Acquisition Directorate
Graham.Hindle@ncia.nato.int
Telephone: +32 (0)2 707 8857

NCIA/ACQ/2020/6616
30 April 2020

To: Prospective Bidder

From: The Director of Acquisition, NCI Agency

Subject: **IFB-CO-15079-IAS "Provide Information Administration Services and Upgrade NATO Information Portal (IAS)"**

Reference(s):
A. AC/4-D/2261(1996 Edition
B. C-M(2002)49-COR12
C. AC/4-DS(2019)0014
D. BC-DS(2019)0027 (INV)

Dear Sir/Madam,

1. Your firm is invited to participate in an Invitation for Bid (IFB) for the **Provide Information Administration Services and Upgrade NATO Information Portal (IAS),** project.

2. The award will be based on the proposal evaluated as the lowest price, technically compliant in accordance with the selection criteria set forth in the Bidding Instructions.

3. NATO intends placing one contract to cover the entire scope of the project. No partial bidding will be allowed.

4. **THE CLOSING TIME FOR SUBMISSION OF BIDS IN RESPONSE TO THIS INVITATION FOR BIDS (IFB) IS 14:00 HOURS (BRUSSELS TIME) ON 12 June 2020.**

5. This Invitation for consists of the

    a. Bidding Instructions (Book I) and

    b. The Bidding sheets (in excel format)

    c. the Prospective Contract (Book II).

        i. The contract cover and draft Signature Sheet

        ii. the place holder for the Schedule of Supplies and Services (Part I),

        iii. Contract Special Provisions (Part II), Contract General Provisions (Part III), and the

        iv. Statement of Work (Part IV).

        v. Annex A the System requirement Specification (SRS)

d. The Statement of Work and the Annexes thereto set forth detailed specifications governing the performance requirements of the contract.

6. The overall security classification of this Invitation for Bid is “NATO UNCLASSIFIED”. This Invitation for Bid (IFB) remains the property of the NCI Agency and shall be protected in accordance with the applicable national security regulations.

7. The Bidders have the right to request IFB clarifications as outlined in section 2.6 of the Bidding Instructions (Book I).

8. You are requested to complete and return the enclosed acknowledgement of receipt within 5 days of receipt of this IFB, informing NCI Agency of your intention to bid/not to bid. Should you wish to receive the Hard Drive with the material mentioned at annex B you are required to complete and return the Non Disclosure certificate at Annex C.

9. Your firm is not bound by its initial decision, and if you decide to reverse your stated intention and request the Hard Drive at a later date, you are requested to advise us by a separate letter. But, please be aware no extension to the bidding period will be allowed if your late decision reduces your bid preparation period

10. Prospective Bidders are advised that the NCI Agency reserves the right to cancel this IFB 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.

11. The Purchaser point of contact for all information concerning this IFB is:

NCI AGENCY
Boulevard Leopold III
1110 Brussels
Belgium
Attn.: Mr. Graham Hindle (ACQ)
E-mail: Graham.Hindle@ncia.nato.int

FOR THE DIRECTOR:

[Original Signed By]

Graham Hindle
Senior Contracting Officer

Attachments:

A: Acknowledgement of IFB
B. Non Disclosure Certificate for Hard Drive content

Attachment A

Acknowledgement of Receipt of Invitation for Bids

IFB-CO-15079-IAS

Please complete and return within 5 days by e-mail to: Graham.Hindle@ncia.nato.int.

We hereby advise that we have received Invitation for Bids **IFB-CO-15079-IAS**

on ....., together with all enclosures listed in the Table of Contents.

CHECK ONE

{ } As of this date and without commitment on our part, we do intend to submit a bid,

{ } We wish to receive the hard drive and a signed Attachment B, is enclosed,

{ } We do not intend to submit a bid,

{ } We are reviewing the requirements of the IFB and will notify you of our decision as soon as possible.

Signature: _____

Printed Name: _____

Title: _____

Company: _____

Address: _____

Attachment B

NCI AGENCY DECLARATION

To be signed by the Bidder representative designated under IFB-CO-15079-IAS I UNDERSTAND:

That I must preserve the security of all commercial-in-confidence information which is provided as background to this solicitation by the NCI Agency listed below:

i Source Code

ii Installation binaries to install IKM Tools

iii Installation Guide, User Guide and Administration Guide

iv Virtual Machines with running IKM Tools environment

The information will be disseminated to bidders by issuing a hard drive containing the material.

It is acknowledged that the hard drive remains the property of the NCI Agency at all times and must be returned upon request

The bidder shall not, without prior written approval of the Purchaser, use for the Bidders benefit, publish, copy, or otherwise disclose to others, or permit the use by others for their benefit or to the detriment of the Purchaser, any Confidential Information.

The bidder shall return to the Purchaser any and all records, notes, and other written, printed, or tangible materials in its possession pertaining to Confidential Information immediately if the Purchaser requests it in writing.

_____Date_____

Full name (in block capitals) Signature

NATO Communications and Information Agency

Contract - IFB-CO-13887-IT

Consultancy Framework for Modernisation and Rationalisation of NATO Information Technology Infrastructure

Book II

Prospective Contract

<table>
<tr><th colspan="2">NCI Agency Contract</th></tr>
<tr><td>1. Original Number __ of</td><td>2. PO Number :TBD</td></tr>
<tr><td>3. Contract Number: CO-15079-IAS</td><td>4. Effective date: Same as block 17</td></tr>
<tr><td>5. Contractor:</td><td>6. Purchaser:
The General Manager
NATO Communications and Information Agency
Boulevard Leopold III
B-1110 Bruxelles
Tel: +32(0)2 707 8857
Fax: +32(0)2 707 87.70</td></tr>
<tr><td colspan="2">7. CONTRACT SCOPE:</td></tr>
<tr><td colspan="2">8. TOTAL AMOUNT OF CONTRACT : _____
Currency – Excluding VAT
Firm Fixed Price</td></tr>
<tr><td>9. PERIOD OF PERFORMANCE
As stated in Schedule of Supplies and Services and Special Provisions</td><td>10. DELIVERY SITE
As stated in Schedule of Supplies and Services and Special Provisions</td></tr>
<tr><td colspan="2">11. CONTRACT
This Contract consists of the following parts and named documents:
a) Part I. Schedule of Supplies and Services
b) Part II. Special Contract Provisions and Annexes
c) Part IV. Statement of Work and Annexes
d) Contractor’s proposal dated [insert date] and subsequent clarifications.
e) In the event of any conflict or inconsistencies between or among any of the documents comprising this Contract, the order of priority specified in Clause Error! Reference source not found. of Part II shall apply.</td></tr>
<tr><td>12. Signature of Contractor</td><td>13. Signature of Purchaser</td></tr>
<tr><td>14. Name and Title of Signer</td><td>15. Name and Title of Signer</td></tr>
<tr><td>16. Date signed by the Contractor</td><td>17. Date signed by the Purchaser</td></tr>
</table>

INVITATION FOR BID

IFB-CO-15079-IAS

PROVIDE INFORMATION AND KNOWLEDGE MANAGEMENT (IKM) SERVICES

NATO Communications and Information Agency

AUTHORISATION/SERIAL NOs

AC/4-DS(2019)0014 & BC-DS(2019)0027 (INV)

BOOK I

BIDDING INSTRUCTIONS

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1 INTRODUCTION

1.1 Purpose

1.1.1 The purpose of this Invitation for Bid (IFB) is to award a Contract for the provision of Information and Knowledge Management (IKM) services.

1.1.2 This project covers Step 2 of the Information Administration Services project (2014/0IS03095) and also includes scope originally programmed through the Upgrade Information Portal project (2014/0IS03100) to reduce overall costs and accelerate implementation timelines of the combined capability.

1.2 Project Scope

1.2.1 The current authorisation and consequently any Contract resulting from this Invitation for Bid (IFB) shall address combined scope of Projects 2014/0IS03095-0 and 2014/0IS03100-0.

1.2.2 The purpose of this project is to plan, implement and deliver P95 Step 2 using proven and fielded Commercial Off The Shelf (COTS) capabilities.

1.2.2.1 The Enterprise Document Management System (EDMS), an upgraded version of Tasker Tracker (TT+), a common workflow service as well as the enhancement of the underlying infrastructure.

1.2.2.2 It includes the migration of existing / legacy DHS, TTE and workflow tools. The scope is both ON and PBN. The project will also enhance the NATO Information Portal (NIP) to become an enterprise-wide service and to proliferate the solution to the Protected Business Network (PBN).

1.2.2.3 The project will upgrade to ITM SharePoint (2016), will enhance EDMS capabilities and will offer a centralised workflow service

1.2.2 The project scope will include:

1.2.2.1 Project management;

1.2.2.2 Requirements Analysis, System Engineering/Design, Testing, Site Surveys;

1.2.2.3 Security accreditation;

1.2.2.4 Site implementation;

1.2.2.5 Contractor Logistics Support (CLS), including Training;

1.2.2.6 ILSP from PSA to 5 years after FSA.

1.3 Overview of the Prospective Contract

1.3.1 The Prospective Contract (Book II) requires the selected Contractor to deliver the scope of the project described above. This will be achieved within the framework of the Contract resulting from this IFB, by means of performance of Contract requirements and Work Packages that are further defined in the Statement of Work (SOW), Part IV to the Prospective Contract. Final System Acceptance (FSA) for the main implementation contract is

scheduled for 19 months after Effective Date of Contract (EDC), with follow-on Operation and Maintenance support Option.

1.3.2 A Contract will be awarded for the work defined in the SOW, with Hardware procurement and implementation, Pilot Release and Final Release being the Basic Contract, as well as optional 5 x 1 year IKM tools Operation and Maintenance included as Evaluated Firm Fixed Price options to the Contract.

1.4 Governing Rules, Eligibility, and Exclusion Provisions

1.4.1 This solicitation is issued in accordance with the Procedures for International Competitive Bidding set forth in the NATO document AC/4-D/2261 (1996 Edition).

1.4.2 Pursuant to these procedures, bidding is restricted to companies from participating NATO member nations (see paragraph 2.2.1) for which a Declaration of Eligibility has been issued by their respective government authorities.

1.4.3 The evaluation method to be used in the selection of the successful Bidder under this solicitation is the Lowest Compliant Bidding Procedures set forth in AC/4-D/2261(1996 Edition).

1.4.4 The Bid evaluation criteria and the detailed evaluation procedures are described in Section 4 BID EVALUATION AND CONTRACT AWARD.

1.4.5 This IFB will not be the subject of a public Bid opening.

1.4.6 The Bidder shall refer to the Purchaser all queries for resolution of any conflicts found in information contained in this document in accordance with the procedures set forth in paragraph 2.6 "Request for IFB Clarifications".

1.5 Security

1.5.1 This Invitation for Bid has been classified as NATO UNCLASSIFIED.

1.5.2 Contractor will be required to handle and store classified material to the level of “NATO SECRET” and the Contractor shall have the appropriate facility and personnel clearances. Should a Contractor be unable to perform the Contract due to the fact that the facility clearance has not been provided by their respective national security agency, this lack of clearance cannot be the basis for a claim of adjustment or an extension of schedule, nor the lack of clearance be considered a mitigating circumstance in the case of an assessment of Liquidated Damages or a determination of Termination For Default by the Purchaser.

1.5.3 Contractor personnel working at NATO sites are required to possess a security clearance of “NATO SECRET”. Contractor personnel without such a clearance, confirmed by the appropriate national security authority and transmitted to the cognisant NATO security officer at least fourteen (14) days prior to the site visit, will be denied access to the site. Denial of such access by the Purchaser may not be used by the Contractor as the basis for a claim of adjustment or an extension of schedule nor can the denial of access be considered a mitigating circumstance in the case of an assessment of Liquidated Damages or a determination of Termination for Default by the Purchaser. Contractor personnel who need System Administrator or Operator privileges when working on NATO SECRET systems shall be required to hold NATO CTS clearances.

1.5.4 Bidders are advised that Contract signature will not be delayed in order to allow the processing of security clearances for personnel or facilities and should the otherwise successful Bidder not be in a position to accept the offered Contract within a reasonable period of time, due to the fact that its personnel or facilities do not possess the appropriate security clearance(s), the Purchaser may determine the Bidder's Offer to be non-compliant and offer the Contract to the next ranking Bidder. In such a case, the Bidder who would not sign the Contract shall be liable for forfeiture of the Bid Guarantee.

1.5.5 All documentation, including the IFB itself, all applicable documents and any reference documents provided by the Purchaser are solely to be used for the purpose of preparing a response to this IFB. They are to be safeguarded at the appropriate level according to their classification and reference documents are provided "as is, without any warranty" as to quality or accuracy.

1.6 Bidders Presentation

1.6.1 Prospective Bidders are invited to a Bidders Presentation that will be held online via Video TeleConference on 12 May 2020 from 0930 until 1600 (CST).

1.6.2 The purpose of the Bidders Presentation is to brief the Prospective Bidders on the IFB. The Bidder's Presentation is planned to include a briefing on the bidding process; the bidding sheets; the Prospective Contract; and the technical aspect of the project.

1.6.3 All Bidders Presentation information and registration details shall be posted on https://ifb.ncia.nato.int/IFB-CO-15079-IAS. All Nominated Prospective Bidders shall have access to this web portal.

1.6.4 The participation to the Presentation is limited to a maximum of two (2) persons simultaneously per Bidder. No exception to this number of attendees will be made by NCI Agency because of space restrictions.

1.6.5 Proposed Presentation Programme:

0930-1000	Opening Remarks
1000-1050	Welcome and Introduction of the P95 Step 2 Project
1050-1135	P95 Step 2 Technical Introduction
1135-1200	Presentation of the Acquisition Process
1200-1300	Lunch Break
1300-1500	Live Demonstration of the current IKM tools
1500-1545	Questions and Answers
1545-1600	Closing Remarks

1.6.6 Those companies that wish to participate in the Bidders Presentation shall indicate their intention to attend no later than 7 days prior to the date of the Presentation to the Point of Contract stated in Paragraph 0 Security clearances are not required to attend the Bidders Presentation. The interested firms shall email the Purchaser POC, the following relevant data for each of the two company members attending:

1.6.1.1 The name of company

1.6.1.2 Name of attendee(s) and Email Address(es)

1.6.7 The potential Bidders may submit questions in writing not later than 7 days prior to the date of the Presentation to the POC, at the email address mentioned in paragraph 0. The Purchaser will endeavour to respond to the previously submitted questions at the Bidders Presentation.

1.6.8 If any additional questions are asked by the potential Bidders at the Bidders Presentation, the Purchaser may attempt to answer them at that time. However, any answer that may appear to amend terms, conditions and/or specifications of the Contract shall be considered to be formally included in the IFB but only when a written amendment to the IFB is issued in writing, by the Purchaser.

1.6.9 Answers to all questions will be issued in writing to all Bidders as soon as possible after the Presentation, regardless of whether or not the Bidders attended the Presentation. The formal written answers will be the official response of the Agency, even if the written answer differs from the verbal response provided at the Presentation.

1.6.10 Notwithstanding the written answers provided by the NCI Agency after the Bidders' Presentation, the terms, conditions and language of the IFB remains unchanged unless a formal IFB amendment is issued by the NCI Agency and is identified as such.

2 GENERAL BIDDING INFORMATION

2.1 Definitions

2.1.1 In addition to the definitions and acronyms set in the Clause 2 entitled “Definitions of Terms and Acronyms” of the NCI Agency Contract General Contract Provisions Book II, (Part III), the following terms and acronyms, as used in this IFB, shall have the meanings specified below:

2.1.1.1 "Bidder": a firm, consortium, or joint venture, which submits an offer in response to this solicitation. Bidders are at liberty to constitute themselves into any form of Contractual arrangements or legal entity they desire, bearing in mind that in consortium-type arrangements a single judicial personality shall be established to represent that legal entity. A legal entity, such as an individual, Partnership or Corporation, herein referred to as the “Principal Contractor”, shall represent all members of the consortium with the NCI Agency and/or NATO. The “Principal Contractor” shall be vested with full power and authority to act on behalf of all members of the consortium, within the prescribed powers stated in an irrevocable Power of Attorney or equivalent issued to the “Principal Contractor” by all members associated with the consortium. Evidence of authority to act on behalf of the consortium by the “Principal Contractor” shall be enclosed and sent with the Bid. Failure to furnish proof of authority shall be a reason for the Bid being declared non-compliant.

2.1.1.2 "Compliance": strict conformity to the requirements and standards specified in this IFB and its attachments.

2.1.1.3 "Contractor": the awardee of this solicitation of offers, which shall be responsible for the fulfilment of the requirements established in the prospective Contract.

2.1.1.4 “Firm of a Participating Country”: a firm legally constituted or chartered under the laws of, and geographically located in, or falling under the jurisdiction of a Participating Country.

2.1.1.5 “IFB”: Invitation for Bid.

2.1.1.6 ‘’Purchaser’’: The Purchaser is defined as the current NCI Agency or its legal successor.

2.1.1.7 “Quotation” or “Bid”: a binding offer to perform the work specified in the attached prospective Contract (Book II).

