviceable for a period of time, during the implementation of this Project, due to Contractor induced failures (conditions above apply), the warranty period shall be extended accordingly for the site sharing the same FSA and for the amount of time the system has been unserviceable without any cost to be incurred by the Purchaser.

5.8.18 Shipment/Transportation of unserviceable items to the Contractor for repair/ replacement and the return to sender is the responsibility and cost of the Contractor.

5.8.19 Return of unserviceable equipment to Contractor facility for warranty repair/replacement shall be directly to the Contractor's facility at the address which shall be indicated by the Contractor ILS Manager.

5.8.20 If the Contractor becomes aware at any time before PSA and during warranty that a defect exists in any supplies or services or documentation, the Contractor shall promptly correct the defect.

[1] [Definition] Major deficiencies are any malfunction, error, anomaly, deviation etc. preventing the System(s), workmanship and documentation to meet the original contract performance, safety, security and interoperability requirements, including RAMT KPIs and Services Levels. Minor deficiencies are all deviations not classified as major.

5.8.21 The Contractor shall provide Software patches and software/hardware/firmware upgrades, if applicable, whenever a specific issue is reported by the Purchaser until the expiration of the warranty, at no additional cost for the Purchaser.

5.8.22 The Contractor shall provide Technical Assistance to the Purchaser or his representatives until the end of the warranty. Technical assistance information details shall be provided at CDR.

5.8.23 The Technical Assistance shall provide support in English for requests that correspond to information demands limited to the perimeter of delivered products, evolution proposals, problem reports, or any information needed by the Purchaser or its representatives, which are not included in the supplied technical documentation.

5.8.24 Under the warranty arrangements (from PSA), the Contractor shall provide 24/7 reactive maintenance/support to the Purchaser based on a combination of[2]:

- Full access (credentials) to the OEMs and Contractor's KEDB/patches/firmware-software updates/firmware-software upgrades portal of the Contractor relevant to the procured hardware/software/firmware products by the Purchaser
- Full access to OEMs and Contractor's live helpdesk (chat, video, phone call) for instructions, documentation, troubleshooting, help on support and maintenance, configuration issues, patching and fixing of any hardware/software problem/failure under purchaser responsibilities (see maintenance/support concept)
- OEMs and/or Contractor's Intervention on-site in 24hrs from the request for any critical issue beyond the Purchaser responsibilities and/or capabilities, providing also On-the-Job-Training (OJT)/instructions/documentation to purchaser personnel during the solution of the problem.

5.8.25 Under the warranty arrangements (from PSA), the Contractor shall provide continuous advice and pro-active Support/Maintenance to the Purchaser based on a combination of[3]:

- Full access (credentials) to the OEMs and Contractor's Knowledge Base (or similar DB) portal of the Contractor relevant to the procured hardware/software/firmware products by the Purchaser.
- OEMs and Contractor's periodic (e.g. weekly) bulletins/ information/ notices/ recommendations for the improvement of the settings/security of the procured hardware/software/firmware by the Purchaser.
- Active monitoring and both periodic and urgent notification of security alerts with temporary workarounds (including fixes and instructions) and follow-on release of security patches or new software/firmware releases.
- Support for hardware/software/firmware inventories management (CMDB and LBS management).

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[2] E.g. for CISCO equipment this could be through SKU: CON-AS-NS-OPT if that matches all the requirements.
The Contractors are invited to use, to the maximum extent, their and OEMs support packages/solutions whose combinations shall fulfil the requirements in this SOW.

[3] E.g. for CISCO equipment this could be through SKU: CON-AS-NW-OMS if that matches all the requirements.
The Contractors are invited to use, to the maximum extent, their support packages/solutions whose combinations shall fulfil the requirements in this SOW.

- Support, through a Single Point of Contact (SPOC) for hardware/software/firmware settings/improvements to increase Security and Performance of the delivered equipment.

5.8.26 All activities and issues arising before and during the warranty period shall be reported in the PMR minutes and AIL for tracking and closure purposes.

SECTION 6 – QUALITY ASSURANCE AND CONTROL

6.1 The Purchaser in this contract applies the NATO Standardisation Agreement, STANAG 4107 Ed. 9 “Mutual Acceptance of Government Quality Assurance” which the Contractor shall herewith accept and agree to.

6.2 The Purchaser may delegate the Quality Assurance to the appropriate Government Quality Assurance Authority (GQAA) in accordance with STANAG 4107.

6.2.1 The GQAA, when accepting the STANAG 4107 Request for GQAA Services, appoints his QA Representative(s) (QAR).

6.2.2 The Purchaser, through their own Quality Assurance, however, will retain the overall supervisory and liaison authority concerning all QA/QC matters, and for this purpose will use their own QA Personnel.

6.2.3 The term “National QAR” (NQAR) shall apply to any of the Purchaser appointed QARs, whether nominated by the GQAA or by Purchaser QA.

6.2.4 During the entire project implementation, the NQAR(s) within their own rights, defined in the Contract applicable AQAPs, shall assure the Contractor’s and Sub-Contractor’s compliance with all contractual requirements.

6.3 The Contractor shall be ISO 9001:2015 certified and shall fulfil the general requirement of STANAG 4107 Ed. 9 and, in particular:

- AQAP 2210 Ed. A Ver 2;
- AQAP 2130 Ed. 3;
- AQAP 2110 Ed. D, as applicable for the application of ISO 10012:2004;
- AQAP 2131 Ed. 2

6.4 The Contractor shall deliver as part of the PIP, a Quality Assurance Plan describing the general processes, methods and procedures in place in the Contractor organization to deliver quality work, artefacts, studies and documents as required in this SOW, including sub-Contractors and COTS elements management and integration.

6.4.1 The Contractor QA Plan will be subject to Purchaser approval and/or comments.

6.4.2 In case of comments, the Contractor shall amend the QA Plan as suggested and reissue formally the document for approval not later than four (4) working weeks after the reception of Purchaser comments.

SECTION 7 – CONFIGURATION MANAGEMENT

7.1 The Contractor shall be responsible for establishing and maintaining an effective Configuration Management (CM) organisation to implement the CM programme and manage the CM functions (configuration identification and documentation, configuration control, configuration status accounting, configuration audits).

7.2 The Contractor shall establish and maintain the CM policies, processes and practices in conformance with STANAG 4427 Ed. 3 and underpinning ACMPs (ACMP-2000, ACMP-2009, ACMP-2100) and ISO 10007:2017.

7.3 The Contractor shall implement the CM activities for any hardware, software and firmware, customization and document provided, used or defined in the frame of the project and shall integrate the COTS elements-data in order to implement a unique CM framework.

7.4 The Contractor shall define the CI trees (Baselines), hierarchically structured, clearly defining each node/leaf as Configuration Item (CI), Hardware Configuration Item (HWCI), Computer Software Configuration item (CSCI), Hardware Parts (HWP) or (Computer Software Component (CSC) in accordance with the guidelines provided in the above defined ACMPs and ISO.

7.5 The Contractor shall define and deliver, as a minimum the following Baselines:

- Allocated Baseline (ABL): it starts to be developed at the beginning of the design phase (PDR); it is established and “frozen” at the end of the design phase (at CDR - it is also known as “as-designed” baseline);
- Product Baseline (PBL): It starts to be developed at the beginning of the production phase. It is established and “frozen” at the end of the production phase (at factory integration/test).

7.6 The Contractor shall deliver the first ABL at PDR and the final ABL at CDR

7.7 The Contractor shall deliver the first PBL at FAT or at the start of Installation activities on site.

7.8 Both the ABLs and the PBLs shall be maintained under Configuration Control and subject to change management processes and procedures (CRs, ECPs, ECOs etc.) in accordance with STANAG 4427 Ed. 3.

7.9 All the baselines shall be developed, maintained and fully documented in the Contractor’s Product Lifecycle Management (PLM) tool.

7.10 For each Baseline and relevant modifications, in accordance with the Change Request (CR), Engineering Change Proposal (ECP) and Engineering Change Order (ECO) processes, the Contractor shall export for his PLM the baselines in the form of CMDBs, covering as a minimum the following relationships:

- Contract functional/non-functional requirements to Functional elements of the FBL (the FBL shall not be delivered but shall be defined and maintained by the Contractor)
- Functional Elements of the FBL to Major CIs of the ABL
- Major CIs of the ABL to Full CIs (CIs, HWCIs, CSCIs, HWPs, CSCs) tree (PBL)
- Major CIs of the PBL to Services/Sub-Services delivered by the System (mapping of CIs vs Services and vice versa)

7.11 The Contractor shall define the structure and templates of the different baselines in order to provide views, from the FBL to the PBL, with incremental content.