2.2 Eligibility and Origin of Equipment and Services

2.2.1 As stated in paragraph 1.4.2 above only firms from a Participating Country are eligible to engage in this competitive Bidding process. In addition, all Contractors, sub-Contractors and manufacturers, at any tier, must be from Participating Countries.

2.2.2 In addition, 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 Unless otherwise authorised by the terms of the prospective Contract, the Intellectual Property Rights (IPR) 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 community.

2.3 Bid Delivery and Bid Closing

2.3.1 All Bids shall be in the possession of the Purchaser at the address given below in paragraph 2.3.2 on/or before 15:00 hours (Brussels Time) on 12 June 2020, at which time and date Bidding shall be closed. Delivery POCs are shown at below.

2.3.2 SUBMISSION OF BIDS BY ELECTRONIC MAIL

2.3.3 All electronic bids, including modifications or withdrawals thereto, shall be sent exclusively to the following electronic mail address

2.3.4 IFB-CO-15079-IAS@ncia.nato.int. The electronic mail message shall include in the subject line:

“Electronic Quote in Response to IFB-CO-15079-IAS@ncia.nato.int.”
Submission of the bid to anyone other than the Contracting Officer at the email address specified in paragraph 2.3.2 may result in a determination of non-compliance.

NCI Agency will only accept electronic bids that are compatible with the following programs: Microsoft Word V3, Adobe 7.0, Microsoft Excel 2013. Files shall be saved in a format that protects it from alteration and shall adhere to the following naming convention:

Administration [Insert Company Name]_ IFB-CO-15079-IAS@ncia.nato.int.

Price [Insert Company Name]_ IFB-CO-15079-IAS@ncia.nato.int.

Technical [Insert Company Name]_ IFB-CO-15079-IAS@ncia.nato.int.

2.3.5 NCI Agency will not be responsible for any failure attributable to the transmission or receipt of the bid including, but not limited to: receipt of garbled or incomplete bid; software or other compatibility issues related to opening and reading the bid; delay in transmission or receipt of bid; failure of the bidder to properly identify the bid; illegibility of the bid; or security of bid data.

2.3.6 Electronic bids that fail to furnish required representations or information or that reject any of the terms, conditions, and provisions of the solicitation may be excluded from consideration. Electronic bids must contain any required signatures. NCI Agency reserves the right to make award solely on the electronic bid. However, the apparently successful bidder agrees to promptly submit the complete original signed bid if requested by the Contracting Officer.

2.3.7 Bids 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. Such bids deemed late will not be taken in consideration for award and will be deleted from NCI Agency's files unless the Purchaser can determine that the bid in question meets the criteria for consideration as specified in paragraph 2.3.9 below.

2.3.8 Bids 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. Such bids will be returned unopened to the Bidder at the Bidder's expense unless the Purchaser can determine that the bid in question meets the criteria for consideration as specified below.

2.3.9 Consideration of Late Bid –

2.3.10 The Purchaser considers that it is the responsibility of the Bidder to ensure that the bid submission arrives by the specified Bid Closing time. Electronic bids, including modifications or withdrawals thereto, that reach the Contracting Officer after the exact time specified for receipt of bids is late and will not be considered unless cumulatively:

i. it is received before contract award is made;

ii. the Contracting Officer determines that accepting the late bid would not unduly delay the acquisition;

iii. there is acceptable evidence to establish the bid was received at the initial point of entry to the NCI Agency infrastructure prior to the exact time specified for receipt of bids.

2.4 Requests for Extension of Bid Closing Date

2.4.1 Bidders are informed that requests for extension to the closing date for the IFB shall be submitted by the Bidder only through its respective country's NATO Delegation or Embassy to the Purchaser POC, indicated in paragraph 0 below. In accordance with AC/4-D/2261 Final (July 1996 Edition) any request for extension shall be submitted by the respective NATO Delegation or Embassy **no later than fourteen (14) days** prior to the established Bid closing date. The Purchaser is under no obligation to answer requests submitted after this time. Bidders are advised to submit their request in sufficient time as to allow their respective NATO Delegation or Embassy to deliver the formal request to the Purchaser within the above time limit.

2.5 Purchaser's Point of Contact

2.5.1 The Contracting Officer (CO) responsible for this solicitation is Mr. Graham Hindle. All Correspondence regarding this IFB should solely be addressed to:

Mr. Graham Hindle
NATO Communications and Information Agency
Acquisition Directorate
NATO HQ Boulevard Leopold III
B-1110 Brussels – Belgium
Tel +32 2 707 8857
Email: graham.hindle@ncia.nato.int

Alternative :

Mrs. Lise Vieux Rochat
Acquisition Directorate
NATO HQ Boulevard Leopold III
B-1110 Brussels – Belgium
Email: Lise.Vieuxrochat@ncia.nato.int

2.6 Request for IFB Clarifications

2.6.1 Bidders, at the earliest stage possible during the solicitation period, are encouraged to query and seek clarification of any matters of a Contractual, administrative and technical nature pertaining to this IFB.

2.6.2 All questions and requests for clarification shall be forwarded to the Purchaser via email using the Clarification Request Form provided at BOOK

I - ANNEX E of this Book I. Such questions shall be forwarded to the point of contact specified in paragraph 0 above and shall arrive **not later than twenty eight (28) calendar days** prior to the stated "Bid Closing Date". The Purchaser is under no obligation to answer requests for clarification submitted after this time. Requests for clarification must address the totality of the concerns of the Bidder, as the Bidder will generally not be permitted to revisit areas of the IFB for additional clarification except as noted in paragraph 2.6.3, below.

2.6.3 Additional requests for clarification are limited only to the information provided as answers by the Purchaser to Bidder requests for clarification. Such additional requests shall arrive not later than eighteen (18) calendar days before the established Bid Closing Date.

2.6.4 It is the responsibility of the Bidders to ensure that all Clarification Requests submitted bear no mark, logo or any other form or sign that may lead to reveal the Bidders' identity in the language constituting the clarification itself. This prescription is not applicable to the means used for the transmission of the clarification (i.e. email or form by which the clarification is forwarded).

2.6.5 The Purchaser declines all responsibilities associated to any and all circumstances regardless of the nature or subject matter arising from the Bidders' failure or inability to abide to the prescription in paragraph 2.6.4.

2.6.6 The Purchaser may provide for the removal of any form of identification in the body of the clarification request in those instances in which such practice is feasible as well as providing for a re-wording of the clarification request in those cases in which the original language submitted is deemed ambiguous, unclear, subject to different interpretation or revelatory of the Bidder's identity.

2.6.7 Bidders are advised that subsequent questions and/or requests for clarification included in a Bid shall neither be answered nor considered for evaluation and may be considered by the Purchaser as grounds for a determination of non-compliance.

2.6.8 Except as provided above, all questions will be answered by the Purchaser and the questions and answers (but not the identity of the questioner) will be issued in writing to all prospective Bidders. The Bidders shall immediately inform the Purchaser in the event that submitted question are not reflected in the answers published.

2.6.9 The published answers issued by the Purchaser shall be regarded as the authoritative interpretation of the IFB. Amendment to the language of the IFB included in the answers shall be incorporated by the Bidder in his offer.

2.6.10 Where the extent of the changes implied by the response to a clarification request is of such a magnitude that the Purchaser considers it necessary to issue revised documentation, the Purchaser will do so by the mean of the issuance of a formal IFB Amendment in accordance with paragraph 2.8 below.

2.6.11 The Purchaser reserves the right to reject clarification requests clearly devised or submitted for the purpose of artificially obtaining an extension of the Bidding time (i.e. clarifications re-submitted using different wording

where such wording does not change the essence of the clarification being requested).

2.7 Requests for Waivers and Deviations

2.7.1 Bidders are informed that requests for alteration to waivers or deviations from the terms and conditions of this IFB and attached Prospective Contract (Book II) will not be considered after the request for clarification process. Requests for alterations to the other requirements, terms or conditions of the IFB or the Prospective Contract will only be considered as part of the clarification process set forth in paragraph 2.6 above. Requests for alterations to the specifications, terms and conditions of the Contract, which are included in a Bid as submitted, will be regarded by the Purchaser as a qualification or condition of the Bid and may be grounds for a determination of non-compliance.

2.8 Amendment of the IFB

2.8.1 The Purchaser may revise, amend or correct the terms, conditions and/or specifications and provisions of the IFB at any time prior to the date set for the Bid Closing. All modifications will be transmitted to all Bidders by an official amendment designated and signed by the Contracting Authority. Such amendment will be accompanied by an acknowledgement of receipt which the Bidder shall complete and forward to the Purchaser. This process may be part of the clarification procedures set forth in paragraph 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 Bidders to prepare a proper Bid within the allotted time. The Purchaser may extend the "Bid Closing Date" at its discretion and such extension will be set forth in the amendment document.

2.8.3 All revision or amendments issued by the Purchaser shall also be acknowledged by the Bidder in its Bid by completing the “Annex B-2 – Acknowledgement of Receipt of IFB Amendments and Responses to Clarification Requests” at Annex B-2 – Acknowledgement of Receipt of IFB Amendments and Responses to Clarification Requests, 6.2. Failure to acknowledge receipt of all amendments may be grounds to determine the Bid to be non-compliant.

2.9 Modification and Withdrawal of Bids

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

2.9.2 Modifications to Bids which arrive after the Bid Closing Date, will be considered as "Late Modifications" and will be processed in accordance with the procedure set forth above concerning "Late Bids", except that unlike a "Late Bid", the Purchaser will retain the modification until a selection is made. A modification to a Bid which is determined to be late, will not be considered

in the evaluation and selection process. If the Bidder submitting the modification is determined to be the successful Bidder on the basis of the unmodified Bid, the modification may then be opened. If the modification makes the terms of the Bid more favourable to the Purchaser, the modified Bid may be used as the basis of Contract award. The Purchaser however, reserves the right to award a Contract to the apparent successful Bidder on the basis of the Bid submitted and disregard the late modification.

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

2.9.4 Except as provided in paragraph 2.10.4.2 below, a Bidder may withdraw its Bid after Bid Opening only by forfeiture of the Bid Guarantee.

2.10 Bid Validity

2.10.1 Bidders shall be bound by the term of their Bids for a period of twelve (12) months starting from the Bid Closing Date specified in paragraph 2.3.1 above.

2.10.2 In order to comply with this requirement, the Bidder shall complete the Certificate of Bid Validity set forth in paragraph 6.4. Bids 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 Bids which remain under consideration for award.

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

2.10.4.1 Accept this extension of time in which case Bidders shall be bound by the terms of their offer for the extended period of time and the Bid Guarantee and Certificate of Bid Validity extended accordingly; or

2.10.4.2 Refuse this extension of time and withdraw the Bid, in which case the Purchaser will return to the Bidder its Bid Guarantee in the full amount without penalty.

2.10.5 Bidders shall not have the right to modify their Bids due to a Purchaser request for extension of the Bid validity, unless expressly stated in such request.

2.11 Bid Guarantee

2.11.1 The Bid Guarantee shall be submitted by email to the Purchaser, either directly by a banking institution or from the Bidder, to the email address specified in section 2.5. In either case, the Bidder shall provide an additional copy of the Bid Guarantee in the Bid Administration Volume. Bidders are

reminded that the Bid Guarantee shall reflect any extensions to the Bid Validity Date due to extensions in the Bid Closing Date.

2.11.2 The Bidder shall furnish with its Bid, a guarantee with an amount equal to Three Hundred Thousand Euros (€300,000). The Bid Guarantee shall be substantially similar to 13 BOOK I - ANNEX C as an irrevocable, unqualified and unconditional Standby Letter of Credit (SLC), 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 and the drawing against can be made by the NCI Agency at its premises in Belgium. Bid Guarantees shall be made payable to the Treasurer, NCI Agency.

2.11.3 Alternatively, a Bidder may elect to post the required Guarantee by certified cheque. If the latter method is selected, Bidders are informed that the Purchaser will cash the cheque on the Bid Closing Date or as soon as possible thereafter.

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

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

2.11.6 In the event that a Bid Guarantee is submitted directly by a banking institution, the Bidder shall furnish a copy of said document in the Bid Administration Package.

2.11.7 The Purchaser will make withdrawals against the amount stipulated in he Bid Guarantee, under the following conditions:

2.11.8 The Bidder has submitted a bid and after bid closing date (including extensions thereto) and prior to the selection of the lowest compliant price bid, withdraws the bid, or states that it does not consider the bid valid or agree to be bound by the bid, or:

2.11.9 The Bidder has submitted a lowest compliant price bid, but the Bidder declines to sign the Contract offered by the Agency, such Contract being consistent with the terms of the IFB.

2.11.10 The Purchaser has offered the Bidder the Contract for execution but the Bidder has been unable to demonstrate compliance with the security requirements of the Contract, within a reasonable time.

2.11.11 The Purchaser has entered into the Contract with the Bidder but the Bidder has been unable or unwilling to provide the Performance Guarantee required under the terms of the Contract, at the date of Contract signature.

2.11.12 Bid Guarantees will be returned to Bidders as follows:

2.11.12.1 to non-compliant Bidders forty-five (45) days after notification by the Purchaser of a non-compliant Bid

(except where such determination is challenged by the Bidder; in which case the Bid Guarantee will be returned forty-five (45) days after a final determination of non-compliance);

2.11.12.2 to all other unsuccessful Bidders within thirty (30) days following the award of the Contract to the successful Bidder;

2.11.12.3 to the successful Bidder 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;

2.11.12.4 pursuant to paragraph 2.10.4.2 above.

2.11.13 “Standby Letter of Credit" or “SLC” 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 Contractor can revoke or condition the Standby Letter of Credit. The term “Belgian financial institution” includes non-Belgian financial institutions licensed to operate in Belgium.

2.12 Cancellation of IFB

2.12.1 The Purchaser may cancel, suspend or withdraw for re-issue at a later date, the IFB at any time prior to Contract award. No legal liability on the part of the Purchaser for payment of any type, shall arise and in no event will any Bidder have cause for action against the Purchaser for the recovery of costs incurred in connection with preparation and submission of a Bid (including participation at a Bidders Presentation), in response to this IFB.

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 IFB to the prospective Bidders as soon as practicable.

2.13.2 Bidders are cautioned that the Purchaser will rely exclusively on electronic mail communication to manage all correspondence related to this IFB, including IFB Amendments and clarifications.

2.13.3 Bidders are cautioned that electronic transmission of documentation, which contains classified information, is not permissible

2.14 Supplemental Agreements

2.14.1 Bidders are required, in accordance with the certificate in paragraph 6.7 of these Instructions to Bidders, to disclose any prospective Supplemental Agreements that are required by national governments to be executed by NATO/NCI Agency or successor organisations as a condition of Contract performance.

2.14.2 Supplemental Agreements are typically associated with, but not necessarily limited to, national export control regulations, technology transfer restrictions and end user agreements or undertakings.

2.14.3 Bidders are cautioned that failure to provide full disclosure of the anticipated requirements and the terms thereof, to the best of the Bidder's knowledge and experience, may result in the Purchaser withholding award of the Contract or cancelling an executed Contract if it is discovered that the terms of such Supplemental Agreements contradict salient conditions of the Prospective Contract to the extent that either key objectives cannot be accomplished or basic Contract principles and Purchaser rights have been abridged.

2.15 Notice of Limitations on Use of Intellectual Property Delivered to the Purchaser

2.15.1 Bidders are instructed to review Clause 30 of the Contract General Provisions set forth Part III of Book II herein. This Clause sets forth the definitions, terms and conditions regarding the rights of the Parties, concerning Intellectual Property developed and/or delivered under this Contract or used as a basis of development under this Contract.

2.15.2 Bidders are required to disclose, in accordance with paragraph , the Intellectual Property proposed to be used by the Bidder that will be delivered with either Background Intellectual Property Rights or Third Party Intellectual Property Rights. Bidders are required to identify such Intellectual Property and the basis on which the claim of Background or Third Party Intellectual Property is made.

2.15.3 Bidders are further required to identify any restrictions on Purchaser use of the Intellectual Property that is not in accordance with the definitions and rights set forth in the Contract concerning use or dissemination of such Intellectual Property.

2.15.4 Bidders are reminded that restrictions on use or dissemination of Intellectual Property conflicting with the objectives and purposes of the Purchaser as stated in the Prospective Contract, may result in a determination of non-compliant Bid.

3 BID PREPARATION INSTRUCTIONS

3.1 General

3.1.1 Bidders shall prepare and submit their Bid in accordance with the requirements and format set forth in this IFB. Compliance with all Bid submission requirements is mandatory. Failure to submit a Bid in conformance with the stated requirements may result in a determination of non-compliance by the Purchaser and the elimination of the Bid from further consideration.

3.1.2 Bidders shall prepare their bid in three (3) parts in the format and quantities specified in 3.2.1 below

(a) Administrative Package (Part I)

(b) Price Proposal (Part II):

(c) Technical Proposal (Part III

3.1.3 The specific requirement for quantities and format of each volume each volume is stated in paragraph 3.2.1.below.

3.1.4 Bidders shall not simply restate the IFB requirements. A Bid shall demonstrate that the Bidder understands the terms, conditions and requirements of the IFB and shall demonstrate the Bidder's ability to provide all the services and deliverables listed in the Schedules of the prospective Contract.

3.1.5 Bidders are informed that the quality, thoroughness and clarity of the Bid will affect the overall scoring of the Bid. Although the Purchaser may request clarification of the Bid, it is not required to do so and may make its assessment on the content of the Bid as written. Therefore, Bidders shall assume that inconsistencies, omissions, errors, lack of detail and other qualitative deficiencies in the submitted Bid will have a negative impact on the final rating.

3.1.6 Partial Bids and/or bids containing conditional statements will be declared non-compliant.

3.1.7 Bidders are advised that the Purchaser reserves the right to incorporate the successful Bidder's offer in whole or in part by reference in the resulting Contract.

3.1.8 If no specific format has been established for electronic versions, Bidders shall deliver documentation in an electronic format, which is best suited for review and maintenance by the Purchaser (e.g., Project Master Schedule in MS Project format, Project Highlight Reports in MS Word).

3.1.9 Bids and all related documentation shall be submitted in the English language.

3.1.10 All documentation submitted as part of the Bid shall be classified no higher than "NATO UNCLASSIFIED".

3.2 Packaging and marking of Bids

3.2.1 The complete Bid shall consist of three distinct and separated emailed documents as described in clause 2.3, parts each of which will be as described in the following subparagraphs.

3.2.2 Detailed requirements for the structure and content of each of these packages are contained in these Bidding Instructions.

Part	Format and Quantity Details
I: Administrative Package	Bid Administration Package, containing soft copy of the documents specified in paragraph 3.4 below. A copy of the Bid Guarantee. Emailed to IFB-CO-15079-IAS@ncia.nato.int
II: Price proposal	Price Proposal containing one soft copy of the Price Quotation in MS Excel format which can be manipulated (i.e. not an image) and be the full and complete price proposal including the CLIN Price Breakdown sheets, specified in paragraph 3.5.emailed to Price [Insert Company Name]_ IFB-CO-15079-IAS@ncia.nato.int
III Technical Proposal	Technical proposal containing soft copies of the following volumes, emailed to :Technical [Insert Company Name]_ IFB-CO-15079-IAS@ncia.nato.int.: Volume 1 – Management and Risk with the Executive Summary,Technical Proposal Cross Reference Matrix in the format at annex F to Book I the bidding instructions Volume 2 – Engineering Volume 3 – Supportability
Bid Guarantee	1 PDF File, Submitted by Email directly to the Purchaser Treasury (TreasuryVendorBank.Finance@ncia.nato.int) using the following subject line IFB-CO-15079-IAS Official Bid for [Company Name]

3.2.3 Part I is the Bid Administration Package, containing the documents specified in paragraph 3.4 below. This shall be provided as per paragraph 3.2.1 above.

3.2.4 Part II is the Price Proposal Package consisting of the Completed bidding sheets and supporting documentation.

3.2.5 Part III is the Technical Proposal Package consisting of three volumes as specified below. This shall be provided as per paragraph 3.2.1 above.

3.2.5.1 Volume 1– Management and Risk with the Executive Summary,Technical Proposal Cross Reference Matrix

3.2.5.2 Volume 2 – Engineering

3.2.5.3 Volume 3 – Supportability

3.2.6 Bidding instructions describing the expected contents of each of the Bid Parts follows in this Section of the Bidding Instructions.

3.3 Technical Data Package

3.3.1 Bidders have been issued with a Hard Drive with the details of the current products Description Please) including all relevant information pertaining to the current products.

3.3.2 The products listed below are included:

3.3.3 Source Code
3.3.4 Installation binaries to install IKM Tools
3.3.5 Installation Guide, User Guide and Administration Guide
3.3.6 Virtual Machines with running IKM Tools environment

3.3.7 All software, coding documents or any other artefacts that are included in the hard drive remain the property of the NCI Agency and no use of the material for any other purpose is allowed without the express written permission of the Purchaser

3.3.8 The information provided “as is” is to enable bidders to provide a response to this IFB and no warranty as to quality or accuracy is inferred or should be implied.

3.4 Part 1 – Bid Administration Package - content

3.4.1 The Bid Administration Package must include the copy of the Bid Guarantee required by paragraph 2.11 of the Bidding Instructions to the email address specified in Paragraph 2.5. If the Bid Guarantee is sent to the Purchaser directly from the Bidder's bank, a letter, in lieu of the actual Guarantee, shall be included specifying the details of the transmittal and a copy of the Guarantee. Bidders are reminded that the Bid Guarantee shall reflect any extensions to the Bid Validity Date due to extensions in the Bid Closing Date.

3.4.2 Bidders shall complete and return the IFB/ Bid Requirements Cross Reference Matrix (BRCM) (see instructions in BOOK I - ANNEX D) covering the full Prospective Contract and Bidding Instructions where required. It is the Bidders responsibility to ensure that the submitted IFB Cross-Reference Table covers all sections of the IFB technical requirements.

3.4.3 The Package shall include the Certificates set forth in paragraph 6 Annex B to these Bidding Instructions, signed in the original by an authorised representative of the Bidder. The text of the certificates must not be altered in any way. The Certificates are as follows:

3.4.3.1 Annex B-1 – Certificate of Legal Name of Bidder;

3.4.3.2 Annex B-2 – Acknowledgement of Receipt of IFB Amendments and Responses to Clarification Requests;

3.4.3.3 Annex B-3 – Certificate of Independent Determination;

3.4.3.4 Annex B-4 – Certificate of Bid Validity;

3.4.3.5 Annex B-5 – Certificate of Exclusion of Taxes, Duties and Charges;

3.4.3.6 Annex B-6 – Comprehension and Acceptance of Contract Special and General Provisions;

3.4.3.7 Annex B-7 – Disclosure of Requirements for NCI Agency Execution of Supplemental Agreements;

3.4.3.8 Annex B-8 – Certificate of Compliance AQAP 2110:2016 or ISO 9001:2015 or Equivalent;

3.4.3.9 Annex B-9 – List of Prospective ;

3.4.3.10 Annex B-10 – Bidder Background IPR;

3.4.3.11 Annex B-11 – List of Subcontractors IPR;

3.4.3.12 Annex B-12 – Certificate of Origin of Equipment, Services, and Intellectual Property;

3.4.3.13 Annex B-13 – List of Proposed Key Personnel;

3.4.3.14 Annex B- 14 – Copies of Power of Attorney or equivalent (where relevant);

3.4.3.15 Annex B-15 – Disclosure of Involvement of Former NCI Agency Employment;

3.4.4 No information disclosing or contributing to disclose the bid price shall be made part of the Bid Administration volume. Failure to abide to this prescription shall result in the bid being declared non-compliant.

3.5 Part 2 – Price Proposal

3.5.1 The Price Quotations shall be submitted electronic form and contain the BOOK I - ANNEX A (paragraph 5) “Bidding Sheets” and, as an Annex, the complete set of sheets contained in the electronic file “2-IFB-CO-15079-IAS-Bidding Sheets.xls” submitted as part of this IFB.
Bidders shall prepare their Price Quotation by completing the Bidding Sheets referred in referred in paragraph

3.5.2 3.5.1 above, in accordance with the Bid Package Content instructions specified in paragraph 3.2.

3.5.3 The structure of the Bidding Sheets shall not be changed, other than as indicated elsewhere, nor should any quantity or item description in the Bidding Sheets. The currency (ies) of each Contract Line Item and sub-item shall be indicated by the Bidder. The prices provided shall be intended as the comprehensive total price offered for the fulfilment of all requirements as

expressed in the IFB documentation including but not limited to those expressed in the SOW.

3.5.4 Bidders 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.

3.5.5 Bidders shall furnish Firm Fixed Prices for the Base Contract and for each Option. Purchaser evaluation of the submitted Bids will be on the basis of the complete submission including administrative, price and technical components.

3.5.6 Offered prices shall not be “conditional" in nature. Any comments supplied in the Bidding Sheets which are conditional in nature, relative to the offered prices, may result in a determination that the Bid is non-compliant.

3.5.7 Bidders 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.

3.5.8 Bidders shall quote in their own national currency. Bidders may also quote in other than their national currency if it can be demonstrated that the Bidder is expected to incur equivalent costs in that/those currency (ies), for example through sub-Contracts or purchased materials/services. In these cases, a Bidder may express its Bid price in multiple currencies.

3.5.9 Bidders are informed that the Purchaser, by virtue of its status stipulated in the provisions of the NATO Communication and Information Organisation (NCIO) Charter, Article 67(e)(3), is exempt from all direct and indirect taxes (e.g., VAT), and all customs duties on merchandise imported or exported. The stated provision reads as follows:

> *"Each participating nation undertakes to grant to NCI Agency under the terms of Articles 9 and 10 of the Ottawa Agreement, exemption from all direct taxes (except rates, taxes and dues which are no more than charges for public utility services) from the taxes on the sale of movable and immovable properties, and from customs and excise duties in respect of equipment imported or exported by NCI Agency or its appointed agents."*

3.5.10 Bidders shall therefore exclude from their price Bid all taxes, duties and customs charges from which the Purchaser is exempted by international agreement and are required to certify that they have done so through execution of the Certificate at 6.5.

3.5.11 Unless otherwise specified in the instructions for the preparation of Bidding Sheets, all prices quoted in the Bid shall be on the basis that all deliverable items shall be delivered on the basis of Delivery Duty Paid (DDP) in accordance with the International Chamber of Commerce INCOTERMS 2010 to the destination(s) and at such times as set forth in the Schedule of Supplies and Services.

3.5.12 The Bidder’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. Any other document will not be considered for evaluation.

3.5.13 All prices Bid shall be clearly traceable in the detailed Bidding Sheets.

Any adjustment or discount to prices should be clearly traceable to the lowest level of break down in the Bidding Sheets and should not be aggregated or summed. Any lack of clarity or traceability may render the Bid non-compliant.

3.6 Technical Proposal

3.7

4 BID EVALUATION AND CONTRACT AWARD

4.1 General

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

4.1.2 The evaluation of bids 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 Bidder and contained in his bid. The Purchaser shall not be responsible for locating or securing any information which is not included in the bid or included only by reference.

4.1.3 To ensure that sufficient information is available, the Bidder shall furnish with its bid 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 Bidder proposes to furnish and whether the offer meets the technical, administrative and contractual requirements of this IFB.

4.1.4 During the evaluation, the Purchaser may request clarification of the bid from the Bidder and the Bidder shall provide sufficient detailed information in connection with such requests as to permit the Purchaser to make a final assessment of the bid based upon the facts. The purpose of such clarifications will be to resolve ambiguities in the bid and to permit the Bidder to state its intentions regarding certain statements contained therein. The purpose of the clarification stage is not to elicit additional information from the Bidder that was not contained in the original submission or to allow the Bidder to supplement cursory answers or omitted aspects of the bid. The Bidder is not permitted any cardinal alteration of the bid regarding technical matters and shall not make any change to its price quotation at any time.

4.1.5 The Bidder’s prompt response to the Purchaser’s clarification requests is important and therefore failure to provide the requested clarifications within the time-limits set forth in the specific Clarification Requests (minimum 24 hours next working day), may cause the Bid to be deemed non-compliant.

4.1.6 The Purchaser reserves the right, during the evaluation and selection process, to verify any statements made concerning experience and facilities, by making a physical inspection of the Bidder's facilities and capital assets and by interviewing proposed Key Personnel. Physical inspections and interviews shall also apply to assertions in the proposal made on behalf of

proposed Subcontractors. The Bidder shall be responsible for providing access to its own or Subcontractors' facilities and personnel.

4.2 Evaluation Procedure

4.2.1 The evaluation will be done in a 3-step process, as described below.

4.3 Step 1: Administrative Compliance Evaluation

4.3.1 Bids shall be reviewed for administrative compliance in accordance with Section 3.4 of this IFB. The evaluation of the Bid Administrative Package will be made on its completeness, conformity and compliance to the requested information. This evaluation will not be scored but is made to determine if a bid complies with the requirements of the Bidding Instructions and Prospective Contract. Specifically, the following requirements shall be verified:

4.3.2 The Bid was received by the Bid Closing Date and Time.

4.3.1.2 The Bid is packaged and marked properly as detailed in Paragraph 3.2 Packaging and marking of Bids;

4.3.1.3 The Bid Administration Package contains the documentation listed in paragraph 3.3 above and complies with the formal requirements established in paragraph 3.1 above;

4.3.1.4 The Bidder has not taken exception to the Terms and Conditions of the Prospective Contract or has not qualified or otherwise conditioned its offer on a modification or alteration of the Terms and Conditions or the language of the SOW; and

4.4 Step 2: Price Evaluation

4.4.1 All bids having successfully passed Step 1 shall have their Price Quotation evaluated for the lowest compliant price as follows:

4.4.1.1 Compliance with the requirements for preparation and submission of the Price Quotation in accordance with paragraph 3.5.

4.4.1.2 All pricing data, i.e., quantities, unit prices, unit price currencies, should be provided as reflected in the Schedule of Supplies and Services and the Bidding Sheets (at Annex A).

4.4.1.3 Bid prices include all costs for items supplied, delivered, and supported.

4.4.1.4 The Bidder must have provided accurate unit price and the unit price currency of each of the sub-items added (if any).

4.4.1.5 The Bidder must have provided accurate unit price, unit price currency and total price for each line item.

4.4.1.6 The grand total shall be accurate.

4.4.1.7 All prices should be accurately entered into appropriate columns, and accurately totalled.

4.4.1.8 Bidders shall indicate that in accordance with the treaties governing the terms of business with NATO, exclude from their prices all taxes, duties and customs charges from which the Purchaser has been exempted.

4.4.1.9 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 sectors).

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

4.4.1.11 The Price Quotation meets requirements for price realism as described below in paragraph 4.4.3.

4.4.2 Basis of Price Comparison

4.4.2.1 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 (Known as “Euro foreign exchange reference rates”) of the European Central Bank (ECB) at close of business on the last working day of the ECB preceding the Bid Closing Date.

4.4.2.2 The price comparison will be based on the offered Grand Total Firm Fixed Price which includes Work Packages 5, 8 and Optional Work Package 9 (Evaluated Options) in the Bidding Sheets.

4.4.3 Price Realism

4.5.2.1 In those cases in which the prices quoted in relation with this IFB appear to be unreasonably low in relation to the performance required under the prospective contract and/or the level of effort associated with the tasks, the Purchaser will reserve the right to request the Bidder clarifications aimed to demonstrate the rationale for such circumstances.

4.5.2.2 Indicators of an unrealistically low bid may be the following, amongst others:

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

4.5.2.2.2 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.

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

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

4.5.2.3.1 An error was made in the preparation of the Price Quotation. In such a case, the Bidder 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 Bidder. In such a case, the Bidder shall petition the Purchaser to either remain in the competition and accept the Contract at the offered price or to withdraw from the competition.

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

4.5.2.3.3 The Bidder recognises that the submitted Price Quotation is unrealistically low, compared to its cost of performance and for business reasons the Bidder is willing to absorb such a loss. Such a statement can only be made by the head of the business unit submitting the Bid and will normally be made at the level of Chief Operating Officer or Chief Executive Officer. In such a case, the Bidder shall estimate the potential loss and show that the financial resources of the Bidder are adequate to withstand such reduction in revenue.

4.5.2.3.4 If a Bidder fails to submit a comprehensive and compelling response on one of the examples above, the Purchaser may determine the Bid submitted as non-compliant.

4.5.2.3.5 If the Bidder responds on the basis of paragraph 4.5.2.3.1 above and requests to withdraw from the competition, the Purchaser may, depending on the nature and gravity of the mistake, allow the Bidder to withdraw with or without penalty.

4.5.2.3.6 If the Purchaser accepts the Bidder's explanation of mistake in paragraph 4.5.2.3.1 and allows the Bidder to accept the Contract at the offered price, or the Purchaser accepts the Bidder's explanation pursuant to paragraph 4.5.2.3.3 above, the Bidder shall agree that the supporting pricing data submitted with his Bid, will be incorporated by reference in the resultant contract. The Bidder 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.

4.5.2.3.7 If the Bidder presents a convincing rationale pursuant to paragraph 4.5.2.3.2 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 Bid may be determined to be non-compliant.

4.5.2.4 An award shall be made on the basis of Work Package 5, 8 and Evaluated Option Work Package 9.

4.5 Step 3: Technical Compliance Evaluation

4.5.1 Upon determination of the lowest-priced Bid as described above, that Bid will be evaluated to confirm compliance with the following criteria associated with the respective sections of the Technical Proposal.

4.5.2 The Technical Compliance Evaluation Factors: Engineering, Management, and Supportability shall take into account, the information presented by and received from the Bidder during the Technical Demonstration. Detailed information about the Technical Demonstration is in Book I Annex D which will also be considered as part of the Technical Compliance Evaluation.

4.5.3 In order for a Bid to be determined to be compliant, the Bidder will have submitted a Technical Proposal, which after evaluation by the Purchaser, has met all the criteria set forth below. All criteria will be evaluated by default in respect of comprehensiveness, feasibility, logic and reasonableness and the demo

4.5.4 Contractual Compliance.

4.5.5 A Bid must be based on strict compliance with the terms, conditions, and requirements of the IFB and the prospective Contract.