7.12 The Contractor shall incorporate in the baselines, under a unique hierarchical tree, all the information relevant to the OEMs/COTS hardware, software and firmware used and integrated in the System.

7.13 Each element of the PBL shall include as minimum (but not be limited to) the following pieces of information (in accordance with the type of item):

- Position in the structure (hierarchical level or indenture code)
- Physical location (Reference Designator or similar positional code) coherent with the As-Built Drawings and manuals
- Type of Configuration Item (CI, HWCI, CSCI, HWP, CSC)
- Type of MSI, coherent with the LBS
- Item identifiers (Part Number – P/N, Cage Code, Nomenclature, revision/issue, release etc.) coherent with the Contractor's defined CM numbering system, including OEMs/COTS data and their propagation in the CM tree
- Asset Data (SMR Code, Price, Price UOM, MOQ, start of warranty/licence validity etc.)
- Inventory Data (Serial Number - S/N or Licence number if applicable etc.)
- CI documentation:
  - For HWCIs/HWPs: specifications, datasheet, Certificates of Conformity (CoC), Declaration of Conformity (DoC), Items Setting Documents (ISD – how to configure hardware, software and firmware) etc.
  - For HWCIs/CIs: interconnection diagrams, interface specifications/control documents, test procedures, test records, integration data, customization/setting procedures etc.
  - For CSCIs/CSCs: software Release Notes (SRN), software test data records, software metrics (type of language, Line of Code, number of function points etc.), software Source Code (if specifically generated or modified/adapted/customised in the frame of the project), software Installation files, software Version Description Documents (VDDs), software installation/customization procedures, software settings, software operating manual etc.
- Alternative (P/N, Cage Code, Nomenclature, revision/issue, release etc.)
- NATO Stock Number (NSN)

7.14 The Contractor shall prepare and make available the PBLs and shall prepare and attend as a minimum the following Physical Configuration Audits (PCA) events:

- Pre-SAT (Site Acceptance Test) PCA – Before SAT to determine the to-be-tested Products baseline
- Post-SAT PCA – Immediately after SAT to determine the applicable PBL immediately after SAT
- Spares and consumables Audit at PSA – three (3) working weeks before PSA.

7.15 All the hardware, software and firmware elements and media and ILS and System documentation provided in the scope of this project shall be properly identified, coherent and consistent with the CM baselines in use at the time of issuance/installation.

SECTION 8 – TEST, VERIFICATION, VALIDATION AND ACCEPTANCE

8.1 This section details the Test, Verification, Validation and Acceptance (TVV&A) processes to be applied and performed under this Contract. The term TVV&A is intended to encompass all engineering/development testing, verification and validation of project delieverables and overarching acceptance of those deliverables.

8.1.1 The Contractor shall produce a Test and Acceptance Plan (TAP) that details all TVV&A activities the Contractor proposes to conduct to meet all the requirements in the SOW, requirements specifications and final design. The Purchaser will review the TAP and approve once all deficiencies have been corrected. The Purchaser will monitor and inspect the Contractor's TAP activities to ensure compliance.

8.1.2 The Contractor shall have the overall responsibility for meeting the TVV&A requirements and conducting all related activities. This includes the development of all test documentation required under this Contract, the conduct of all independent verification, validation and acceptance events, and the evaluation and documentation of the results.

8.1.3 The Contractor shall develop the TVV&A approach (in conjunction with Purchaser subject matter experts) and carryout tests of the FIT delivered capability to verify that all applicable SIS and SOW requirements are met in the operational environment and to establish benchmarks for system performance and system reliability, maintainability, and availability, according to the TAP approved by the Purchaser.

8.1.4 Where requested by the Purchaser, the Contractor shall provide test data to support all TVV&A activities.

8.1.5 The contractor shall develop use cases to test, verify and validate all requirements in the SOW, requirements specifications and final design. As a minimum these test cases shall include the following information (the Purchaser will also provide a template):

- Scope
- Approach
- Testing Environment with a block diagram of the test layout
- List of all required test equipment
- A detailed step by step procedure written so that the procedure can be clearly understood and followed by the Test Group
- Objectives and expected test results with permissible test limits
- Test data sheet(s)
- Verification Cross Reference Matrix
- Observations and Defects Sheet
- Signature Sheets

8.1.6 The Contractor shall produce and maintain a Requirements Traceability Matrix (RTM) to track the TVV&A status of all requirements during both the testing; and, independent verification, validation and acceptance activities.

8.1.7 The Contractor shall provide report(s) to the Purchaser following the completion of any TVV&A event. The Purchaser will approve the report and its findings within two (2) working days.

8.1.8 The Contractor shall include a subset of the Verification Cross Reference Matrix to show how test tasks are linked to and demonstrate specific SIS and SOW requirements, in the test procedures and test reports.

8.1.9 Modification of inaccurate or inadequate TVV&A deliverables and any subsequent work arising as a result shall be carried out at the Contractor's expense.

8.1.10 The Contractor shall provide an overall project Test Director, who will work closely with the Purchaser's assigned TVV&A lead through the execution of all TVV&A activities.

8.1.11 All TVV&A materials developed and used under this contract shall be delivered to the Purchaser.

8.1.12 The Contractor shall provide status reports to the Purchaser regarding test planning, preparation and execution progress during the planning/design and development stages.

8.1.13 The Contractor shall have the overall responsibility for meeting the TVVA requirements and conducting all related activities defined in Table 1.

TVVA Phases	Scope	Purchaser Involvement
Engineering	Internal contractor testing executed during installation, implementation and testing phase of the system to ensure the system/software conforms to the requirements and design specifications.	**Review**: Test Reports for Unit, Integration and System tests.
Qualification	Tests executed to verify the design and manufacturing process, ensure the system meets necessary design requirements, and provide a baseline for subsequent acceptance tests. *Possible tests:* *TEMPEST Testing* *Electro-Magnetic Compatibility (EMC) Testing* *General Environmental Testing* *Water/Dust Ingress Testing* *Operational Robustness Testing* *Mechanical Environmental Testing* *Environmental Control Testing*	**Review**: Test Plan, Test Cases/Scripts, Test Report, Test Data, Test Environment Baseline, Existing defects. **Participate**: Test Readiness Review (TRR), Test Execution, Test Results Review

TVVA Phases	Scope	Purchaser Involvement
	Biological & Chemical Testing *Transportation Testing* *Physical Functional System Testing* *Product Safety Testing* *User Interface Testing* *Component Testing* *Interface Testing* *Security Testing* *Integration Testing (internal to the project deliverables)*	
Factory Acceptance	To verify that production units comply with the requirement/design specifications and production can start. Confirm that all required engineering-level testing activities have been completed in accordance with the SOW. Determine if project deliverables are ready for independent verification, validation and acceptance.	**Review**: Test Plan, Test Cases/Scripts, Test Report, Test Data, Test Environment Baseline, Existing defects. Dry Run results. **Participate**: Dry Run (Optional Purchaser participation), TRR, Test Execution, Test Results Review
IVVA Assessment	Independent assessment performed with Purchaser and led by Contractor to determine whether or not a system satisfies user needs, functionality, requirements, design specifications and user workflow processes before it goes into operation. To ensure verification of quality criteria defined in **Error! Reference source not found.**, for the following tests: - **System Acceptance Test (SAT)** – Tests focused on ensuring compliance with the requirements outlined in the SOW. - **System Integration Test (SIT**) – Requirements based testing, focused on verifying integration of the different components together	**Review**: Security Test and Verification Plan (STVP), Test Cases/Scripts, Test Report, Test Data, Test Environment Baseline, Existing defects **Participate**: TRR, Test Execution, Test Results Review, User Reviews (including internal users)