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

4.5.5.1.2 In case of conflict between the information shown in the forms attached to this IFB, and the detailed evidence or

explanations/comments furnished somewhere else in the offer, the detailed evidence/comments shall take precedence for the actual determination of compliance.

4.5.5.1.3 Technical Compliance

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

4.5.5.1.5 Proposal Formal Compliance

4.5.5.1.6 The Bidder has included a Table of Contents that meets the requirements established in paragraph **Error! Reference source not found.**

4.5.5.1.7 The Bid includes a Cross-Reference Matrix in accordance with paragraph **Error! Reference source not found.**above.

4.5.5.1.8 The last column of the Cross-Reference Matrix in BOOK I - ANNEX F is completely filled out with Bid references that locate the technical proposal documentation required by the IFB.

The Bidder states it complies with all requirements in section 3.5 Technical Proposal.

The Bidder provides all deliverables required in the Technical Proposal section 3.5 in the form that has been asked for (i.e.: format and completeness).

The deliverables provided by the Bidder are meaningful and trustworthy to what is being asked for, that is, accurately provides the information is being requested.

4.5.5.1.9 Bidder Qualifications

4.5.5.1.10 The Bid provides an overview of the Bidder's products and services, locations, facilities, organisation, and financial condition as required by paragraph 3.6.6.1.6.

4.5.5.1.11 The description of the organisational structure and facilities is as detailed and comprehensive as indicated in paragraph 3.6.6.1.7 and is adequate for the performance of the prospective contract.

4.5.5.1.12 The Bidder has provided documentation to prove that it has adequate financial resources to perform the contract or the ability to obtain them.

4.5.5.1.13 The Bid describes the distribution, warehousing or order-processing capabilities the Bidder has, that enables it to provide efficient and prompt delivery of COTS information systems equipment, in satisfaction of short-notice or unpredictable customer orders. The description provides sufficient evidence to confirm that the Bidder will be able to meet the timelines and other shipment and Task requirements of the SOW.

4.5.5.1.14 As required by **Error! Reference source not found.**, the Bid describes the Bidder's experience and expertise in Developing SharePoint information systems to geographically-dispersed organisations. In particular, the Bid identifies at least three contracts within the last three years for which the Bidder provided customized SharePoint Solutions to two or more locations of a company or other organisation.

4.5.5.1.15 As required by 3.6.6.1.7, the Bid describes the Bidder's experience and expertise in providing COTS information systems equipment to geographically-dispersed organisations. In particular, the Bid identifies at least three contracts within the last three years for which the Bidder provided COTS servers, and ancillary equipment to two or more locations of a company or other organisation.

4.5.5.1.16 The Bid describes the Bidder's experience and expertise in providing warranty support and repair-and-replacement service for SharePoint information systems equipment for geographically-dispersed organisations. The description demonstrates that the Bidder has the capacity and corporate expertise to provide after-acceptance warranty support to the anticipated number and distribution of IAS sites.

4.5.5.1.17 Equipment Requirements.

4.5.5.1.18 General.

4.5.5.1.19 The Bid states whether all Equipment provided by the Bidder will be compliant to SOW ANNEX C Hardware specifications ITM.

4.5.5.1.20 Hardware.

4.5.5.1.21 The Bid states whether all hardware provided by the Bidder will be able to support the performance requirements (SRS section 4.2.2).

4.5.5.1.22 The Bid states whether all hardware provided by the Bidder will be compliant with SOW sections 9 and 10.

4.5.5.1.23 Software Requirements.

4.5.5.1.24 The Bid states whether all software to be provided by the Bidder are in compliance with SRS sections 4.2.4.2, 4.4 and 4.6.

4.5.5.1.25 Security Requirements.

4.5.5.1.26 The initial SDS describes how the system shall meet the security requirements in SRS section 4.2.8.

4.5.5.1.27 Equipment Specifications.

4.5.5.1.28 For each Hardware Contract Line Item Number (CLIN) the Bid ncludes a detailed list of the COTS components proposed to be supplied as part of that CLIN. The product name, manufacturer name, and manufacturer's part number, version, or release number are stated. If a generic or non-vendor specific component is proposed, the Bidder provides the item name.

4.5.5.1.29 The Bid includes a detailed specification sheet for each item of COTS equipment the Bidder proposes to provide in satisfaction of contractual requirements.

4.5.5.1.30 Personnel Qualifications.

4.5.5.1.31 The Bid includes a resume for each key personnel and identifies the proposed role for that key personnel.

4.5.5.1.32 Each key personnel's resume meets or exceeds the experience and education criteria stated in Book II, Sections 11 of the SOW and Section 3.6.6.16 of Book 1.

4.5.5.1.33 CD-ROM.

4.5.5.1.34 The Bid contains an electronic version of all the documentation included in the Technical Proposal Package on CD-ROM format readable through MS Office suite or Acrobat Reader.

4.5.5.1.36 As part of the assessment of compliance with the technical requirements of the Bid a Live Demonstration of the Bidder's notional IAS system in its environment is required.

4.5.5.1.37 The Apparent winning Bidder prepares the demonstration in compliance with Book I Annex G.

4.5.5.1.38 The Apparent winning Bidder demonstrates all required functionality in compliance with SOW ANNEX F .

4.5.5.1.39 A bid which fails to meet the requirements of the Live Demonstration will be declared non-compliant.

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5 BOOK I - ANNEX A

BIDDING SHEETS

Annex A Bidding Sheets

See separate Excel Workbook attached
“1- IFB-CO-15079-IAS-Book 1 Annex A Bidding Sheets.xlsx”

Bidding Sheets

On behalf of the firm stated below I hereby offer the Purchaser the services and deliverables (collectively referred as “ITEMS”) set forth in the attached schedules[1], at the specified prices, and subject to the terms and conditions stated in IFB-CO-15079-IAS.

Signature: _____

Printed Name: _____

Title: _____

Date: _____

Company: _____

Bid Reference _____

[1] Bidders shall submit in electronic form the cover page and an electronic copy of the worksheets contained in the file “2- IFB-CO-15079-IAS-Bidding Sheets.xls” that was submitted to them as part of the IFB package.

5.1 Instructions for the Preparation of Bidding Sheets

5.1.1 INTRODUCTION

Bid pricing requirements as addressed in this Annex are mandatory. Failure to abide to the prescriptions of Bid submission referred in this section may lead to the Bid being declared non-compliant and not being taken into consideration for award.
No alteration of the Bidding sheets including but not limited to quantity indications, descriptions or titles are allowed with the sole exception of those explicitly indicated as allowed in this document. Additional price columns may be added if multiple currencies are Bid, including extra provisions for all totals.

5.1.2 GENERAL REQUIREMENTS

Bidders shall follow the specific instructions provided in each worksheet.

Bidders shall insert information in all yellow cells.

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. In preparing the Bidding Sheets, Bidders shall ensure that the prices of the Sub-items total the price of the major item of which they constitute a part.

All metrics (e.g., cost associated with labour) will be assumed to be standard or normalised to 7.6 hour/day, for a five day working week at NATO sites and Contractor facilities located within Europe and 8 hours/day at NATO sites and Contractor facilities located in the United States.
Should the Bid be in other than Euro currency, the award of the Contract will be made in the currency or currencies of the Bid.
Bidders are advised that formulae are designed to ease evaluation of the Bidders Bid, have been inserted in the electronic copies of the Bidding Sheets. Notwithstanding this, the Bidder remains responsible for ensuring that their figures are correctly calculated and should not rely on the accuracy of the formulae electronic copies of the Bidding Sheets.
If the Bidder identifies an error in the spreadsheet, the Purchaser should be notified and subsequently will make a correction and notify all the Bidders of the update.
Any discounted or reduced prices offered by the Bidder must be traceable to a CLIN or CLINs at the lowest level. Prices and detail of the traceability of application of the discount shall be clearly identified in the supporting detail sheets and applied at the unit price level.

5.1.3 STRUCTURE OF BIDDING SHEETS

The Bidding Sheets provided in MS Office Excel format are organised according to the following structure:

- Instructions
- Section 1. Offer & CLIN Summary sheets
- Section 2. Detailed Bidding sheets for
- Labour,Material,Travel,ODC and Rates

5.1.3 COMPLETING SECTION 1 (Offer & CLIN Summary Sheets)

5.1.4.1 Section 1 corresponds to the Schedule of Supplies and Services of the Prospective Contract. Each Work Package (WP) included in the Contract is represented by a detailed schedule showing the Contract Line Items (CLINs) included within the scope of the Work Package (Detailed Bidding sheet tabs) and a detailed cost breakdown attached to each WP schedule.

5.1.4.2 Filling in the Offer Summary

Bidders shall fill in the Offer Summary sheet based on the information provided in the CLIN summary sheet. The Offer Summary is a high level summary that separates the offer prices for the investment and the Operations and Maintenance offers. CLIN 5 is the Operations and Maintenance offer. CLINs 1, 2, 3 and 4 are to be considered investment.

5.1.4.3 Filling the CLIN Summary Sheet

Bidders shall fill in the CLIN summary sheet based on the information provided in the detailed Bidding sheets (CLIN Price Breakdown sheets). The detailed Bidding sheets are broken down in to the categories listed in Section 5. Bidders are expected to aggregate the prices in the detailed Bidding sheets that make up the line items in the CLIN summary sheet. The line items in the CLIN Summary Sheet shall be all INCLUSIVE of the price being Bid in order to fulfil the requirement for the line item in the CLIN Summary Sheet. Bidders shall make sure that the total price indicated in the Detailed Bidding Sheets matches the price stated in the CLIN summary sheet for the same corresponding CLIN or sub-CLIN.
Bidders shall make sure that they have filled all delivery dates in yellow and that these dates comply with the time limits specified in each worksheet and are in accordance with the dates proposed in the Milestone Schedule (Book II, Part 4 – SOW, Section 3).

5.1.4 COMPLETING SECTION 2 (Detailed Bidding Sheets)

Bidders are instructed to prepare their cost Bids in sufficient detail to permit thorough and complete evaluation. For each of the CLINs the Bidder shall use the separate Sheets as provided, adding additional sheets if multiple currencies are used. Change the currency in the header of the Sheets if necessary.

5.1.5.1 MATERIAL

5.1.5.1.1 Purchased Parts: Provide a consolidated priced summary of individual material quantities included in the various tasks, orders, or Contract line items being proposed and the basis for pricing.

a. Raw Material: Consists of material in a form or state that requires further processing. Provide priced quantities of items required for the Bid. Show total cost.
b. Standard Commercial Items: Consists of items that the Bidder normally fabricates, in whole or in part, and that are generally stocked in inventory.

Provide an appropriate explanation of the basis for pricing on attached schedule.

c. The Bidder shall provide a level of detail down the unique sellable item level (e.g. A server, a laptop, a printer).
d. The Bidder shall provide unit prices that shall be EXCLUSIVE of any applicable overhead, general and administrative costs, profit, costs associated to travel, per-diem and/or incidentals as well as Personnel Installation costs at the sites of performance. Factors for overhead shall be applied in the MATERIAL LABOUR OVERHEAD section of the detailed Bidding sheet to the total cost of material.

5.1.5.2 DIRECT LABOUR

Show the hourly rate by year and the total hours for the categories and disciplines of direct labour proposed. Unit prices shall be EXCLUSIVE of any applicable overhead, general and administrative costs, profit, costs associated to travel, per-diem and/or incidentals as well as Personnel Installation costs at the sites of performance. Factors for overhead shall be applied in the DIRECT LABOUR OVERHEAD section of the detailed Bidding sheet to the total cost of direct labour.

5.1.5.3 SUBCONTRACT LABOUR

Show the hourly rate by year and the total hours for the categories and disciplines of subcontract labour proposed. Unit prices shall be EXCLUSIVE of any applicable overhead, general and administrative costs, profit, costs associated to travel, per-diem and/or incidentals as well as Personnel Installation costs at the sites of performance. Factors for overhead shall be applied in the SUBCONTRACT LABOUR OVERHEAD section of the detailed Bidding sheet to the total cost of subContract labour.

5.1.5.4 TRAVEL

Show the number of trips being made, the number of people travelling, the number of days per trip, the cost of traveling (e.g. flight costs), and the daily per diem rate. Insert comments/descriptions/references/explanation of calculation method under the 'Notes' column including the location & reference to SOW.

5.1.5.5 OTHER DIRECT COSTS

5.1.5.5.1 Special Tooling/Equipment. Identify and support specific equipment and unit prices. Use a separate schedule if necessary.

5.1.5.5.2 Individual Consultant Services. Identify and support the proposed contemplated consulting. State the amount of services estimated to be required and the consultant’s quoted daily or hourly rate.

5.1.5.5.3 Other Costs. List all other direct charge costs not otherwise included in the categories described above (e.g., services of specialized trades, computer services, preservation, packaging and packing, leasing of equipment, ex-pat costs etc.) and provide bases for pricing.

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6 BOOK I - ANNEX B

Prescribed Administrative Forms and Certificates

Annex B Prescribed Administrative Forms and Certificates

6.1 Annex B-1 – Certificate of Legal Name of Bidder

This Bid 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: _____

TELEFAX No: _____

POINT OF CONTACT REGARDING THIS BID:

NAME: _____
POSITION: _____
TELEPHONE: _____

ALTERNATIVE POINT OF CONTACT:

NAME: _____
POSITION: _____
TELEPHONE: _____

Signature of authorised Representative:

_____

Printed Name: _____

Title: _____

Date: _____

Company: _____

6.2 Annex B-2 – Acknowledgement of Receipt of IFB Amendments and Responses to Clarification Requests

I confirm that the following Amendments and responses to Clarification Requests to Invitation for Bid CO-15079-IAS have been received and the Bid, as submitted, reflects the content as such.

Amendment no./Responses to CR release no.	Date of Issued	Date of receipt	Initials

Signature of authorised Representative:

_____

Printed Name: _____

Title: _____

Date: _____

Company: _____

6.3 Annex B-3 – Certificate of Independent Determination

It is hereby stated that:

a. We have read and understand all documentation issued as part of CO-15079-IAS. Our Bid submitted in response to the referred solicitation is fully compliant with the provisions of the IFB and the prospective Contract.
b. Our Bid has been arrived at independently, without consultation, communication or agreement, for the purpose of restricting competition, with any other Bidder or with any competitor;
c. The contents of our Bid have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by the Bidder prior to award, directly or indirectly to any other Bidder or to any competitor; and
d. No attempt has been made, or will be made by the Bidder to induce any other person or firm to submit, or not to submit, a Bid for the purpose of restricting competition.

Signature: _____

Printed Name: _____

Title: _____

Date: _____

Company: _____

Bid Reference _____

6.4 Annex B-4 – Certificate of Bid Validity

I, the undersigned, as an authorised representative of the firm submitting this Bid, do hereby certify that the pricing and all other aspects of our Bid will remain valid for a period of twelve months from the Bid Closing Date of this Invitation for Bid.

Signature of authorised Representative:

_____

Printed Name: _____

Title: _____

Date: _____

Company: _____

6.5 Annex B-5 – Certificate of Exclusion of Taxes, Duties and Charges

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

Signature of authorised Representative:

_____

Printed Name: _____

Title: _____

Date: _____

Company: _____

6.6 Annex B-6 – Comprehension and Acceptance of Contract Special and General Provisions

The Bidder hereby certifies that he has reviewed the Special Contract Provisions and the NCI Agency General Provisions set forth in the Prospective Contract, Book II of this Invitation for Bid. The Bidder hereby provides its confirmation that he fully comprehends the rights, obligations and responsibilities of the Contractor as set forth in the Articles and Clauses of the Prospective Contract. The Bidder additionally certifies that the offer submitted by the Bidder is without prejudice, qualification or exception to any of the Terms and Conditions and he will accept and abide by the stated Special and General Provisions if awarded the Contract as a result of this Invitation for Bid.

Signature of authorised Representative:

_____

Printed Name: _____

Title: _____

Date: _____

Company: _____

6.7 Annex B-7 – Disclosure of Requirements for NCI Agency Execution of Supplemental Agreements

I, the undersigned, as an authorised representative of _____, certify the following statement:

All supplemental agreements, defined as agreements, documents and/or permissions outside the body of the Contract but are expected to be required by my Government, and the governments of my subcontractors, to be executed by the NCI Agency, or its legal successors, as a condition of my firm's performance of the Contract, have been identified, as part of the Bid.

These supplemental agreements are listed as follows:
Examples of the terms and conditions of these agreements have been provided in our Offer. 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. 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.

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).

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 Bidder may be cause for the NCI Agency, or its legal successors, to determine the submitted Bid to be non-compliant with the requirements of the IFB;

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.

Signature of authorised Representative: _____

Printed Name: _____

Title: _____

Date: _____

Company: _____

6.8 Annex B-8 – Certificate of Compliance AQAP 2110:2016 or ISO 9001:2015 or Equivalent

I hereby certify that _____ (name of Company) possesses and applies Quality Assurance Procedures/Plans that are equivalent to the AQAP 2110 or ISO 9001:2015 as evidenced through the attached documentation[1].

Signature of authorised Representative:

_____

Printed Name: _____

Title: _____

Date: _____

Company: _____

[1] Bidders must attach copies of any relevant quality certification.