TVVA Phases	Scope	Purchaser Involvement
	and with any external interface as defined by the SOW - **User Acceptance Test (UAT)** – Scenario based testing, focused on validating the system as per user needs. - **Security Tests** – Tests focused on ensuring the security criteria are met. - **RFC Evaluation** – Review by Agency Change Managers and execution of any additional evaluation as requested by Change Managers. Under normal circumstances, all required inputs are generated from earlier TVVA activities.	
Site Acceptance	To ensure that the specific site/node is installed properly per site/node installation plan and the service meets the requirements stated in the SRS. Site Acceptance (SiA) Testing is also to ensure compatibility and integration of the product with the site environment. Migration related tests are also covered under this tests. This includes integration with PFE.	**Review**: Test Plan, Test Cases/Scripts, Test Report, Test Data, Test Environment Baseline, Existing defects **Participate**: TRR, Test Execution, Test Results Review
Operational Test and Evaluation	To ensure that all the Operational Requirements Specifications (ORS) such as performance and availability have been successfully implement. Sites are successfully integrated and tested on the network level. Demonstrate that all components of the System/Application have been integrated (including other systems) to meet all the requirements of the ORS as well as all security requirements defined in the Security Accreditation Documentation Package.	**Review**: Test Plan, Test Cases/Scripts, Test Report, Test Data, Test Environment Baseline, Existing defects **Participate**: TRR, Test Execution, Test Results Review

TVVA Phases	Scope	Purchaser Involvement
	Ensure end to end delivered system works as expected and can interoperate with other Purchaser equipment	

Table 1 List of TVV&A Phases

8.1.14 TEMPEST testing will be completed by the Purchaser. The Contractor shall support TEMPEST testing of components to be deployed on the NS to ensure they meet the requirements of SDIP-27 Tempest level C. This will involve making hardware available for testing at an NCI Agency NATO facility (NCSC, Mons or CSSC, Brunssum) as directed by the Purchaser. Transporting the equipment to and from the testing facility shall be at the Contractor's expense.

8.1.14.1 After TEMPEST testing is complete, the Contractor shall send the tested equipment back to a staging facility (defined by the Contractor) and, only when authorized, equipment (in batches potentially or in its entirety) shall be delivered to the destination site for Installation, Integration and Testing. All the shipments and staging facilities/warehouses are under Contractor's responsibility and costs. Notice of Shipment shall be provided to the purchaser two (2) weeks in advance. Provisions of SOW section 5.7 apply.

8.1.14.2 The duration of testing is dependent upon the TEMPEST Level required, the type and quantity of equipment to be tested, and the availability of the test facility. It is anticipated that two to three devices could be tested per working day.

8.1.14.3 When scheduling TEMPEST testing, the Contractor shall provide sufficient notice (typically four (4) weeks) to the Purchaser. An additional Notice of Shipment shall be provided to the Purchaser two (2) weeks in advance of equipment arriving on site for TEMPEST testing. Provisions of SOW section 5.7 apply. The Contractor shall plan for a lead time of one (1) week between equipment arriving on site for TEMPEST testing and commencement of TEMPEST testing.

8.2 **Testing**

8.2.1 The Contractor shall conduct testing throughout the project lifecycle consistent with Table 1 and compliant with the following requirements:

8.2.1.1 The contractor shall provide evidence to the Purchaser of the results of these testing activities. The Contractor shall respond to any Purchaser clarification requests regarding test results or performance within two working days.

8.2.1.2 The Contractor shall demonstrate to the Purchaser that there is a testing process in place during the installation, implementation and testing phase, following the Quality Assurance requirements of this Statement of Work.

8.2.2 The Contractor shall ensure that rigorous testing, including regression testing when required, is performed at every stage of the project lifecycle in order to identify and correct defects as early as possible and minimize impact on cost and schedule.

8.2.3 The Contractor shall develop the test approach (in conjunction with Purchaser subject matter experts) and carryout tests of the FIT delivered capability to verify that all applicable SIS and SOW requirements are met in the operational environment and to establish benchmarks for system performance and system reliability, maintainability, and availability, according to the TAP approved by the Purchaser.

8.2.3.1 The Contractor shall support the Purchaser to maintain the accreditation status of the NCIRC systems via the provision of relevant information to the Purchaser to enable the update of accreditation paperwork.

8.2.3.2 The Contractor shall conduct all testing activities for any architectural changes.

8.2.3.3 The Contractor shall generate and deliver automated test procedures/cases compatible with Purchaser test management and automation tools.

8.2.3.4 In the event of failed tests, at the Contractor's expense, and at no additional cost to the Purchaser, the Contractor shall remediate all defects raised as a result of failed testing and complete subsequent retesting, remediation and resolution activities. All remediation and resolution activities shall be completed by the Contractor within four (4) working weeks following the failed test date.

8.2.3.5 In the event of failed TVVA event and the need to return to a site for re-testing, travel and per diem expenses of Purchaser personnel shall be borne by the Contractor.

8.2.3.6 The Contractor shall make use of automated testing and supporting testing tools (test management, requirement coverage, issue tracking, etc.) to the maximum applicable extent, for all system development, implementation, internal and formal tests. The process and proposed supportive tools shall be described in the Test and Acceptance Plan (TAP).

8.2.3.7 Any changes required from the application of the test procedure shall be incorporated into the subsequent test procedure by the Contractor. If only certain pages are affected, then it shall be sufficient to up-date and re-issue those pages plus cover sheet with amendment instructions. Should major changes in contents or page re-numbering be needed, then the complete section shall be re-issued by the Contractor. All changes shall be made with the agreement and approval of the Purchaser.

8.3 **Independent Verification, Validation and Acceptance (IVVA)**

8.3.1 All deliverables supplied by the Contractor under this Contract shall be independently verified and validated by the Purchaser to ensure compliance with the stated SOW clause, requirement specification or final design. IVVA shall take place once the installation,

implementation and testing phase, engineering testing, qualification testing and Factory Acceptance (FA) have been completed.

8.3.2 The Contractor shall be responsible for the planning, execution and follow-up of all IVVA events. The Purchaser will assist in preparations by reviewing and providing feedback on all Contractor produced configuration items. The Purchaser will also provide testing and engineering Subject Matter Expertise (SME) during all IVVA events to witness and assist with these events.

8.3.3 All non-testable deliverables produced by the Contractor will be verified by the Purchaser using the technique agreed in the RTM.

8.3.4 The Contractor shall identify and communicate to the Purchaser which best practices and international standards will be applied.

8.3.5 The Contractor shall submit the draft test cases for the IVVA events to the Purchaser for approval no later than four (4) weeks prior to the execution of the tests. The Purchaser shall provide comments or approval within two (2) working weeks receipt of draft test procedures. The purchaser must have the final version of the test cases available seven (7) working days prior to a TVVA event.

8.3.6 The contractor shall conduct a Test Readiness Review (TRR) meeting at least five (5) working days prior to every IVVA event.

8.3.7 The Contractor shall conduct a Test Review Meeting (TRM) no more than one (1) working day following an IVVA event. The Contractor shall ensure that the Purchaser and Contractor agree on the results of the event following the TRM. If agreement is not reached, the disputed items shall be escalated to the Purchaser's and Contractors Project Managers.

8.3.8 The Contractor shall strictly follow the Purchaser's IVVA process, document templates and guidance provided by the Purchaser.

8.3.9 The Contractor shall use tools for requirements coverage, defect management and test management those are selected and hosted by the Purchaser. For any internal work, the Contractor may use their own internal tools, but they must be able to share data and information with those selected and hosted by the Purchaser.

8.3.10 The Contractor shall support post go-live activities during the Service Operation and Operational Test and Evaluation period. This will allow for the evaluation of the capability's operational requirements such as performance and availability. It will also establish benchmarks for future enhancements, including any changes made to fulfil the requirements.

8.3.11 All results of all formal IVVA activities performed during a given day shall be recorded in the test management tool. The Contractor shall provide these test results for any given day by the start of the next working day (0900 AM), or as agreed by the Purchaser following the completion of IVVA activities.

8.3.12 For each IVVA event defined in Table 1, the Contractor shall perform the following activities:

8.3.12.1 Planning and management of the test event;

8.3.12.2 The design and development of all tests cases and associated documentation required under this Contract;

8.3.12.3 The conduct of all IVVA events;

8.3.12.4 Recording and reporting the results;

8.3.12.5 Planning and executing remedial actions including full or partial re-running of the IVVA event.

8.3.12.6 Closure of the of test events (including the final version of all test artefacts created during the test event).

8.3.13 The Contractor shall only proceed to the next formal IVVA activity, after the successful completion of the previous IVVA activity and/or agreement/approval by the Purchaser.