6.9 Annex B-9 – List of Prospective Subcontractors

Name and Address of Sub-Bidder	DUNS Number [3]	Primary Location of Work	Items/Services to be Provided	Estimated Value of Sub-Contract

Signature: _____

Printed Name: _____

Title: _____

Date: _____

Company: _____

[3] Data Universal Numbering System (DUNS). Bidders are requested to provide this data in order to help NCI AGENCY to correctly identify Subcontractors. If a Subcontractor's DUNS is not known this field may be left blank.

6.10 Annex B-10 – Bidder Background IPR

I, the undersigned, as an authorised representative of Bidder _____, warrant, represent, and undertake that:

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

ITEM	DESCRIPTION

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

9 The Background IPR stated above complies with the terms specified in Clause 32 of the Special Contract Provisions and shall be licensed to the Purchaser according to the terms and conditions specified in the prospective Contract, and more particularly, in accordance with Clause 32 of the Special Contract Provisions and Clause 30 of the NCIA General Contract Provisions.

Signature: _____

Printed Name: _____

Title: _____

Date: _____

Company: _____

Bid Reference: _____

9.1 Annex B-11 – List of Subcontractors IPR

I, the undersigned, as an authorised representative of Bidder _____, warrant, represent, and undertake that:

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

ITEM	DESCRIPTION

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

12 The Subcontractor IPR stated above complies with the terms specified in Clause 32 of the Special Contract Provisions and shall be licensed to the Purchaser according to the terms and conditions specified in the prospective Contract, and more particularly, in accordance with Clause 32 of the Special Contract Provisions and Clause 30 of the NCIA General Contract Provisions.

Signature: _____

Printed Name: _____

Title: _____

Date: _____

Company: _____

Bid Reference: _____

12.1 Annex B-12 – Certificate of Origin of Equipment, Services, and Intellectual Property

The Bidder hereby certifies that, if awarded the Contract pursuant to this solicitation, he 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 provisioned 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 Bidder to firms, individuals or Governments other than within the NATO member countries.

Signature: _____

Printed Name: _____

Title: _____

Date: _____

Company: _____

Bid Reference: _____

12.2 Annex B-13 – List of Proposed Key Personnel

Position	SOW/Work Package Reference	Labour Category	Name	Designation Period
Project Manager				EDC thru Contract expiration date
Senior System Engineer Lead (Technical Lead)				EDC thru Contract expiration date
Test Director / Test Engineer				EDC thru Contract expiration date
Other (tbd by Bidder):				EDC thru Contract expiration date

Signature of authorised Representative:

_____

Printed Name: _____

Title: _____

Date: _____

Company: _____

12.3 Annex B- 14 – Copies of Power of Attorney or equivalent (where relevant)

12.4 Annex B-15 – Disclosure of Involvement of Former NCI Agency Employment

A. The Bidder hereby certifies that, in preparing its Bid, the Bidder did not have access to solicitation information prior to such information been authorized for release to Bidders (e.g., draft statement of work and requirement documentation).
B. The Bidder hereby acknowledges the post-employment measures applicable to former NCI Agency Personnel as per the NCI Agency Code of Conduct.
C. The Bidder hereby certifies that its personnel working as part of the company's team, at any tier, preparing the Bid:

☐ 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 in Annex B of the prospective Contract Provisions):

Employee Name	Former NCIA Position	Current Company Position

D. The Bidder 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 : .....

Name & Title : .....

Company : .....

Bid Reference :.....

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13 BOOK I - ANNEX C

Bid Guarantee - Standby Letter of Credit

7.1 Annex C Bid Guarantee - Standby Letter of Credit

Standby Letter of Credit Number:

Issue Date: _____

Beneficiary: NCI Agency, Financial Management Office
Boulevard Leopold III, B-1110, Brussels
Belgium

Expiry Date: _____

A. 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 BIDDER) in the original amount of € 300,000.00 (Three Hundred Thousand Euro). We are advised this Guarantee fulfils a requirement under Invitation for Bid IFB CO-15079-IAS dated _____.
B. 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 NCI Agency Contracting Officer that:
    1) (NAME OF BIDDER) has submitted a Bid and, after Bid Closing Date (including extensions thereto) and prior to the selection of the lowest priced, technically compliant Bid, has withdrawn its Bid, or stated that he does not consider its Bid valid or agree to be bound by its Bid, or
    2) (NAME OF BIDDER) has submitted a Bid determined by the Agency to be the lowest priced, technically compliant Bid, but (NAME OF BIDDER) has declined to execute the Contract offered by the Agency, such Contract being consistent with the terms of the Invitation for Bid, or
    3) The NCI Agency has offered (NAME OF BIDDER) the Contract for execution but (NAME OF BIDDER) has been unable to demonstrate compliance with the security requirements of the Contract within a reasonable time, or
    4) The NCI Agency has entered into the Contract with (NAME OF BIDDER) but (NAME OF BIDDER) has been unable or unwilling to provide the Performance Guarantee required under the terms of the Contract within the time frame required.
C. 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.
D. 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 NCI 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.

E. We may terminate this letter of credit at any time upon sixty (60) calendar days' notice furnished to both (NAME OF BIDDER) and the NCI Agency by registered mail.
F. 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 NCI Agency Contracting Officer which states
G. "The NCI 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 NCI Agency from, or on behalf of (NAME OF BIDDER), and the NCI 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)."
H. 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.
I. 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.
J. Multiple drawings are allowed.
K. Drafts drawn hereunder must be marked, "Drawn under {issuing bank} Letter of Credit No. {number}" and indicate the date hereof.
L. 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.
M. 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.
N. This Letter of Credit is subject to The International Standby Practices-ISP98 (1998 Publication) International Chamber of Commerce Publication No.590.

INVITATION FOR BID

IFB-CO-15079-IAS

PROVIDE INFORMATION AND KNOWLEDGE MANAGEMENT (IKM) SERVICES

NATO Communications and Information Agency

14 BOOK I - ANNEX D

Bid Requirements Cross Reference Matrix (BRCM)

8.1 Annex D Bid Requirements Cross Reference Matrix (BRCM)

14.1 Volume 1 shall contain a Bid Requirements Cross Reference Matrix (BRCM), indicating where in the Bid the Bidder addresses each of the 'shall' statements in the SOW.

14.2 Bidders shall provide the BRCM in Excel format according to the template "Book I Annex D BRCM".

14.3 The BRCM shall be completed as per the following instructions:

- "Reference Document", the document from which the requirement is defined.

- "Reference ID", the reference of the section/requirement under consideration. The "Reference ID" column shall cover:

"Bidding Instruction" references covering section 3 of this document. "Bidding Instruction" references shall be provided in the format [BI - #] where "#" represents the actual paragraph number.

"SOW Requirement" references covering all "*SHALL*" statement of the SOW (including SRS annexes A). SOW Requirement References shall be provided in the following format:

For the SOW: [SOW - #] where "#" represents the actual requirement (i.e. paragraph or "*SHALL"* statement) number.

For the SOW Annex A (SRS): [SRS - #] where "#" represents the actual requirement number (i.e. paragraph or "*SHALL"* statement) number.

- "Description": the actual text of the section/requirement under consideration.

- "Bid Reference" indicating where in their Bid the associated Bid Instruction Reference and/or SOW Requirement Reference is/are addressed. Bid Reference shall be provided in the form "Volume # - Doc # - Section #"

- "Remarks", as applicable. The column "Remarks" might be used by the Bidders to provide a brief description of how the Bidder meets the requirement, to facilitate the reading, but any such descriptions will not form part of the formal evaluation.

- "Compliance statement": the way and extent the Bid covers and complies with the section/requirement under consideration, using the following classifications:

a) “Provided/Detailed”: The Bidder states providing a document or details at the mentioned reference. Such a classification is expected for all BIs and the majority of the SOW and SRS requirements.

“Partial”: The Bidder states fulfilling the requirement but only describes part of it. Such a classification is expected for a small number of SOW and SRS requirements.

“Deviation proposed”: The Bidder states tacking and describing an alternative approach to fulfil the section/requirement under consideration. Such a classification is expected for a very limited amount of SOW and/or SRS requirements.

“Not detailed”: The Bidder states fulfilling the requirement, but does not detail/justify how. It is expected that some requirements from the SOW or SRS cannot be justified/detailed at the Bidding stage.

14.4 One copy of the duly completed BRCM shall be included in the Bid Administration Package, as well as the Technical Bid Package (Volume 1).

INVITATION FOR BID

IFB-CO-15079-IAS

PROVIDE INFORMATION AND KNOWLEDGE MANAGEMENT (IKM) SERVICES

NATO Communications and Information Agency

15 BOOK I - ANNEX E

Clarification Request Form

9.1 Annex E Clarification Request Form

CLARIFICATION REQUEST FORM

INSERT COMPANY NAME HERE
INSERT SUBMISSION DATE HERE

ADMINISTRATION or CONTRACTING				
Serial NR	**IFB REF**	**QUESTIONS**	**ANSWERS**	**Status**
A.1.				
A.2.				
A.3.				

PRICE				
Serial NR	**IFB REF**	**QUESTIONS**	**ANSWERS**	**Status**
P.1				
P.2				
P.3				

TECHNICAL				
Serial NR	**IFB REF**	**QUESTIONS**	**ANSWERS**	**Status**
T.1				
T.2				
T.3				

16 BOOK I - ANNEX F
TECHNICAL PROPOSAL CROSS-REFERENCE MATRIX

17 BOOK I - ANNEX G
TECHNICAL DEMONSTRATION

A.1. Purpose

The purpose of the Demonstration is to validate the claims made in the apparent winning bidder's paper bid.

A.2. Description of the Demonstration

- The Event Demo aims to demonstrate how to depict local and remote events, coming from another calendar in different site collection and farm, with different colour scheme. So that the user can see local events and remote events, distinguish them and get all information from his current Site Collection.
- The calendars are to use specific content types commonly defined in a top level hub. (See Figure 1 Event Calendar Test elements):

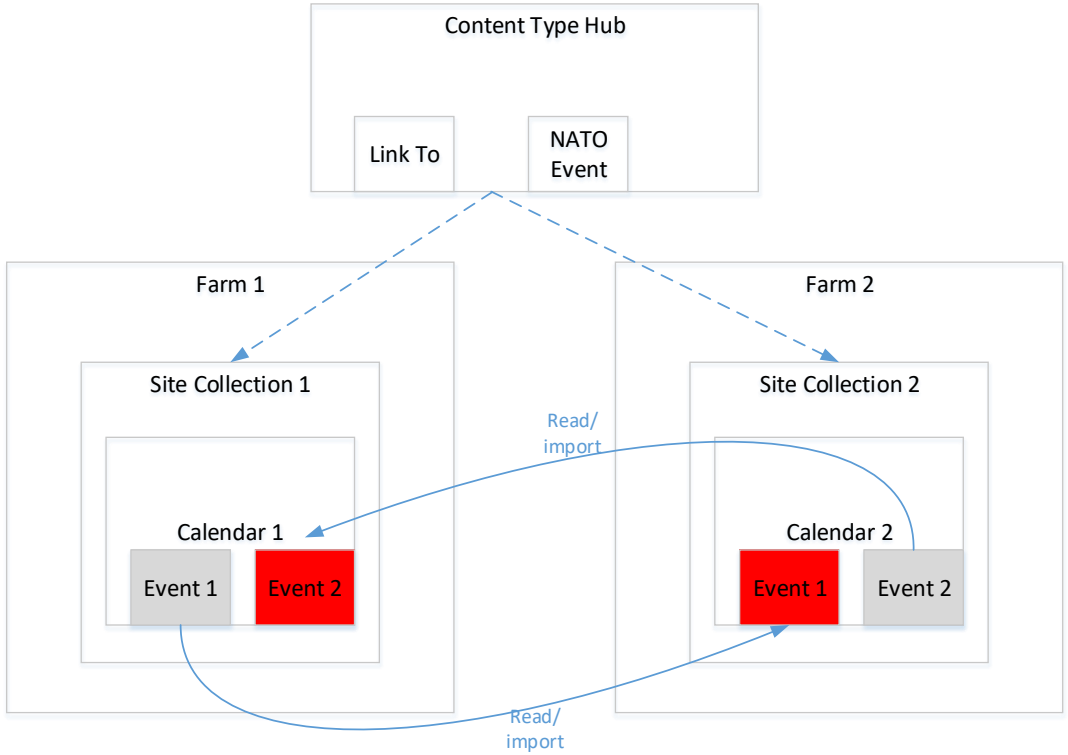

Figure 1 Event Calendar Test elements

Activity	Duration (maximum)
Notification of initial meeting	0.5 Day

Preparation/installation at Bidder's premises for initial meeting (including visitor requests processing for NCIA review team)	10 days
Evaluation Test at Bidder's Premises	1 day
NCIA Evaluation of Bidder's test	5 days

Evaluation of the Demonstration:

The Contractor shall provide the means for the Purchaser to fully evaluate this test project by giving access to the project's configuration and running instance. This regardless of whether it is to be delivered remotely or on premises.

A.3. SharePoint configuration

1. The SharePoint version to be used shall be SharePoint Server 2016.
2. The implementation shall consist of at least two separate SharePoint farms.
3. There shall only be one search service providing search to all farms.
4. There shall only be one managed metadata service providing a term store to all farms.
5. Each farm shall contain at least one content web application.
6. Each calendar web application shall at least have one calendar site collection.
7. Each calendar site collection is represented by a unique term in the term store.
8. The first site collection shall be configured to be in the Brussels time zone (UTC+1 wintertime/UTC+2 summertime).
9. The second site collection shall be configured in the Norfolk time zone (UTC-5 wintertime/UTC-4 summertime).
10. A content type hub shall provide the necessary columns and content types required for the this test, as specified in the following section.
11. The content type hub shall be installed using an automated solution (i.e. Power Shell script) so it can be installed on different environments.

- ■

A.4. Content Type Hub

- ■ The content type hub shall contain at least the following columns:

Display Name	Type	Linked to
Linked To	Managed metadata	Unique site collection term set (e.g.: GUID)

The content type hub shall contain the following content types

Display Name	Group	Parent
NATO Event	NATO Content Types	Event (OOTB event content type)

The NATO Event content type shall have at least the following configuration:

Field	Status
Title	Required
Location	Optional
Start Time	Required
End Time	Required
Description	Optional
Category	Optional
All Day Event	Optional
Recurrence	Optional
Linked To (see site columns above)	Optional

17.1 Calendar

1. Each calendar shall be based on the out of the box SharePoint Calendar.
2. The calendar shall not have the default content type, but the content type ‘NATO Event’ from the content type hub.
3. Each calendar shall have at least the following events:
    - An all-day one-day event.
    - An all-day multiple day event.
    - A timed one-day event (e.g. from 8:00 till 11:30).
    - A timed multiple day event.

- A recurrent event which occurs weekly.
- An event, part of a recurrence above, on a different day.
- A deleted event, part of a recurrence above.

17.2 Calendar visual representation

1. Each calendar shall use the out of the box SharePoint view(s) but can also be a custom-built implementation.
2. Each calendar shall be viewable in a daily, weekly or monthly schedule.
3. Each calendar shall have a visual representation showing the events added to its own calendar.
4. Each calendar shall show events linked to the unique site collection term in other calendars across the environment.
5. Each calendar shall show recurrent events.
6. Each calendar shall show all events, including events coming from other calendars, in the local time of the calendar.
7. Each preview event shall be shown with at least the title. In case of an all-day event, it may only show the title, otherwise, the title, start and end time shall be visible at least.
8. Each event shown on the view shall have a link pointing to the default display form of the calendar it resides in (e.g. Calendar 1 having an Event 2 from Calendar 2, the Event2 has a link pointing to the Calendar 2 default view).
9. An event stored in the own calendar shall be marked in grey colour on the visual calendar.
10. On the other hand an event stored in another calendar, linked to the unique site collection term shall be marked in red colour on the visual calendar.

17.3 Event

1. Each event can be linked to 0, 1 or more calendars.
2. Each event shall be linked to another calendar’s site collection through the field “Linked To” (described above).
3. Each event shall be using the content type ‘NATO Event’.
4. Any event update shall be reflected on all calendars within 15 minutes.
5. Each event shall only be created, updated and deleted only by a specific SharePoint group of administrators.

17.4 Site Collections

1. Each Calendar's site collection shall provide the functionality specified above without the dependency of other Calendar's site collections.
2. Each site collection shall inherit its content types from the content type hub.
3. Each site collection shall reside in its own content database.
4. Each site collection shall allow 'Everyone' to have read permissions.
5. Each site collection shall contain an administrator group.

A.5. Technology

1. The solution shall not use SharePoint server-side code.
2. The codebase shall make use of SPFx (SharePoint Framework).
3. The codebase shall make use of TypeScript.
4. The codebase shall make use of React JS.
5. The solution shall make use of rest API calls.
6. The solution shall use Visual Studio Code as IDE.
7. The code shall be commented following Microsoft best practices (summary, remarks, parameter(s) description, return value(s)).
8. Each class, interface, struct, and any other similar member shall briefly state the intended purpose.
9. Each method shall be commented, with a description for each parameter, the return value, and any exceptions thrown.
10. Each method shall have its own unit test.
11. The calendar project code shall be versioned using Git.
12. Custom errors shall be logged into a centralized location containing the following information: machine ID (server name), user ID (login name), absolute URL, exception type, exception message, exception stack trace, time stamp.
13. The calendar project shall provide a deployment manual, containing deployment steps and version control.

NATO Communications and Information Agency

Contract - CO-15079-IAS

PROVIDE INFORMATION AND KNOWLEDGE MANAGEMENT (IKM) SERVICES

Book II

Prospective Contract

<table>
<tr><th colspan="2">NCI Agency Contract</th></tr>
<tr><td>1. Original Number __ of</td><td>2. PO Number :TBD</td></tr>
<tr><td>3. Contract Number: CO-15079-IAS</td><td>4. Effective date: Same as block 17</td></tr>
<tr><td>5. Contractor:</td><td>6. Purchaser:
The General Manager
NATO Communications and Information Agency
Boulevard Leopold III
B-1110 Bruxelles
Tel: +32(0)2 707 8857
Fax: +32(0)2 707 87.70</td></tr>
<tr><td colspan="2">7. CONTRACT SCOPE:</td></tr>
<tr><td colspan="2">8. TOTAL AMOUNT OF CONTRACT : _____
Currency – Excluding VAT
Firm Fixed Price</td></tr>
<tr><td>9. PERIOD OF PERFORMANCE
As stated in Schedule of Supplies and Services and Special Provisions</td><td>10. DELIVERY SITE
As stated in Schedule of Supplies and Services and Special Provisions</td></tr>
<tr><td colspan="2">11. CONTRACT
This Contract consists of the following parts and named documents:
a) Part I. Schedule of Supplies and Services
b) Part II. Special Contract Provisions and Annexes
c) Part IV. Statement of Work and Annexes
d) Contractor’s proposal dated [insert date] and subsequent clarifications.
e) In the event of any conflict or inconsistencies between or among any of the documents comprising this Contract, the order of priority specified in Clause Error! Reference source not found. of Part II shall apply.</td></tr>
<tr><td>12. Signature of Contractor</td><td>13. Signature of Purchaser</td></tr>
<tr><td>14. Name and Title of Signer</td><td>15. Name and Title of Signer</td></tr>
<tr><td>16. Date signed by the Contractor</td><td>17. Date signed by the Purchaser</td></tr>
</table>

IFB-CO-15079-IAS

PROVIDE INFORMATION AND KNOWLEDGE MANAGEMENT (IKM) SERVICES

NATO Communications and Information Agency

Part I

Schedule of Supplies and Services

To be inserted

INVITATION FOR BID

IFB-CO-15079-IAS

PROVIDE INFORMATION AND KNOWLEDGE MANAGEMENT (IKM) SERVICES

NATO Communications and Information Agency

BOOK II – PART II

CONTRACT SPECIAL PROVISIONS

PART II
CONTRACT SPECIAL PROVISIONS - INDEX OF CLAUSES

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4. COMPREHENSION OF CONTRACT AND SPECIFICATIONS 3
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1. ORDER OF PRECEDENCE

1.1 In the event of any inconsistency in this Contract, the inconsistency shall be resolved by giving precedence in the following order:

a. Signature sheet
b. Part I - The Schedule of Supplies and Services (SSS)
c. Part II - The Contract Special Provisions (CSP)
d. Part III – The Contract General Provisions
e. Part IV – The Statement of Work (SOW) and SOW Annexes
f. The Contractor's Bid including any clarifications thereto, incorporated by reference, and the formal documentation of pre-Contract discussions.

2. TYPE OF CONTRACT

2.1 This is a Firm Fixed Price Contract established for the supplies and services defined in Part I - Schedule of Supplies and Services and Part IV – Statement of Work.

2.2 The Purchaser assumes no liability for costs incurred by the Contractor in excess of the stated Firm Fixed Price except as provided under other provisions of this Contract.

2.3 The Total Contract price is inclusive of all expenses related to the performance of the present contract.

3. SCOPE OF WORK

3.1. The project is intended to provide the Alliance with Information and Knowledge Management (IKM) Services.

3.2 In order to fulfil that purpose the Contractor shall deliver, in consideration for the prices specified in the Schedule of Supplies and Services, in the manner and at the time and location specified and in accordance with the specifications and descriptions set forth in the Statement Of Work.

4. COMPREHENSION OF CONTRACT AND SPECIFICATIONS

4.1 The Contractor warrants that he has read, understood and agreed to each and all terms, clauses, specifications and conditions specified in the Contract and that this signature of the Contract is an acceptance, without reservations, of the said Contract terms within their normal and common meaning.

4.2 The specifications set forth the performance requirements for the Contractor's proposed work as called for under this Contract. Accordingly, notwithstanding any conflict or inconsistency, which hereafter may be found between achievement of the aforesaid performance requirements and adherence to the Contractor's proposed design for the work, the Contractor hereby warrants that the work to be delivered will meet or exceed the performance requirements of the said specifications.

4.3 The Contractor hereby acknowledges that he has no right to assert against the Purchaser, its officers, agents or employees, any claims or demands with respect to the aforesaid specifications as are in effect on the date of award of this Contract.

4.4 Based upon impossibility of performance, defective, inaccurate, impracticable, insufficient or invalid specifications, implied warranties of suitability of such specifications, or

4.5 Otherwise derived from the aforesaid specifications, and hereby waives any claims or demands so based or derived as might otherwise arise.

4.6 Notwithstanding the “Changes” clause or any other clause of the Contract, the Contractor hereby agrees that no changes to the aforesaid specifications which may be necessary to permit achievement of the performance requirements specified herein for the Contractor’s proposed work shall entitle the Contractor either to any increase in the firm fixed price as set forth in this Contract or to any extension of the delivery times for the work beyond the period of performance in the Schedule of Supplies and Services.

5. PLACE AND TERMS OF DELIVERY

5.1 Deliverables under this Contract shall be delivered DDP (Delivered Duty Paid) in accordance with the International Chamber of Commerce INCOTERMS 2010 to the destination(s) and at such times as set forth in the Schedule of Supplies and Services. The Contractor shall note that the Purchaser is exempt from customs duties and VAT. The Purchaser shall not be liable for any storage, damage, accessorial or any other charges involved in such transporting of supplies.

6. PARTICIPATING COUNTRIES

6.1 This Clause supplements Clause 9 (Participating Countries) of the Contract General Provisions.

6.2 Participating countries are as follows NATO nations in ALBANIA, BELGIUM, BULGARIA, CANADA, CROATIA, THE CZECH REPUBLIC, DENMARK, ESTONIA, FRANCE, GERMANY, GREECE, HUNGARY, ICELAND, ITALY, LATVIA, LITHUANIA, LUXEMBOURG, THE NETHERLANDS, NORWAY, POLAND, PORTUGAL, ROMANIA, SLOVAKIA, SLOVENIA, SPAIN, TURKEY, THE UNITED KINGDOM and THE UNITED STATES.

7. TRANSPORTATION OF EQUIPMENT

7.1 All supplies covered under this Contract, including Purchaser Furnished Equipment (PFE) if any, once handed over to the Contractor, and items shipped under warranty for repair or otherwise, shall be transported to and from all destinations at the responsibility of the Contractor. The Purchaser shall not be liable for any storage, damage, accessorial or any other charges involved in such transporting of supplies.

8. INSPECTION AND ACCEPTANCE

8.1 Acceptance is the action by which the Purchaser formally acknowledges that the Contractor has fully demonstrated that Contract Deliverables are complete or have been performed according to the requirements set in the Contract.

8.2 Inspection and Acceptance procedures are described in Clause 21 of the NCIO General Contract Provisions (“Inspection and Acceptance of work”).

9. CONTRACTOR’S RESPONSIBILITY

9.1 The Contractor shall monitor changes and/or upgrades to commercial off the shelf (COTS) software or hardware to be utilized under subject Contract.

9.2 For COTS items which are or could be impacted by obsolescence issues, as changes in technology occur, the Contractor will propose substitution of new products/items for inclusion in this Contract. The proposed items should provide at least equivalent performance and/or lower life-cycle support costs, or enhanced performance without a price or cost increase.

9.3 The Contractor will provide evidence with respect to price and performance of the equipment being proposed as well as data proving an improvement in performance and/or a reduction in price and/or life-cycle support costs. If necessary for evaluation by the Purchaser, the Contractor shall provide a demonstration of the proposed items. Should the Purchaser decide that the proposed item(s) should be included in the Contract, an equitable price adjustment will be negotiated and the proposed item(s) shall be added to the Contract by bilateral modification under the authority of this Article.

9.4 The Contractor shall notify the Purchaser of any proposed changes in the commercial off the shelf software or hardware to be utilized. Such notification shall provide an assessment of the changes and the impact to any other items to be delivered under this Contract.

10. PRICING OF CHANGES, MODIFICATIONS, FOLLOW-ON CONTRACTS AND CLAIMS

10.1 The Purchaser may at any time, by written order designated or indicated to be a change order, and without notice to the sureties, if any, make changes within the scope of any Contract or Task Order, in accordance with Clause 16 (Changes) of the Contract General Provisions.

10.2 Changes, modifications, follow-on Contracts of any nature, and claims shall be priced in accordance with Clause 19 (Pricing of Changes, Amendments and Claims) of the Contract General Provisions, and with the "Purchaser's Pricing Principles" as set out in the Annex 1 to the Contract General Provisions.

10.3 Except otherwise provided for in this Contract, prices quoted for the above-mentioned changes, modifications, etc shall have a minimum validity period of twelve (12) months from the date of purchaser acceptance of proposal

11. INVOICES AND PAYMENTS

11.1 Following Purchaser acceptance, in writing, payment for supplies and services furnished shall be made in the currency specified for the relevant portion of the Contract.

11.2 The term of the Contract may not be exceeded without prior approval of the Purchaser. In no case will the Purchaser make payment above the total of the corresponding CLINs.

11.3 No payment will be made if CLIN items agreed for delivery before milestones are not complete as described in bidding sheets, SSS and SoW.

11.4 No payment shall be made with respect to undelivered supplies; works not performed, services not rendered and/or incorrectly submitted invoices.

11.5 No payment will be made for additional items delivered that are not specified in the contractual document.

11.6 The invoice amount shall be exclusive of VAT and exclusive of all Taxes and Duties as per Clause 26 (Taxes and Duties) of the Contract General Provisions.

11.7 CLINs will be paid as below based on Purchaser milestone approval in writing.

11.8 The Contractor shall be entitled to submit invoices as follows:

CLIN 5: IKM Tool Evolution

Payment Milestone	Amount to be invoiced
Purchaser's written acceptance of: - System Requirements Review (SRR), and - All CLIN 1 activities and deliverables contractually due before and at SRR	20% of the value of CLIN 1
Purchaser's written acceptance of: - Provisional Design Review (PDR), and - All CLIN 1 activities and deliverables contractually due after SRR, and before and at PDR	30% of the value of CLIN 1
Purchaser's written acceptance of: - Pilot Site Acceptance Test (SAT) report, and - All CLIN 1 activities and deliverables contractually due	40% of the value of CLIN 1
Purchaser's written acceptance of: - Final Site Acceptance (FSA) report	10% of the value of CLIN 1

CLIN 8: Hardware Procurement

Payment Milestone	Amount to be invoiced
Purchaser's written acceptance of: - Critical Design Review (CDR), and - All CLIN 2 activities and deliverables contractually due before and at CDR	25% of the value of CLIN 2

Purchaser's written acceptance of: - Major Release System Acceptance Test (SAT) report; and - All CLIN 2 activities and deliverables contractually due	65% of the value of CLIN 2
Purchaser's written acceptance of: - Final Site Acceptance (FSA) report	10% of the value of CLIN 2

CLIN 9: Optional O&M

Payment Milestone	Amount to be invoiced
Purchaser's written acceptance of: - System Design Review (SDR) Update, and - All CLIN 3 activities and deliverables contractually due before and at SDR Update	25% of the value of CLIN 3
Purchaser's written acceptance of: - Final System Acceptance (FSA) test report, and - All CLIN 3 activities and deliverables contractually due	65% of the value of CLIN 3
Purchaser's written acceptance of: - Final Site Acceptance (FSA) report	10% of the value of CLIN 3

11.9 Evidence of the acceptance by the Purchaser shall be attached to all invoices.

11.10 The Purchaser is released from paying any interest resulting from any reason whatsoever.

11.11 The Contractor shall render all invoices in a manner, which shall provide a clear reference to the Contract. Invoices in respect of any service and/or deliverable shall be prepared and submitted as specified hereafter and shall contain:

11.11.1 Contract number CO-15079-IAS

11.11.2 Purchase Order number (TBD at Contract Award)

11.11.3 Contract Amendment number (if any)

11.11.4 Contract Line Item(s) (CLIN) as they are defined in the priced Schedule of Supplies and Services.

11.11.5 Bank Account details for International wire transfers

11.12 The invoice shall contain the following certificate:
"I certify that the above invoice is true and correct, that the delivery of the above described items has been duly effected and/or that the above mentioned services have been rendered and the payment therefore has not been received". The certificate shall be signed by a duly authorised company official on the designated original.

11.13 Invoices referencing "CO-15079-IAS/ PO (TBD at Contract Award)" shall be submitted in electronic format to:

AccountsPayable@NCIA.NATO.int

An Electronic copy shall be sent to the Contracting Officer, at the email address specified in the clause ‘’Contract Administration’’.

11.14 NCI Agency will make payment within 60 days of receipt by NCI Agency of a properly prepared and documented invoice.

12. LIQUIDATED DAMAGES

12.1 This Clause replaces Clause 38 (Liquidated Damages) of the Contract General Provisions.

12.2 If the Contractor fails to:

12.2.1 meet the delivery schedule of the Deliverables or any specified major performance milestones or required performance dates specified in the Schedule of Supplies and Services to this Contract, or any extension thereof, or

12.2.2 deliver and obtain acceptance of the Deliverables or to acceptably perform the services as specified in the Schedule of Supplies and Services to this Contract,

the actual damage to the Purchaser for the delay will be difficult or impossible to determine. Therefore, in lieu of actual damages the Contractor shall pay to the Purchaser, for each day of delinquency in achieving the deadline or milestone, fixed and agreed liquidated damages of 0.2% (zero point 2 per cent) per day of the associated payment set forth in the schedule of payments provided in Clause 11 of the Contract Special Provisions.

12.3 In addition to the liquidated damages, the Purchaser shall have the possibility of terminating this Contract in whole or in part, as provided in Clause 39 (Termination for Default) of the Contract General Provisions. In the event of such termination, the Contractor shall be liable to pay the excess costs provided in Clause 39.5 (Termination for Default) of the Contract General Provisions.

12.4 The Contractor shall not be charged with liquidated damages when the delay arises out of causes beyond the control and without the fault or negligence of the Contractor as defined in Clause 39.6 (Termination for Default) of the Contract General Provisions. In such event, subject to the provisions of Clause 41 (Disputes) of the Contract General Provisions, the Purchaser shall ascertain the facts and extent of the delay and shall extend the time for performance of the Contract when in his judgement the findings of the fact justify an extension.

12.5 Liquidated damages shall be payable to the Purchaser from the first day of delinquency and shall accrue at the rate specified in Clause 12.2.2 above to 15% of the value of each line item individually and an aggregate sum of all delinquent items not to exceed 15% of the value of the total Contract. These liquidated damages shall accrue automatically and without any further notice being required.

12.6 The amount of Liquidated Damages due by the Contractor shall be recovered by the Purchaser in the following order of priority:

a) By deducting such damages from the amounts due to the Contractor against the Contractor's invoices.

b) By proceeding against any surety or deducting from the Performance Guarantee if any

c) By reclaiming such damages through appropriate legal remedies.

12.7 The rights and remedies of the Purchaser under this clause are in addition to any other rights and remedies provided by law or under this Contract.

13. SUPPLEMENTAL AGREEMENT(S), DOCUMENTS AND PERMISSIONS

13.1 If any supplemental agreements, documents and permissions are introduced after Contract award, the execution of which by the Purchaser is/ are required by national law or regulation, and it is determined that the Contractor failed to disclose the requirement for the execution of such agreement from the Purchaser prior to Contract signature, the Purchaser may terminate this Contract for Default, in accordance with Clause 39 (Termination for Default) of the Contract General Provisions.

13.2 Supplemental agreement(s), documents and permissions, the execution of which by the Purchaser is/are required by national law or regulation and that have been identified by the Contractor prior to the signature of this Contract, but have not yet been finalised and issued by the appropriate governmental authority, are subject to review by the Purchaser. If such supplemental agreement(s), documents and permissions are contrary to cardinal conditions of the signed Contract between the Parties, and the Parties and the appropriate governmental authority cannot reach a mutual satisfactory resolution of the contradictions, the Purchaser reserves the right to terminate this Contract and the Parties agree that in such case the Parties mutually release each other from claim for damages and costs of any kind, and any payments received by the Contractor from the Purchaser will be refunded to the Purchaser by the Contractor.