8.3.14 The Contractor shall provide all items required and identified in this SOW. The Purchaser has the right to cancel the TRR and/or IVVA event if the evidence demonstrates that execution of the IVVA event will not be effective or that the Contractor is not prepared.

8.3.15 The Contractor shall use the Purchasers' categorization nomenclature for all defects and non-compliances.

8.3.16 The Contractor shall describe in the TAP what training (if any) will be provided prior to formal IVVA events.

8.3.17 The start and/or ending of any IVVA activity shall be subject to the Purchaser approval. In the event that critical issues or more than ten (10) major issues are encountered which impact the IVVA event, the Purchaser has the right to stop the testing for Contractor's investigation. The tests can only re-start if the Purchaser agrees to continue testing from the point of failure or re-start testing from the beginning. If testing cannot continue, part of all of a test event shall be re-run.

8.3.18 For each IVVA event, the Contractor shall provide log/record of the event, including but not limited to individual test results, test execution durations, deviations during execution and sign-off for each result by both the Contractor and Purchaser.

8.3.19 At the end of the project, the Contractor shall provide the final version of all artefacts (regardless of format) created during the execution of all IVVA activities.

8.3.20 The Contractor shall produce and maintain the Requirement Traceability Matrix (RTM) which includes all functional and non-functional requirements throughout the Contract execution to demonstrate and confirm that the verification and validation methods have successfully verified the requirements and that those requirements are tracked. The

Purchaser will review and approve the proposed RTM. The RTM must be provided in a format that can be imported into the Purchaser's test management tools.

8.3.21 The Contractor shall identify in the RTM how each requirement will be verified at each of the IVVA activities. As a minimum, it shall consist of the following items and may be merged with the RTM into one configuration item upon agreement with the Purchaser:

8.3.21.1 The verification method: Inspection, Analysis, Test or Demonstration

8.3.21.2 Correspondent test phase(s) for each requirement

8.3.21.3 Coverage Status

8.3.22 The Contractor shall provide the Purchaser with updates (via the automated tools) to the RTM daily during the execution of each IVVA event, and following the conclusion of each event defined in Table 1. A workflow for updating the RTM shall be proposed by the Contractor and approved by the Purchaser

8.3.23 The Contractor shall provide the Purchaser with a System Test Documentation Package, following documentation templates provided by the Purchaser, that is comprised of the following documents:

Work Product Name	Sent to Review/Approve
The Test and Acceptance Plan (TAP)	*4 weeks after contract award*
Test plans for individual test events including test design specifications	*2 months before IVVA event*
The Security Test & Verification Plans (STVP)	*2 months before IVVA event*
Security Implementation Verification Procedures (SIVP)	*4 weeks before IVVA event*
Any submitted test Waivers together with supporting material	*4 weeks before IVVA event*
The Test Cases/Scripts/Steps	*4 weeks before IVV event*
Status Reports	*Periodically (to be agreed in TAP)*
The Test Reports	*2 days after IVVA event*
System under-test Documentation	*2 weeks before IVVA event*
The Requirements Traceability Matrix (RTM) updated with test-related information	*First with TAP and update per test event*

Table 2 Test Documentation

8.3.24 If applicable, the Contractor shall develop and validate any Test Harnesses, simulators and stubs, including all script/code/data/tools required to execute the planned functional

and non-functional tests in the Test Environment. The Test Harnesses for PFE will be provided by the Purchaser.

8.3.25 The Contractor shall produce a section in the Test and Acceptance Plan (TAP) to address the plans for each IVVA activity listed in this document

8.3.26 The Contractor shall describe how the Quality Based Testing is addressed and implemented in the TAP. Figure 1 is based on ISO 25010 and should be used as product quality criteria model.

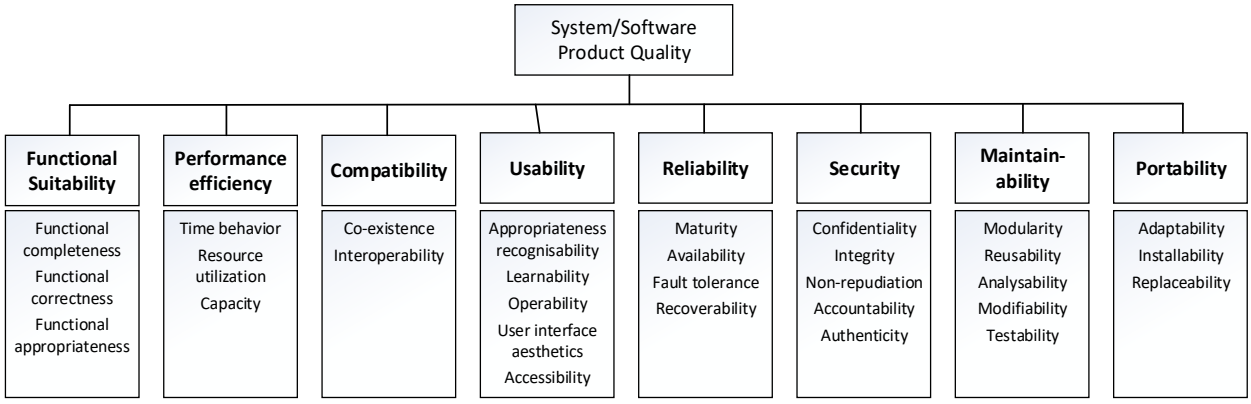


Figure 1 Product Quality Criteria

8.3.27 The Contractor shall describe all formal IVVA activities in the TAP with a testing methodology and strategy that fit the development methodology chosen by the project.

8.3.28 The Contractor shall describe in the TAP how the following objectives will be met:

8.3.28.1 Compliance with this SOW.

8.3.28.2 Verification that the design produces the capability required

8.3.28.3 Compatibility among internal system components

8.3.28.4 Compliance with the SRS requirements

8.3.28.5 Compliance with external system interfaces and/or systems (interoperability)

8.3.28.6 Confidence that system defects are detected early and tracked through to correction, including re-test and regression approach

8.3.28.7 Compliance with the stated Purchaser policies and guidance (i.e security regulations, etc)

8.3.28.8 Operational readiness and suitability

8.3.28.9 Product Quality Criteria (Figure 1)

8.3.29 The Contractor shall identify which platform(s) to be used for all IVVA events and the responsibilities for configuration control, operation and maintenance of the environment.

8.3.30 The Contractor shall describe their test organization and its relationship with the Contractor's Project Management Office and Quality Assurance (QA) functions in the TAP.

8.3.31 The Contractor shall identify the "Entry", "Suspension", "Resumption" and "Exit" criteria for each of the formal IVVA activities.

8.3.32 The Contractor shall provide the overall TVV&A schedule (including all IVVA events) in the TAP.

8.3.33 The Contractor shall describe how defects/non-conformances encountered during IVVA events will be reported, managed and remedied.

8.3.34 The Contractor shall describe their approach to Test Reviews, including TRRs and TRMs for each IVVA event.

8.3.35 The Contractor shall produce a STVP, to ensure that the Security testing, including verification of compliance with NATO CIS security regulations is applied. This is an integral part of the IVVA process.

8.3.36 The Contractor shall obtain the approval of the Purchaser regarding the environments the formal IVVA events will take place on and in requesting the approval, indicate what support is required from the Purchaser to configure and prepare the environment. This includes any required data from the Purchaser required for the test event. The Reference Environment Configuration shall be formally controlled using configuration management tools, and each baseline that will enter into a contractual event shall be delivered to the Purchaser for approval prior to TRR.

8.3.37 The Contractor shall ensure that all test/reference environments are under proper change management and configuration control. The Change Management and Configuration Control specific toolset and process shall be approved by the Purchaser.

8.3.38 The Contractor may request a Test Waiver if the Contractor has previously successfully completed qualification testing to national or international standards for assemblies, subassemblies components or parts. The Purchaser, after review of test waiver request and analysis of their impact, reserves the right to require formal IVVA of the modified equipment at no cost to the Purchaser. The Purchaser has the right to reject any test Waiver. If the Purchaser grants the waiver, the Contractor shall execute the Testing in accordance with the waiver.

8.3.39 In respect to a requested waiver, the Contractor shall certify that the test environment to be implemented is identical to that which was originally used for testing, or advice the Purchaser of design/construction changes which affect form, fit or function.

8.3.40 The Contractor shall record and log all waiver requests along with their disposition submitted for the Purchaser's approval.