14. SECURITY

14.1 This Clause supplements Clause 11 (Security) of the Contract General Provisions.

14.2 The security classification of this Contract is NATO UNCLASSIFIED.

14.3 In the performance of all works under this Contract, it shall be the Contractor’s responsibility to ascertain and comply with all applicable NATO and National security regulations as implemented by the Purchaser and by the local authorities.

14.4 Contractor and /or Subcontractor personnel employed under this Contract that will require access to locations, such as sites and headquarters, where classified material and information up to and including “NATO SECRET”

are handled shall be required to have a NATO security clearance up to this level. Contractor personnel who need System Administrator or Operator privileges when working on NATO SECRET systems shall be required to hold NATO CTS (Cosmic Top Secret) clearances.

14.5 All NATO CLASSIFIED material entrusted to the Contractor shall be handled and safeguarded in accordance with applicable security regulations.

14.6 The Contractor will be required to handle and store classified material to the level of “NATO SECRET”.

14.7 It shall be the Contractor’s responsibility to obtain the appropriate personnel and facility clearances to the levels stated in the preceding paragraphs and to have such clearances confirmed to the Purchaser by the relevant National security authority for the duration of the Contract in its entirety.

14.8 Failure to obtain or maintain the required level of security for Contractor personnel and facilities for the period of performance of this Contract shall not be grounds for any delay in the scheduled performance of this Contract and may be grounds for termination under Clause 39 (Termination for Default) of the Contract General Provisions.

14.9 The Contractor shall note that there are restrictions regarding the carriage and use of electronic device (e.g. laptops) in Purchaser secured locations. The Contractor shall be responsible for satisfying and obtaining from the appropriate site authorities the necessary clearance to bring any such equipment into the facility.

15. KEY PERSONNEL

15.1 The designated Contractor personnel fulfilling the roles as described in Statement of Work are considered Key Personnel for successful Contract performance and are subject to the provisions of this Clause as set forth in the following paragraphs.

15.2 The following individuals are identified as Key Personnel under this Contract:

Role	Name
Project Manager (PM)	To be completed based on proposal
Technical Lead (TL) (Senior System Engineer)	To be completed based on proposal
Senior Test Engineer	To be completed based on proposal
Other (TBD by Bidder)	To be completed based on proposal

15.3 Under the terms of this Clause, Key Personnel may not be voluntarily diverted by the Contractor to perform work outside the Contract unless approved by the Purchaser. In cases where the Contractor has no control over the individual’s non-availability (e.g. resignation, sickness, incapacity, etc.), the Contractor shall notify the Purchaser immediately of a change of Key Personnel

and offer a substitute with equivalent qualifications at no additional costs to the Purchaser within 21 days of the date of knowledge of the prospective vacancy.

15.4 The Contractor shall take all reasonable steps to avoid changes to Key Personnel assigned to this project except where changes are unavoidable or are of a temporary nature. Any replacement personnel shall be of a similar grade, standard and experience as the individual to be substituted and must meet the minimum qualifications and required skills cited in the attached Statement of Work,Section 11

15.5 In the event of a substitution of any Key Personnel listed above and prior to commencement of performance, the Contractor shall provide a CV for the personnel proposed. The CV shall clearly stipulate full details of professional and educational background, and evidence that the personnel is qualified in pertinent Contract related areas of the SOW.

15.6 The Purchaser reserves the right to interview any Contractor personnel proposed in substitution of previously employed Contractor Key Personnel to verify their language skills, experience and qualifications, and to assess technical compliance with the requirements set forth in the SOW.

15.6.1 The interview, if required, may be conducted as a telephone interview, or may be carried out at the Purchaser's premises in Brussels, Belgium.

15.6.2 If, as a result of the evaluation of the CV and/or interview the Purchaser judges that the proposed replacement Key Personnel does not meet the required skills levels, he shall have the right to request the Contractor to offer another qualified individual in lieu thereof.

15.6.3 All costs to the Contractor associated with the interview(s) shall be borne by the Contractor, independently from the outcome of the Purchaser's evaluation.

15.7 The Purchaser Contracting Authority will confirm any consent given to a substitution in writing and only such written consent shall be deemed as valid evidence of Purchaser consent. Each of the replacement personnel will also be required to sign the Non-Disclosure Declaration at Annex A hereto prior to commencement of work.

15.8 Furthermore, even after acceptance of Contractor personnel on the basis of his/her CV and/or interview, the Purchaser reserves the right to reject Contractor personnel, if the individual is not meeting the required level of competence. The Purchaser will inform the Contractor, in writing, in cases where such a decision is taken and the Contractor shall propose and make other personnel available within ten working days after the written notification. The Purchaser shall have no obligation to justify the grounds of its decision and the Purchaser's acceptance of Contractor personnel shall in no way relieve the Contractor of his responsibility to achieve the contractual and technical requirements of this Contract nor imply any responsibility of the Purchaser.

15.9 The Purchaser may, for just cause, require the Contractor to remove his employee. Notice for removal will be given to the Contractor by the Purchaser in writing and will state the cause justifying the removal. The notice will either

demand substitution for the individual involved and/or contain a notice of default and the remedies to be sought by the Purchaser.

15.10 In those cases where, in the judgement of the Purchaser, the inability of the Contractor to provide a suitable replacement in accordance with the terms of this Clause may potentially endanger the progress under the Contract, the Purchaser shall have the right to terminate the Contract as provided under Clause 39 (Termination for Default) of the Contract General Provisions.

16. INDEPENDENT CONTRACTOR

16.1 The Personnel provided by the Contractor are at all times employees of the Contractor and not the Purchaser. In no case shall Contractor personnel act on behalf of or as an agent for NATO or any of its bodies. In no way shall the Contractor personnel claim directly or indirectly to represent NATO in an official capacity or claim themselves to be NATO employees.

16.2 The Purchaser shall not be responsible for securing work permits, lodging, leases nor tax declarations, driving permits, etc., with national or local authorities. Contractors personnel employed under this Contract are not eligible for any diplomatic privileges or for NATO employee benefits.

17. NON DISCLOSURE AGREEMENT

17.1 All Contractor and Subcontractor personnel working at any NATO Organisation / Commands premises or having access to NATO classified / commercial-in-confidence information must certify and sign the Declaration attached hereto at Annex A and provide it to the NCI Agency Contracting Officer prior to the commencement of any performance under this Contract.

18. CARE AND DILIGENCE OF PROPERTY

18.1 The Contractor shall use reasonable care to avoid damaging buildings, walls, equipment, and vegetation (such as trees, shrub and grass) on the work site.

18.2 If the Contractor damages any such buildings, walls, equipment or vegetation on the work site, he shall fix or replace the damage as directed by the Purchaser and at no expense to the Purchaser. If he fails or refuses to make such repair or replacement, the Contractor shall be liable for the cost thereof, which may be deducted from the Contract price.

18.3 The Purchaser will exercise due care and diligence for the Contractor's furnished equipment and materials on site. The Purchaser will not, however, assume any liability except for gross negligence and wilful misconduct on the part of the Purchaser's personnel or agents.

18.4 The Contractor shall, at all times, keep the site area, including storage areas used by the Contractor, free from accumulations of waste. On completion of all work, the Contractor is to leave the site area and its surroundings in a clean and neat condition.

19. RESPONSIBILITY OF THE CONTRACTOR TO INFORM EMPLOYEES OF WORK ENVIRONMENT

19.1 The Contractor shall inform his employees under this Contract of the terms of the Contract and the conditions of the working environment.

19.2 Specifically, personnel shall be made aware of all risks associated with the performance under this Contract, the conditions of site in which the performance is to take place and living conditions while performing within the boundaries of the Contract. The selection of adequate personnel shall remain sole responsibility of the Contractor.

20. CONTRACTOR LOGISTICS SUPPORT (CLS)

REMOVED

21. SOFTWARE

21.1 The Purchaser reserves the right to exclude from the awarded Contract the purchase of software licenses for which NATO has established centralized Contracts. In this case, the Contract terms, schedule and prices will be modified accordingly, and the software licenses will be provided to the Contractor in the form of "Purchaser Furnished Property (including software)".

21.2 Where the term Purchaser Furnished Equipment (PFE) is used it should be interpreted as Purchaser Furnished Property as defined in the Contract General Provisions.

22. WARRANTY

22.1 The Contractor shall provide warranty on all material provided under this Contract. The warranty period shall be as a minimum one (1) year warranty, starting from Final System Acceptance where no period is specified.

22.2 For this purpose the Contractor shall provide exact warranty conditions by type of equipment and detailed handling instructions, including information of points of contact to be contacted in case of a warranty claim.

23. COTS PRODUCT REPLACEMENT

23.1 If any COTS products specified in the Contract are upgraded or discontinued by their original providers for commercial or technological reasons, the Contractor shall propose their substitution by the new versions that are intended as market replacement of the original products. The proposed items shall provide an equivalent or enhanced performance without a price or life-cycle support cost increase.

23.2 The Contractor shall provide price and performance data to support an improvement in performance and/or a reduction in price and/or life-cycle support costs. If necessary for evaluation by the Purchaser, the Contractor shall provide a demonstration of the proposed items. Should the Purchaser decide that the proposed item(s) should be included in the Contract, an equitable price adjustment will be negotiated and the proposed item(s) shall

be added to the Contract by bilateral modification under the authority of this Article.

23.3 All COTS furnished by the Contractor under this Contract shall be current production and upgraded to the most current versions at Provisional Site Acceptance (PSA).

24. OPTIONS

24.1 The Purchaser shall have the right to unilaterally place on Contract the provisions of Options in Part I – Schedule of Supplies and Services: Operations and Maintenance (O&M) (5 x 1 year Options) any time and in any combination from the date of Contract execution to Final System Acceptance (FSA) plus one (1) year. If the Purchaser exercises such options, the Contractor shall deliver such specified quantities of additional or alternative supplies and services at such times and to such destinations as specified in the Contract.

24.2 Prices for all optional line items shall have a validity period that corresponds to the option exercise period cited above.

24.3 The Contractor understands that there is no obligation under this Contract for the Purchaser to exercise any of the optional line items and that the Purchaser bears no liability should he decide not to exercise the options (totally or partially). Further, the Purchaser reserves the right to request another Contractor (or the same), to perform the tasks described in the optional line items of the current Contract through a new Contract with other conditions.

24.4 Any options exercised shall be exercised by written Amendment to the Contract.

25. OPTIMISATION

25.1 The Contractor is encouraged to examine methods and technology that may increase efficient operation and management of the system(s) on which the required services are provided to the Purchaser, thus reducing operating and manpower costs and the overall cost to the Purchaser.

25.2 The Contractor may, during the Period of Performance, introduce Engineering Change Proposals (ECPs) offering innovations and/or technology insertion with a view towards reducing the Total Cost of Ownership TCO to the Purchaser.

25.3 Any such ECP submitted shall cite this Clause as the basis of submission and provide the following information:

25.3.1 A detailed description of the technical changes proposed, the advantages, both long and short term, and an analysis of the risks of implementation;

25.3.2 A full analysis of the prospective savings to be achieved, in the form of a TCO Assessment Report, in both equipment and manpower, including, as appropriate, utility and fuel consumption and NATO manpower, travel, etc.;

25.3.3 A full impact statement of changes that the Purchaser would be required to make, if any, to its operational structure and management procedures;

25.3.4 A fully detailed proposal of any capital investment necessary to achieve the savings;

25.3.5 A schedule of how the changes would be implemented with minimal negative impact to on-going performance and operations.

26. CONTRACT ADMINISTRATION

26.1 The Purchaser is the NATO Communications and Information Agency (NCI Agency). The Purchaser is the Point of Contact for all contractual and technical issues. The Contractor shall accept Contract modifications only in writing from the Purchaser's Contracting Authority.

26.2 All notices and communications between the Contractor and the Purchaser shall be written and conducted in English. Contract modifications only become valid when received in writing from the General Manager, NCI Agency, and his authorised representative.

26.3 Formal letters and communications shall be personally delivered or sent by mail, registered mail, courier or other delivery service, to the official points of contact quoted in this Contract. Telefax or other electronic means may be used to provide an advance copy of a formal letter or notice, which shall subsequently be delivered through the formal communications means.

26.4 Informal notices and informal communications may be exchanged by any other communications means including telephone and e-mail.

26.5 All notices and communications shall be effective upon receipt.

26.6 Official points of contact are:

PURCHASER

Contractual issues:	**Technical issues:**
NCI Agency Acquisition Boulevard Léopold III B-1110 Brussels Belgium POC: Graham Hindle Tel: + 32 2 707 8857 Email: graham.hindle@ncia.nato.int	NCI Agency Boulevard Léopold III B-1110 Brussels Belgium POC: Matthew Dorgan Tel: +32 2360 5610 E-mail: Matthew.Dorgan@ncia.nato.int

CONTRACTOR

Contractual issues:	**Technical issues:**
Company Name *Address* POC: Tel:	*Company Name* *Address* POC: Tel:

Fax:	Fax:
E-mail:	E-mail:

27. CONFLICT OF INTEREST

27.1 A conflict of interest means that because of other activities or relationships with other persons or entities, a Contractor is unable, or potentially unable to render impartial assistance or advice to the Purchaser, or the Contractor's objectivity in performing the Contract work is, or might be otherwise impaired, or the Contractor has an unfair competitive advantage. Conflict of interest includes situations where the capacity of a Contractor (including the Contractor's executives, directors, consultants, subsidiaries, parent companies or Subcontractors) to give impartial, technically sound advice or objective performance is or may be impaired or may otherwise result in a biased work product or performance because of any past, present or planned interest, financial or otherwise in organizations whose interest may substantially affected or be substantially affected by the Contractor's performance under the Contract.

27.2 The Contractor is responsible for maintaining and providing up-to-date conflict of interest information to the Purchaser. If, after award of this Contract or any task order herein, the Contractor discovers a conflict of interest with respect to this Contract or task order which could not reasonably have been known prior to award, or if any additional conflicts or potential conflicts arise after award, the Contractor shall give written notice to the Purchaser as set forth below.

27.3 If, after award of this Contract or any task order herein, the Purchaser discovers a conflict of interest with respect to this Contract or task order, which has not been disclosed by the Contractor, the Purchaser may at its sole discretion request additional information from the Contractor, impose mitigation measures, or terminate the Contract for default in accordance with Clause 39 (Termination for Default) of the Contract General Provisions.

27.4 The Contractor's notice called for in paragraph 27.2 above shall describe the actual, apparent, or potential conflict of interest, the action(s) the Contractor has taken or proposes to take to avoid or mitigate any conflict, and shall set forth any other information which the Contractor believes would be helpful to the Purchaser in analysing the situation. Any changes to the Contractor's conflict of interest mitigation plan, if any is incorporated in the Contract, should be also detailed.

27.5 The Contractor has the responsibility of formulating and forwarding a proposed conflict of interest mitigation plan to the Purchaser, for review and consideration. This responsibility arises when the Contractor first learns of an actual, apparent, or potential conflict of interest.

27.6 If the Purchaser in its discretion determines that the Contractor's actual, apparent, or potential conflict of interest remains, or the measures proposed are insufficient to avoid or mitigate the conflict, the Purchaser will direct a

course of action to the Contractor designed to avoid, neutralize, or mitigate the conflict of interest. If the parties fail to reach agreement on a course of action, or if having reached such agreement, the Contractor fails to strictly adhere to such agreement during the remaining period of Contract performance, the Purchaser has the discretion to terminate the Contract for default or alternatively refrain from exercising any further Option or Work Package under the Contract.

27.7 The Contractor's misrepresentation of facts in connection with a conflict of interest reported, or a Contractor's failure to disclose a conflict of interest as required shall be a basis for default termination of this Contract.

28. INCOTERMS

28.1 This Clause replaces Clause 20.1 of the Contract General Provisions.

28.2 Delivery of all items under this Contract shall be made by the Contractor on the basis of "Delivery Duty Paid" (DDP) as defined by the INCOTERMS 2010 (International Chamber of Commerce). It shall be noted, however, that because the Purchaser is exempted from direct taxes and duty as set forth in Clause 26 (Taxes and Duties) of the Contract General Provisions, there is no duty to be paid by the Contractor.

29. INTELLECTUAL PROPERTY

29.1 This Article supplements Clause 30 of the Contract General Provisions.

29.2 Any use of Contractor Background IPR and Third Party IPR for the purpose of carrying out the Work pursuant to the Contract shall be free of any charge to Purchaser. The Contractor hereby grants to NATO and NATO Nations a non-exclusive, royalty-free and irrevocable licence to use and authorise others to use any Contractor Background IPR for the purpose of exploiting or otherwise using the Foreground IPR.

30. INTELLECTUAL PROPERTY RIGHT INDEMNITY AND ROYALTIES

30.1 This Article supplements Clauses 29 of the Contract General Provisions.

30.2 The Contractor shall assume all liability and indemnify the Purchaser, its officers, agents and employees against liability, including costs for the infringement of any patents or copyright in force in any countries arising out of the manufacture, services performed or delivery of supplies, or out of the use or disposal by or for the account of the Purchaser of such supplies. The Contractor shall be responsible for obtaining any patent or copyright licences.