SECTION 9 – GENERAL SAFETY REQUIREMENTS

9.1 The Contractor shall undertake all measures to comply and ensure compliance with respective Regulations for Industrial Safety applicable throughout this project.

9.2 When working at the Purchaser's facilities, the Contractor shall comply with all safety and security directives applicable to the site.

9.3 The equipment and installations that are subject to this SOW shall be designed and constructed in such a way that they do not run in a hazardous condition or put human safety at risk.

9.4 Health and Safety (H&S) is a continuous process which addresses all areas, including where the Contractor shall apply best practices in accordance with EU and respective national H&S legislation for all areas of construction and build. The Contractor shall work with the Purchaser to identify all hazards that exist and shall, as part of this activity, ensure that all personnel (operators and maintainers etc.) are provided with suitably designed and constructed equipment and are trained and provided with any necessary additional equipment to minimise the risk of accidents or injury.

9.5 The Contractor shall ensure that Warning Markings shall be as permanent as the normal life expectancy of the equipment on which they are affixed and shall be placed as close as possible to the point of danger.

9.6 All warning instructions shall be provided in three languages: English, French and Dutch.

9.7 Training and provided documentation shall prominently identify hazardous situations and the preparation, precautions and actions to avoid and contain them.

9.8 If lifting devices, ladders, safety equipment, special tools or harnesses are required, the Contractor shall provide them. No special or difficult techniques that require unusual dexterity or skill in removing or installing items can be assumed.

9.9 **Grounding and lightning protection:**

9.9.1 The installation of any equipment supplied under this Contract shall be properly connected to the grounding system in accordance with National safety regulations and INFOSEC requirements.

9.9.2 Safety grounding shall be in accordance with safety regulations, including IEC 60364-5-54:2011.

9.10 **Electrical installations and signal cabling:**

9.10.1 All equipment used shall be ambient physicochemical and fluids resistant.

9.10.2 All equipment and material delivered shall be new, of high quality, of standard manufacturing, known brand and manufacturer with good logistic support.

9.10.3 Hybrid and self-made equipment are not allowed.

9.10.4 The system shall be designed to operate using an external mains power supply conforming to International Electrotechnical Commission standard IEC 60038:2009, 400/230 V, 50 Hz.

9.10.5 Protective devices used (if any) shall include (but not be limited to) Earth Leakage Current Detectors/Circuit Breakers, which shall conform to IEC 60364.

9.10.6 All conductors and appropriate hardware shall be rated for current carrying capacity in accordance with the applicable industry standards.

9.10.7 The contractor will add an additional 10% margin on the total estimated power budget in order to account for future upgrades of CIS equipment.

9.10.8 All cables shall have non-toxic, non-flammable coating.

9.10.9 Free movement of cables shall be assured when equipment is pulled out for maintenance/repair.

9.10.10 Wires and cables shall be placed and protected as to prevent contact with rough irregular surfaces and sharp edges. Cables connecting to components mounted onto doors or panels shall be protected so that no possibility of damage arises during opening and closing of doors or panels.

9.10.11 Cable harnesses shall be routed away from heat generating equipment and no wire or cable connection shall be in tension.

9.10.12 All soldered connections shall be clean and smooth in appearance and shall provide excellent electrical conductivity. The insulation of soldered wires shall not show damage from the heat of the soldering operation.

9.10.13 Electrical power plugs and sockets, shall be of the European type, conforming to IEC TR 60083 and EN 60309 series.

9.11 **Environmental protection:**

9.11.1 The Contractor must take all reasonable and practical measures to protect the public and his own employees against accidents, and to safeguard the environment and apply the best practices available in the field.

9.11.2 The Contractor shall maintain and make available upon request by the NCIA:

9.11.2.1 A copy of his environmental management system policy;

9.11.2.2 Licenses and permits issued by the relevant authorizing authorities;

9.11.3 In the provision of the services and products that are subject to this SOW, the Contractor shall be in compliance with, as a minimum, European Union (or equivalent from a non-EU

NATO country) environmental protection regulations and the national implementation references (i.e. law, regulation) pursuant to the EU Directives.

9.11.4 The Contractor shall fulfil all the regulatory compliance obligations and the environmental protection requirements indicated above.

9.11.5 The design shall consider the environmental impact of the equipment during its life cycle and disposal, and the documentation shall provide the appropriate recommendations to the user.

9.12 **Applicable standards:**

9.12.1 The Contractor must comply with all of the applicable specific obligations with regard to labour law, social insurance, industrial health and safety, as well as complying with all dispositions in respect of the environment and social responsibility that apply in Belgium.

9.12.2 Without prejudice to their overall legal obligations regarding health and safety of their personnel during the execution of the works, the Contractor and his sub-contractors shall apply the principles of the preventative measures defined in respective Belgian law regarding the welfare of workers and they shall comply with the specific obligations of the contractors regarding temporary or mobile workplaces.

9.12.3 Compliance with all standards shall be documented in the form of a manufacturer's certificate and proof of compliance provided prior to acceptance of the work.

9.12.4 The equipment and installations that are subject to this SOW shall meet requirements including but not limited to following publications where applicable:

9.12.4.1 EN 60309 International standard for plugs, socket-outlets and couplets for industrial purposes

9.12.4.2 Electromagnetic Compatibility and CE marking - Council Directive 93/68/EEC of 22 July 1993

9.12.4.3 IEC 60950 Information technology equipment – Safety

9.12.5 The above list of standards does not relieve the Contractor from the obligation to comply with other applicable National Standards in Belgium.

9.12.6 Note that the Contractor shall clearly state which standards shall apply to each of the design elements.

Annex A – Maintenance/Support definitions

A.1. Scope

A.1.1. This Annex specifies the Maintenance Levels, the Support levels and the relevant activities to be carried on by the involved actors.

A.1.2. The SOW specifies who is responsible for what, at the various Maintenance/Support levels from PSA to the End of Warranty.

A.1.3. Before PSA the responsibility of any maintenance/support activity is and remains with the Contractor.

A.2. Maintenance Concept

A.2.1. A Maintenance Concept is a definition of the maintenance objectives, line of maintenance, indenture levels, maintenance levels, maintenance support and their interrelationships.

A.2.2. A Maintenance Concept is applied both for hardware and software and produces maintenance tasks that will be performed on site, at civil or military maintenance facilities, at industry (OEM, Contractor) maintenance facilities. The Maintenance concept identifies who-does-what-at-what-level in accordance with the Maintenance levels and definitions defined below. The main SOW identifies clearly what is the Maintenance concept for the project(s).

A.3. Maintenance Levels (line of maintenance)

A.3.1. A Maintenance level is the position in an organization where specified levels of maintenance are to be carried out. The line of maintenance is characterized by the skill level of the personnel, the facilities and tools provided, the location, etc.

A.3.2. There are four (4) Maintenance Levels to ensure the highest possible availability of the Product.

A.3.2.1. Level 1: implies a fast and easy exchange of Maintenance Significant Items (MSIs, see B.4.2) performed on the Product by organizational personnel when a malfunction occurs;

A.3.2.2. Level 2: implies exchange of MSIs and/or the replacement of modules, performed on the Product by organizational personnel when a malfunction occurs;

A.3.2.3. Level 3: implies the repair of subassemblies, modules and MSIs after their replacement at maintenance Level 1 and Level 2. Testing on test-benches or integration tests can be included. This maintenance level can be performed either on product (e.g. on-site) or at specific repair shops/facilities;

A.3.2.4. Level 4: all repairs and overhaul activities beyond Level 1 to Level 3 capabilities must be ensured (e.g.: repair of subassemblies, modules and LRUs after their replacement at

maintenance Level 1 to Level 3; major modifications to improve the design and/or operational activities will be prepared and, if necessary, embodied at this level).

A.4. Hardware Maintenance and Hardware Change

A.4.1. The hardware maintenance is:

A.4.1.1. Corrective:

A.4.1.1.1 Deferred: maintenance carried out to perform a Remove & Replace action of a faulty item not affecting system operation. It is done in a time slot that does not further impact the Operational Availability (e.g. during a schedules maintenance downtime period) or on “live” equipment if this is possible (e.g. when active redundancy or hot stand-by are implemented).

A.4.1.1.2 Run-to-failure: maintenance carried out to perform a Remove & Replace action of a faulty item affecting system operation (critical failure). The action is done as soon as all the resources (skills, tools and spares) are available to minimise the System downtime.

A.4.1.2. Preventative:

A.4.1.2.1 On-condition: maintenance carried out to mitigate degradation and reduce the probability of failure after analysis of system conditions through defined indicators assessed on a periodic basis.

A.4.1.2.2 Scheduled (planned): maintenance carried out on a periodic basis (time-related or number-of-occurrences-related).

A.4.2. The hardware maintenance concept shall be based on the modularity of the equipment. The items to be removed from the system/equipment for replacement, to be repaired or to be replaced/refilled for preventative maintenance shall be defined MSIs (Maintenance Significant Items), with the following characteristics:

A.4.2.1. Include those items in the Logistic Breakdown Structure (LBS) which are significant for maintenance at the Organisational Level.

A.4.2.2. Include all the candidate items of the spare parts and consumables lists.

A.4.2.3. Are subdivided into the following categories:

A.4.2.3.1 LRU (Line Replaceable Unit)

A.4.2.3.1.1 Its failure can be detected and indicated by a BIT (Built In Test System) system or by abnormal condition/failure display/alarm, in conjunction with Technical Manuals (TMs) and general-purpose test equipment and troubleshooting procedures;

A.4.2.3.1.2 It is easily accessed for replacement purposes;

A.4.2.3.1.3 It is easy to replace, through the use of a plug-in connector, screwed terminal, nut/bolt fixing or similar connector;

A.4.2.3.1.4 It has minimal adjustment/alignment requirements, such as voltage level settings, software/firmware installations/adaptations etc.;

A.4.2.3.1.5 Adjustments may be carried out with the Built-In test (BIT) or with general-purpose hardware/software tools and test equipment;

A.4.2.3.1.6 When only one LRU has failed, its replacement returns the system/equipment to full operational status.

A.4.2.3.1.7 LRUs are subdivided into the following two categories:

A.4.2.3.1.7.1 Statistical (LS): This category includes (but it's not limited to) the items subject to faults that occur with a statistical probability (most of them are electronic items) e.g. IF/RF strips/boards, SBCs, PPCs, Computers/Servers/Workstations and their components/peripherals, Networking equipment (Routers, switches) and their components/peripherals, Power Supplies, electric/electronic cards in general etc.

A.4.2.3.1.7.2 Limited Life (LL): This category includes (but it's not limited to) the items whose faults are due to ageing (most of them are electromechanical items) e.g. TWTs, Rotary Joints, Slip Rings, Engines, T/R switches, Fans and Fan Assemblies, etc.

A.4.2.3.2 Insurance Item (II): This category includes (but it's not limited to) those items that have a very low failure rate and whose replacement may be necessary as a consequence of deterioration or fault by accident e.g. passive elements (attenuators, couplers, circulators, terminations), circuit breakers, patch panels, cables, metallic frames/cabinets/chassis etc.

A.4.2.3.3 Consumable Items:

A.4.2.3.3.1 Consumables are subdivided into the following three categories:

A.4.2.3.3.1.1 Technical Consumables (C[T]): This category of consumables includes (but it's not limited to) Fuses, Bulbs, Lamps, Gaskets, o-rings, EMI/Tempest seals, Surge Protectors, gas dischargers, Batteries and, in general, any other item replaced in case of preventive or corrective maintenance on the System etc.

A.4.2.3.3.1.2 Not-Technical Consumables (C[NT]): This category of consumables includes (but it's not limited to) all POLs (Petrol, Oils, Lubricants), adhesive, sealing paste, gas and, in general, any other item replaced in case of preventative or corrective maintenance on the System etc.

A.4.2.3.3.1.3 Generic Consumables (C[G]): This category of consumables includes (but it's not limited to) ink cartridges, toners, printing paper, print ribbons, generic cleaning material and in general all the materials whose consumption cannot be predicted (e.g. is not associated to any preventative or corrective maintenance on the System) etc.

A.4.2.3.4 Attaching Parts (AP)

A.4.2.3.4.1 The Attaching Parts are the items reported in the Corrective and Preventative Maintenance Procedures and in the Illustrated Parts Breakdown such as screws, gaskets, nuts, bolts, washers etc.

A.4.3. Hardware Maintenance Levels

A.4.3.1. The hardware maintenance levels used are generally known as HL1, HL2 HL3 and HL4.

A.4.3.1.1 Organizational Maintenance (HL1) is Hardware maintenance capable of being carried out:

A.4.3.1.1.1 on-site;

A.4.3.1.1.2 by relatively low technical skill level personnel performing preventive maintenance and changing Line Replaceable Units (LRU) and Insurance Items (IIs) on the basis of diagnostic outputs;

A.4.3.1.1.3 using Built-In-Test (BIT) facilities for start-up and on-line diagnostics, by referring to main equipment Technical Manuals (TM);

A.4.3.1.1.4 no Special Tools and Test Equipment (TTE) are envisioned to be used;

A.4.3.1.1.5 typical tasks will include visual inspection, preventative maintenance tasks, manual reconfiguration if necessary, external adjustments, removal and replacement of LRUs/IIs;

A.4.3.1.1.6 includes system failure recovery by the application of simple on-line diagnostics or technician initiated restart of the system and the use of off-line diagnostics which do not require external test module support;

A.4.3.1.1.7 generation of equipment failure reports, supply requisitions and other pertinent maintenance and supply records.

A.4.3.1.2 Organizational Maintenance (HL2) is Hardware maintenance capable of being carried out:

A.4.3.1.2.1 on-site;

A.4.3.1.2.2 by higher technical skill level personnel performing preventive maintenance and changing Line Replaceable Units (LRU) and Insurance Items (IIs) on the basis of diagnostic outputs;

1. using Built-In-Test (BIT) facilities for start-up and on-line diagnostics, simple Tools and Test Equipment (TTE) (standard and special-to-type) in addition to BIT as a means for on-line and off-line diagnostics, and by referring to main equipment Technical Manuals (TM) to perform exhaustive fault isolation;

A.4.3.1.2.3 simple either commercial or special-to-type TTE are envisioned to be used (e.g.: screwdrivers, multimeters, oscilloscope, adapters, peculiar support equipment);

A.4.3.1.2.4 where the fault is beyond the capabilities of HL1 technical support, HL2 activities will be performed by Support Site personnel (through on-site intervention);

A.4.3.1.2.5 where remote fault management is not feasible, technicians from the host site will travel to the remote site hand carrying relevant spares to perform maintenance tasks;

A.4.3.1.2.6 generation of equipment failure reports, supply requisitions and other pertinent maintenance and supply records.

A.4.3.1.3 Intermediate Maintenance (HL3) is Hardware maintenance capable of being carried out:

A.4.3.1.3.1 at maintenance facilities and through technical support and assistance or on-site intervention/work by maintenance personnel with skills enabling tasks to be accomplished within the relevant technologies;

A.4.3.1.3.2 by higher technical skill level personnel performing:

A.4.3.1.3.3 repairing, testing and calibrating Line Replaceable Units (LRU), Shop Replaceable Units (SRU) and secondary spare parts (SSPs);

A.4.3.1.3.4 on-site investigations and major scheduled servicing/overhaul, detailed inspection, major equipment repair, major equipment modification, complicated adjustments, system/equipment testing;

A.4.3.1.3.5 failure trend analysis including reporting to relevant Purchaser authorities and Post Design Services (PDS);

A.4.3.1.3.6 repair tasks will be performed using Automatic Test Equipment (ATE), general purpose and special-to-type TTE, calibration equipment, any applicable support software, and the necessary equipment TMs and a Technical Data Package (TDP);

A.4.3.1.3.6.1 where the fault is beyond the capabilities of HL1/2 technical support, HL3 activities will be performed by Support Site personnel (through on-site intervention) or by the Contractor, depending on the Maintenance Concept;

A.4.3.1.3.6.2 It includes generation of equipment failure reports, supply requisitions and other pertinent maintenance and supply records.

A.4.3.1.4 Depot Maintenance (HL4) is Hardware maintenance capable of being carried out:

A.4.3.1.4.1 at maintenance facilities (industry or military, OEMs) and through technical support and assistance or on-site intervention/work by maintenance personnel with skills enabling tasks to be accomplished within the relevant technologies;

A.4.3.1.4.2 where the fault is beyond the capabilities of HL1-3 technical support, HL4 activities will be performed by the Contractor;

A.4.3.1.4.3 It includes generation of equipment failure reports, supply requisitions and other pertinent maintenance and supply records.

A.5. Software Maintenance and Software Change

A.5.1. The software maintenance is a modification for the purposes of software fault removal, adaptation to a new environment, or improvement of performance.

A.5.2. The software maintenance for the purposes of software faults avoidance, identification and/or removal can be:

A.5.2.1. Corrective/Unscheduled - it refers to tasks necessitated by actual errors in a software product. If the software product does not meet its requirements, corrective maintenance is performed. It is a Reactive modification of a software product performed after a new version is made available (patch/update) to correct the discovered problem(s). This activity is linked to Configuration Management, change management (Contractor initiated ECP), new software release(s) and Product baseline (PBL) change.

A.5.2.2. Preventative/Scheduled – it refers to tasks necessitated for detecting potential errors in a software product or anticipate and avoid potential failures (daily checks, DBs clean up/integrity checks, cache cleaning, rebooting/restarting etc.). The task can lead, if latent failures are discovered, to a modification of a software product after delivery to detect and correct latent faults in the software product before they become effective faults (leading to a deferred corrective action).

A.5.3. The software maintenance for the purposes of adaptation to a new environment, or improvement of performance is a software change that enhances the software product. These changes are those that were not in the original design specifications or in the originally released software and are subject to purchaser initiated ECPs:

A.5.3.1. Adaptive maintenance: software maintenance for the purposes of adaptation to a new environment (e.g.: a new environment could be a new type of hardware or a new operating system on which the software is to be run). Adaptive refers to a change necessary to accommodate a changing environment. Adaptive changes include changes to implement new system interface requirements, new system requirements, or new hardware requirements. This is a modification of a software product performed after delivery to keep a software product usable in a changed or changing environment.

A.5.3.2. Perfective maintenance: software maintenance performed to improve the performance, maintainability, or other attributes of a computer program (e.g.: maintenance that adds new required functions is often referred to as enhancement). Perfective refers to a change that improves the software product's performance. A perfective change might entail providing new functionality improvements for users or reverse engineering to create maintenance documentation that did not exist previously or to change existing documentation. This is a modification of a software product after delivery to improve performance or maintainability.

A.5.4. Software Maintenance Levels

A.5.4.1. The software maintenance levels used are generally known as SL1, SL2 SL3 and SL4.

A.5.4.1.1 Organizational Maintenance (SL1) is Software maintenance capable of being carried out with the same characteristics highlighted for HL1. SL1 are those functions/tasks in support of the on-site software that are within the capabilities of site maintenance personnel. This includes software failure recovery by the application of simple diagnostics, or site maintenance personnel initiated restart.

A.5.4.1.2 Organizational Maintenance (SL2) is Software maintenance capable of being carried out with the same characteristics highlighted for HL2 e.g. software settings, simple software customizations (per site/instance), software reloading/installation with automated or detailed procedures reported in the TMs, execution of scripts, management of users/profiles. SL2 are those functions/tasks in support of the on-site software that are within the capabilities of a System Administrator.

A.5.4.1.3 Intermediate Maintenance (SL3) is Software maintenance capable of being carried out with the same characteristics highlighted for HL3 e.g. software/firmware fine tuning (per

site/instance), software/firmware bugs recording and reporting, software/firmware troubleshooting including Operating Systems. SL3 (on-site intervention) comprises those functions/tasks in support of the on-site software that require specialist intervention (software System architects, software programmers, experienced Systems' Administrators, Network specialists). The tasks can be performed either by software personnel visiting the site or by remote diagnostics if enabled by the System and allowed by NCIRC.

A.5.4.1.4 Depot Maintenance (SL4) is Software maintenance capable of being carried out with the same characteristics highlighted for HL4 e.g. software/firmware debugging, re-coding and testing (both in simulated and emulated environments), software/firmware patches creation and deployment. The tasks can be performed by software engineers in properly configured environments (software development and testing facilities) under strict Configuration Control.

A.6. Support Concept

A.6.1. A Support Concept is a definition of the support objectives (scenarios) in relation with maintenance levels, maintenance support and their interrelationships.

A.6.2. This is peculiar for IT software-intensive and IT software-driven systems and shall be implemented in conjunction and coordination with the Maintenance Concept.

A.6.3. Support levels

A.6.3.1. There are (4) support levels

A.6.3.1.1 First level support (on-site, non-specialised)

A.6.3.1.1.1 It consists of simple routine administration and activities. This level is user facing and is the first line of technical support. A single point of contact inside the NCI Agency central Service Desk is provided to customers for the implemented services. The Service Desk will log, categorise, prioritise, diagnose and resolve incidents within the boundaries of their training and permissions. The pertinent NCI Agency CIS Support Units (CSUs) carry out this level of support, in coordination with the NCI Agency Centralised Service Desk.

A.6.3.1.1.2 The 1st Level Support Process implements the Incident Management process in accordance with the ISO/IEC 20000 and ITIL framework or equivalent;

A.6.3.1.1.3 As part of the Incident Management, the Service Desk receives the issue from the user, puts it into a standard format (Trouble Ticket, TT), performs an initial assessment and distributes it to the predefined actors to solve it.

A.6.3.1.2 Second level support (centralised)

A.6.3.1.2.1 It provides escalated technical support to incident investigation and diagnosis. This level delivers advanced expertise to process services related to centralised system

operations, fault isolation, system administration, management of maintenance services, system configuration, including reconfiguration of data sources and data connectivity to restore operations, assistance to first level and on-site support. This level performs end-to-end service monitoring and takes actions to resolve the incident and recover the services impacted.

A.6.3.1.2.2 The 2nd Level Support Process implements the Problem Management process in accordance with the ISO/IEC 20000 and ITIL framework or equivalent;

A.6.3.1.2.3 The Problem Management process receives the TT from the Service Desk and performs the following tasks:

A.6.3.1.2.3.1 (Re-)evaluation of TT category, criticality and priority,

A.6.3.1.2.3.2 Identification of the root cause of the issue (e.g. by issue replication testing),

A.6.3.1.2.3.3 Identification of workarounds,

A.6.3.1.2.3.4 Identification and initial planning of possible short, medium and long-term solutions (e.g. Workarounds, Patches, or new Baseline or CI Releases),

A.6.3.1.2.3.5 Create Problem Analysis Report and Change Request (CR) incl. schedule of implementation, and synchronisation with the Baseline Maintenance process;

A.6.3.1.2.3.6 Presentation of the Problem Analysis Report and CR to the Change Control Board (CCB) for approval,

A.6.3.1.2.3.7 Monitor and Control the approved CR during implementation,

A.6.3.1.2.3.8 Trigger 3rd Level Support and/or 3rd Level Maintenance process to implement the CR;

A.6.3.1.2.3.9 Perform the post- CR implementation review.

A.6.3.1.3 Third level support (centralised)

A.6.3.1.3.1 It consists of central service management, central problem isolation and resolution, system-level maintenance, local repairs or spares provision, and management of deficiencies and warranty cases, beyond the capability of the second level support.

A.6.3.1.3.2 The 3rd Level Support Process implements the Deployment and Release Management process in accordance with the ISO/IEC 20000 and ITIL framework or equivalent.

A.6.3.1.3.3 The Deployment and Release Management process receives the approved Change Request from the 2nd Level Support and performs the following tasks:

A.6.3.1.3.3.1 Release of the solution (release unit/record)

A.6.3.1.3.3.2 Development of the solution (e.g. new CI Fix, Repair, Replacement, Patch, or Release),

A.6.3.1.3.3.3 Testing of the solution (e.g. Regression testing, issue/deficiency replication testing),

A.6.3.1.3.3.4 Update of Baseline content and status,

A.6.3.1.3.3.5 Delivery and deployment of the solution.

A.6.3.1.4 Fourth level support (OEM/vendor)

A.6.3.1.4.1 It consists of off-site factory/vendor problem resolution and maintenance, beyond the capability of third level support.

A.7. Support scenarios

A.7.1. The support concept is the apportionment of maintenance activities:

A.7.1.1. NATO Maintenance Task (NMT) will be performed by NATO personnel (military or civilian),

A.7.1.2. Industry Maintenance Task (IMT) will be performed by industry personnel under Warranty or Post Warranty Arrangement arrangement.

A.7.2. Theoretically there are four possible scenarios:

A.7.2.1. NONO – NATO Owned / NATO Operated. If this approach is chosen the solution would be procured as a system and would be operated and maintained by NATO. The responsibilities for NATO maintenance levels are defined in the Maintenance Concept.

A.7.2.2. COCO – Contractor Owned / Contractor Operated. If this approach is chosen NATO would have the solution delivered by a contractor as a Service.

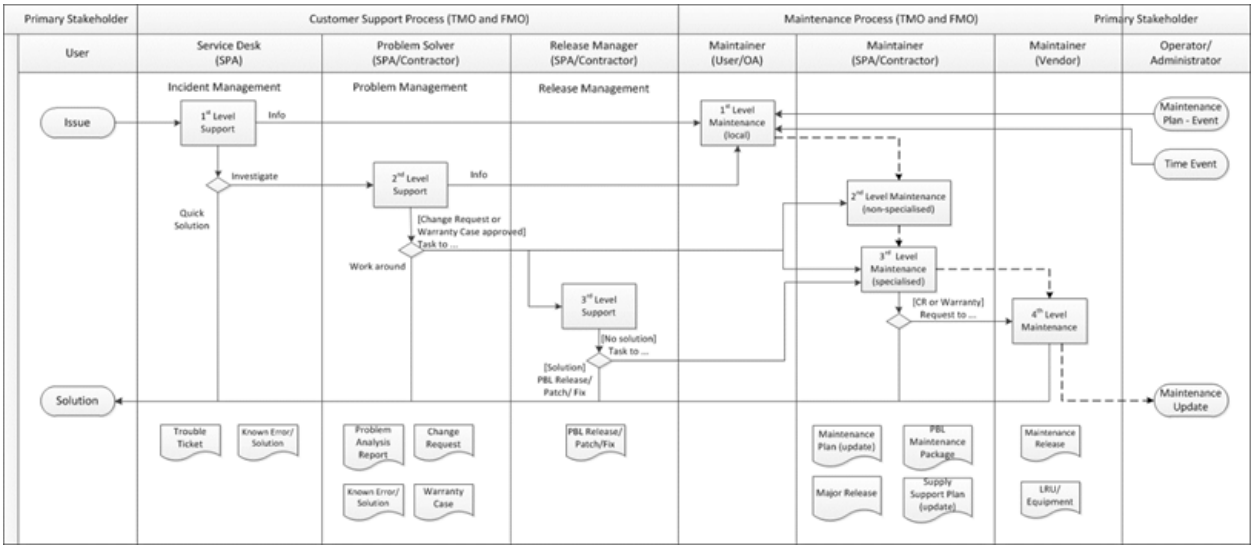
A.7.2.3. NOCO – NATO Owned / Contractor Operated. With this approach NATO would procure a system, but would “outsource” the Operation and Maintenance of it.

A.7.2.4. CONO – Contractor Owned / NATO Operated. This approach exists and is usually called “Financial leasing”.

A.7.3. For NONO and CONO scenario the Contractor shall agree with the Purchaser on maintenance levels commitments and develop a tailored logistic support concept based on a blended sharing of maintenance levels (this means that the Contractor shall apply the Maintenance Concept defined in the SOW):

A.7.4. For NOCO and COCO scenario the Contractor is responsible for all the Maintenance Levels (HL 1/2/3/4 and SL 1/2/3/4)

A.8. Maintenance and Support allocation



Anonymised Identifier	Server Model	Physical CPUs	Total Cores	GB RAM	1GbE Ports	10GbE Ports	HBA Card	8Gb HBA Ports
NR-1	BL465c GEN8	2	16	64	4	8	1	2
NR-2	BL460c GEN8	2	16	32	0	2	0	0
NR-3	EMC Data Domain DD890	2	12	128	6	2	1	2
NR-4	BL465c GEN7	1	8	16	4	8	1	2
NR-5	BL460c GEN8	1	8	32	4	8	1	2
NR-6	BL465c GEN7	1	8	10	4	8	1	2
NR-7	BL465c GEN8	1	8	64	0	2	1	2
NR-8	BL465c GEN7	2	16	128	4	8	1	2
NR-9	BL465c GEN7	2	16	128	4	8	1	2
NR-10	BL465c GEN7	2	16	128	4	8	1	2
NR-11	BL465c GEN7	2	16	128	4	8	1	2
NR-12	BL465c GEN7	2	16	128	4	8	1	2
NR-13	BL465c GEN7	2	16	128	4	8	1	2
NR-14	BL465c GEN7	2	16	128	4	8	1	2
NR-15	BL465c GEN7	2	16	64	4	8	1	2
NR-16	BL465c GEN7	2	16	128	4	8	1	2
NR-17	BL465c GEN8	2	16	128	4	8	1	2
NR-18	BL465c GEN8	2	32	200	4	8	1	2
NR-19	BL465c GEN8	2	16	128	4	8	1	2
NR-20	BL465c GEN7	2	16	128	4	8	1	2
NR-21	BL465c GEN7	2	16	128	4	8	1	2
NR-22	BL465c GEN7	2	16	128	4	8	1	2
NR-23	BL465c GEN7	2	16	128	4	8	1	2
NR-24	BL465c GEN7	2	16	128	4	8	1	2
NR-25	BL465c GEN8	2	16	128	4	8	1	2
NR-26	BL465c GEN8	2	16	128	4	8	1	2
NR-27	BL465c GEN8	2	16	128	4	8	1	2

Anonymised Identifier	Server Model	Physical CPUs	Total Cores	GB RAM	1GbE Ports	10GbE Ports	HBA Card	8Gb HBA Ports
NS-1	BL460c GEN10	2	32	64	2	2	1	2
NS-2	BL460c GEN10	2	32	64	2	2	1	2
NS-3	BL460c GEN10	2	32	64	2	2	1	2
NS-4	BL460c GEN10	2	32	64	2	2	1	2
NS-5	BL465c GEN7	2	16	64	4	8	1	2
NS-6	BL460c GEN8	2	16	32	0	8	1	2
NS-7	BL465c GEN7	1	8	8	4	8	1	2
NS-8	BL465c GEN7	1	8	8	4	8	1	2
NS-9	BL465c GEN7	2	16	32	4	8	1	2
NS-10	BL460c GEN10	2	28	128	2	2	1	2
NS-11	BL460c GEN8	2	16	32	0	2	1	2
NS-12	BL465c GEN7	2	16	128	4	8	1	2
NS-13	BL465c GEN7	2	16	128	4	8	1	2
NS-14	BL465c GEN7	2	16	128	4	8	1	2
NS-15	BL465c GEN7	2	16	128	4	8	1	2
NS-16	BL465c GEN8	2	16	128	4	8	1	2
NS-17	BL465c GEN8	2	16	128	4	8	1	2
NS-18	BL465c GEN7	2	16	128	4	8	1	2
NS-19	BL465c GEN7	2	16	128	4	8	1	2
NS-20	BL465c GEN7	2	16	148	4	8	1	2
NS-21	BL465c GEN7	2	16	128	4	8	1	2
NS-22	BL465c GEN7	2	16	196	4	8	1	2
NS-23	BL465c GEN7	2	16	128	4	8	1	2
NS-24	BL465c GEN7	2	16	128	4	8	1	2
NS-25	BL465c GEN8	2	16	128	4	8	1	2
NS-26	BL465c GEN8	2	16	128	4	8	1	2
NS-27	BL465c GEN8	2	16	128	4	8	1	2
NS-28	BL465c GEN8	2	16	128	4	8	1	2

Anonymised Identifier	Server Model	Physical CPUs	Total Cores	GB RAM	1GbE Ports	10GbE Ports	HBA Card	8Gb HBA Ports
RS-1	BL460c GEN10	2	32	64	2	2	1	2
RS-2	BL460c GEN10	2	32	64	2	2	1	2
RS-3	BL460c GEN10	2	32	64	2	2	1	2
RS-4	BL460c GEN10	2	32	64	2	2	1	2
RS-5	BL465c GEN7	1	8	16	4	2	1	2
RS-6	EMC Data Domain DD890	2	8	72	6	2	1	2
RS-7	BL465c GEN7	2	16	64	4	2	1	2
RS-8	BL465c GEN7	1	8	64	4	2	1	2
RS-9	BL465c GEN7	1	8	64	4	2	1	2
RS-10	BL465c GEN7	2	16	180	4	2	1	2
RS-11	BL465c GEN7	2	32	64	4	2	1	2