31. SERVICE PERFORMANCE AND SERVICE CREDITS

31.1 This Article applies to the Service Deliverables as defined under CLIN 9 of the Schedule of Supplies and Services.

31.2 If the Contractor fails to deliver or to perform the services within the prescribed performance levels specified in the SOW Section 14 Contractor Logistic Support, the Contractor shall be charged with Service credits as described and calculated in the relevant section of the SOW as the Purchaser's remedy for the damages directly arising out of the failure to deliver or perform the Services as specified in the SOW without prejudice of Clause 39 "Termination for Default" of the Contract General Provisions.

31.3 Service performance status shall align per the review periods as described in the SOW.

31.4 Service Credits shall be deducted from the invoices covering the service period to which the credits apply.

31.5 Service Credits are fixed as a percentage as defined in the Key Performance Indicator targets, covering response time targets, incident time targets, on-site intervention time targets related for all HW/SW covered under this contract.

31.6 Per calendar year, service credits on maintenance services and staffing shall be limited to 5% of the total value of the contract for the contracted service period. Applied credits, if any, will be deducted from the respective quarterly invoice.

ANNEX A: DECLARATION

We, the undersigned.....(Company) duly represented by ..... (hereinafter "Contractor") do hereby certify that we shall ensure that the following conditions be accepted and observed by all (Contractor) employees working under CO-15079-IAS.

(Signature)

(Full name in block capitals)

(Date)

==========

TO BE SIGNED BY THE CONTRACTOR'S EMPLOYEES WORKING IN THE NATO'S PREMISES UPON COMMENCEMENT OF THEIR WORK.

I UNDERSTAND:

That I must preserve the security of all classified /commercial-in-confidence information, which comes to my knowledge as a result of this Contract with NATO and that I undertake to comply with all relevant security regulations.

That I must not divulge to any unauthorised person, any classified/commercial-in confidence information gained by me as a result of my Contract with NATO, unless prior permission for such disclosure has been granted by the General Manager of the NCI Agency or by his designated representative.

That I must not, without the approval of the General Manager of the NCI Agency publish (in any document, article, book, CD, video, film, play, or other form) any classified /commercial-in-confidence information, which I have acquired in the course of my work under CO-15079-IAS.

That, at the end of Contract and after performance of all required tasks, I must surrender any official document or material made or acquired by me in the course of my work under CO-15079-IAS, save such as I have been duly authorised to retain.

That the provisions of the above Declaration apply not only during the period of work under CO-15079-IAS, but also after my Contract has ceased and that I am liable to prosecution if either by intent or negligence I allow classified/commercial-in-confidence information to pass into unauthorised hands.

ANNEX B: INVOLVEMENT OF FORMER NCI AGENCY EMPLOYMENT

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

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.

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.

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.

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.

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.

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.

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

INDUSTRY INITIATIVES

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.

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.

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.

POST EMPLOYMENT MEASURES

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.

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 he/she was 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.

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.

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.

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.

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

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

NATO COMMUNICATIONS AND INFORMATION AGENCY

CONTRACT GENERAL PROVISIONS

V 1.0 dated 16 Oct 2014

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The Contract General Provisions

1. ORDER OF PRECEDENCE

In the event of any inconsistency in language, terms or conditions of the various parts of this Contract, precedence will be given in the following order:

1.1. The Signature Page;

1.2. The Contract Schedules, Part I;

1.3. The Contract Contract Special Provisions, Part II;

1.4. The Contract General Provisions, Part III;

1.5. The Statement of Work, Part IV of the Contract;

1.6. The Annexes to the Statement of Work.

2. DEFINITIONS OF TERMS AND ACRONYMS

2.1 ***Assembly***- 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.

2.2 ***Acceptance-*** Acceptance is the act by which the Contracting Authority recognises in writing that the delivered Work meets the Contract requirements..

2.3 ***Claims-*** A written demand or written assertion by one of the Parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of Contract terms, or other relief arising under or in relation to this Contract.

2.4 ***Clause-*** A provision of the Special or General Provisions of this Contract.

2.5 ***Codification Authority-*** The National Codification Bureau (NCB) or authorised agency of the country in which the Work is produced.

2.6 ***Commercial Off-the-Shelf Items (COTS)-*** The term “Commercially Off-the-Shelf Item (COTS)” means any item that:is a commercial item, customarily used by the general public, that has been sold, leased, or licensed to the general public or has been offered for sale, lease or license to the general public;

a) is sold in substantial quantities in the commercial marketplace; and

b) is offered to the Purchaser, under a contract or subcontract at any tier, without modification, in the same form in which it is sold in the commercial marketplace.

2.7 ***Component-*** A part or combination of parts, having a specific function, which can be installed or replaced only as an entity.

2.8 ***Contractor Background IPR-*** Any IPR owned by the Contractor and/or any Sub-contractor or licensed by a third party to the Contractor which is not created in relation to or as the result of work undertaken for any purpose contemplated by the Contract and which is needed for the performance of the Contract or for the exploitation of Foreground IPR.

2.9 ***Correction-*** Elimination of a Defect.

2.10 ***Contract-*** The agreement concluded between the Purchaser and Contractor, duly signed by both contracting parties. The Contract includes the documents referred to in Clause 1 (Order of Preference).

2.11 ***Contracting Authority-*** The General Manager of the NCI Agency, the Director of Acquisition, the Chief of Contracts of the NCI Agency or the authorised representatives of the Chief of Contracts of the NCI Agency.

2.12 ***Contractor-*** The person or legal entity from a Participating Country which has signed this Contract and is a Party thereto.

2.13 ***Day-*** A calendar day

2.14 ***Defect-*** Any condition or characteristic in any Work furnished by the Contractor under the Contract that is not in compliance with the requirements of the Contract.

2.15 ***Deliverable-*** Any and all goods (including movable and immovable goods) to be delivered pursuant to the terms of this Contract including, without limitation, building, raw materials, components, intermediate Assemblies, Parts, end products, equipment, documentation, data, software.

2.16 ***Design Defect-*** Defect attributable to incompatibility, unsuitability or erroneous application of theory, drawings or formula.

2.17 ***Effective Date of Contract (or "EDC")-*** The date upon which this Contract is deemed to start. Unless otherwise specified, a Contract enters into force on the date of the last signature of the Contract by the Parties.

2.18 ***Failed Component-*** A part or combination of parts, having a specific function, which can be installed or replaced only as an entity which ceases to perform in a manner consistent with its intended use and specifications of the Contract.

2.19 ***Foreground IPR*** - Any IPR created by the Contractor or any subcontractor of the Contractor in the course of or as the result of work undertaken for any purpose contemplated by the Contract.

2.20 ***IPR-*** Any intellectual property rights of any qualification irrespective of their stage of development or finalisation, including but not limited to patents, trademarks (registered of not), designs and models (registered or not) and applications for the same, copyright (including on computer software), rights in databases, know-how, confidential information and rights in records (whether or not stored on computer) which includes technical and other data and documents.

2.21 ***Manufacturing Defect-*** Defect attributable to improper manufacturing processes, testing or quality control procedures.

2.22 ***NATO-*** The North Atlantic Treaty Organisation. For the purpose of this contract, the term NATO includes NATO bodies, the NATO military command structure, agencies and NATO nations.

2.23 ***NCI AGENCY-*** The NATO Communications and Information Agency. The NCI Agency is part of the NCIO. The General Manager of the Agency is authorised to enter into contracts on behalf of the NATO CI Organisation.

2.24 ***NATO COMMUNICATIONS AND INFORMATION ORGANISATION (NCIO)-*** The NATO Communications and Information Organisation. The NCI Organisation constitutes an integral part of the North Atlantic Treaty Organisation (NATO) The NCI Organisation is the legal personality from whence flows the authority of its agent, the NCI Agency, to enter into contracts.

2.25 ***NATO Purposes-*** Activities conducted by or on behalf of NATO to promote the common defence and common interests of NATO, such as, among others, NATO operations, NATO procurement, NATO training and NATO maintenance.

2.26 ***Part-*** An item of an assembly or sub-assembly, which is not normally further broken down.

2.27 ***Participating Country-*** A NATO member country that participates in financing the effort.

2.28 ***Parties-*** The Contracting Parties to this Contract, i.e., the Purchaser and the Contractor.

2.29 ***Purchaser***- The NCI Organisation, as represented by the General Manager, NCI Agency. The Purchaser is the legal entity who awards and administers the Contract on behalf of NATO and stands as one of the Contracting Parties.

2.30 ***Purchaser Background IPR-*** Any IPR owned by the Purchaser as of the Effective Date of Contract and which has been developed by, assigned to or licensed to the Purchaser prior to the Effective Date of Contract.

2.31 ***Purchaser Furnished Property-*** Any item of equipment, material, document, technical data, information and Software or any other item of property furnished by the Purchaser to the Contractor required or useful for the performance of the Contract. The Purchaser Furnished Property, if any, shall be detailed in the Contract.

2.32 ***Software (Computer Software)-*** A computer program comprising a series of instructions, rules, routines regardless of the media in which it is recorded, that allows or cause a computer to perform a specific operation or a series of operations.

2.33 ***Software Defect-*** Any condition or characteristic of Software that does not conform with the requirements of the Contract.

2.34 ***Sub-Assembly-*** 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.

2.35 ***Sub-contract-*** Any agreement made by the Contractor with any third party in order to fulfil any part of the obligations under this Contract. Sub-contracts may be in any legal binding form, *e.g.*, contract, purchase order, etc.

2.36 ***Sub-contractor-*** Any person or legal entity directly or indirectly under Sub-contract to the Contractor in performance of this Contract.

2.37 ***Third Party IPR-*** Any IPR owned by a third party not being the Purchaser or the Contractor or its Subcontractor, which is needed for the performance of the Contract or for the exploitation of Foreground IPR. This includes, for example, third party software, including open source software.

2.38 ***Work-*** Any deliverable, project design, labour or any service or any other activity to be performed by the Contractor under the terms of this Contract.

3. AUTHORITY

3.1. All binding contractual instruments and changes, including amendments, additions or deletions, as well as interpretation of and instructions issued pursuant to this Contract shall be valid only when issued in writing by the Purchaser and signed by the Contracting Authority only.

3.2. No direction which may be received from any person employed by the Purchaser or a third party shall be considered as grounds for deviation from any of the terms, conditions, specifications or requirements of this Contract except as such direction may be contained in an authorised amendment to this Contract or instruction duly issued and executed by the Contracting Authority. Constructive change may not be invoked by the Contractor as a basis for Claims under this Contract.

3.3. The entire agreement between the Parties is contained in this Contract and is not affected by any oral understanding or representation, whether made previously to or subsequently to this Contract.

3.4. Personal notes, signed minutes of meetings, comments to delivered documentation and letters, e-mails and informal messages from project or other Purchaser staff which may indicate the intent and willingness to make changes to the Contract, do not implement the change to the Contract and shall not be used as a basis for claiming change to the Contract by the Contractor.

4. APPROVAL AND ACCEPTANCE OF CONTRACT TERMS

4.1. By his signature of the Contract, the Contractor certifies that he has read and unreservedly accepts and approves of all terms and conditions, specifications, plans, drawings and other documents which form part of and/or are relevant to the Contract. The Contractor further agrees that the terms of the Contract take precedence over any proposals or prior commitments made by the Contractor in order to secure the Contract. Contractor also hereby waives any and all rights to invoke any of the Contractor's general and special terms and conditions of sales and/or supply.

5. LANGUAGE

5.1. All written correspondence, reports, documentation and text of drawings delivered to the Purchaser by the Contractor shall be in the English language.

6. AUTHORISATION TO PERFORM/CONFORMANCE TO NATIONAL LAWS AND REGULATIONS

6.1. The Contractor warrants that he and his Sub-contractors are duly authorised to operate and do business in the country or countries in which this Contract is to be performed and that he and his Sub-contractors have obtained or will obtain all necessary licences and permits required in connection with the Contract. No claim for additional monies with respect to any costs or delay to obtain the authorisations to perform shall be made by the Contractor.

6.2. The Contractor acknowledges that he and his Sub-contractors are responsible during the performance of this Contract for ascertaining and complying with all applicable laws and regulations, including without limitation: labour standards, environmental laws, health and safety regulations and export controls laws and regulations in effect at the time of Contract signature or scheduled to go into effect during Contract performance. Failure to fully ascertain and comply with such laws, regulations or standards shall not be the basis for claims for change to the specifications, terms, conditions or monetary value of this Contract.

7. FIRM FIXED PRICE CONTRACT

7.1 This is a Firm Fixed Price Contract. The Firm Fixed Price of this Contract is as stated on the signature page of the Contract or any amendments thereto. The Purchaser assumes no liability for costs incurred by the Contractor in excess of the stated Firm Fixed Price except as may be authorised under certain provisions of this Contract.

8. PERFORMANCE GUARANTEE

8.1. As a guarantee of performance under the Contract, the Contractor shall deposit with the Purchaser within thirty (30) calendar days from the Effective Date of Contract a bank guarantee (the "Performance Guarantee") denominated in the currency of the Contract, to the value of ten per cent (10%) of the total Contract price.

8.2. The Performance Guarantee, the negotiability of which shall not elapse before the expiration of the warranty period, or such other period as may be specified in the Contract, shall be made payable to the Purchaser and shall be in the form of certified cheques or a Standby Letter of Credit subject to the agreement of the Purchaser. In the case of a Standby Letter of Credit, payment shall be made to the Purchaser without question and upon first demand by the Purchaser against a certificate from the Purchaser's Contracting Authority that the Contractor has not fulfilled its obligations under the Contract. The Contractor shall have no right to enjoin or delay such payment.

8.3. Certified Cheques issued to fulfil the requirements of the Performance Guarantee will be cashed by the Purchaser upon receipt and held in the Purchaser's account until the term of the Performance Guarantee has expired.

8.4. The standby letter of credit shall be subject to Belgian Law and shall be issued by (i) a Belgian bank, (ii) the Belgian subsidiary of a foreign bank licensed to provide financial services in Belgium; or (iii) an insurance company licensed to do business in Belgium and belonging to a Belgian banking institution provided the banking institution guarantees explicitly the demand for payment, unless otherwise specified by the Purchaser.

8.5. The Contractor shall request in writing relief from the Performance Guarantee upon expiration of the warranty period or such other period as may be specified in the Contract and such relief may be granted by the Purchaser.

8.6. The Contractor shall be responsible, as a result of duly authorised adjustments in the total contract price and/or period of performance by the Purchaser, for obtaining a commensurate extension and increase in the Performance Guarantee, the value of which shall not be less than ten per cent (10%) of the total contract price (including all amendments), and for depositing such guarantee with the Purchaser, within thirty (30) calendar days from the effective date of aforesaid duly authorised adjustment.

8.7. The failure of the Contractor to deposit and maintain such Performance Guarantee with the Purchaser within the specified time frame, or any extension thereto granted by the Purchaser's Contracting Authority, is a material breach of the Contract terms and conditions subject to the

provisions of the Contract regarding Termination for Default.

8.8. The rights and remedies provided to the Purchaser under the present Clause are in addition to any other rights and remedies provided by law or under this Contract. The certificate described in Clause 8.2 above shall not be regarded as a Termination for Default and this Clause is in addition to and separate from the Clause of the Contract detailing termination for default.

8.9. If the Contractor elects to post the Performance Guarantee by Standby Letter of Credit, the form of the document shall be substantially as follows:

PERFORMANCE GUARANTEE STANDBY LETTER OF CREDIT

Standby Letter of Credit Number: _____

Issue Date: _____

Initial Expiry Date: _____

Final Expiry Date: _____

Beneficiary: NCI Agency, Finance, Accounting & Operations
Boulevard Leopold III, B-1110, Brussels
Belgium

1. We hereby establish in your favour our irrevocable standby letter of credit number {number} by order and for the account of (NAME AND ADDRESS OF CONTRACTOR) in the amount of _____. We are advised this undertaking represents fulfilment by (NAME OF CONTRACTOR) of certain performance requirements under Contract No. _____ dated _____ between the NCI Agency ("NCIA and (NAME OF CONTRACTOR).

2. 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.

3. Funds under this letter of credit are available to you without question or delay against presentation of a certificate signed by the NCI Agency Contracting Officer which states:

> "(NAME OF CONTRACTOR) has not fulfilled its obligations under Contract No. _____ dated _____ between NCI Agency and (NAME OF CONTRACTOR) (herein called the "Contract"), and the NCI Agency, as beneficiary, hereby draws on the standby letter of credit number _____ in the amount denominated in the currency of the Contract, 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.

4. 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.

5. It is a condition of this letter of credit that the expiry date will be automatically extended without amendment for a period of one (1) year from the current or any successive expiry date unless at least 90 (ninety) calendar days prior to the then current expiry date we notify you by registered mail and notify (NAME OF CONTRACTOR) that we elect not to extend this letter of credit for such additional period. However, under no circumstances will the expiry date extend beyond _____ ("Final Expiry Date") without amendment.

6. We may terminate this letter of credit at any time upon 90 (ninety) calendar days notice furnished to both (NAME OF CONTRACTOR) and the NCI Agency by registered mail.

7. In the event we (the issuing bank) notify you that we elect not to extend the expiry date in accordance with paragraph 6 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 NCI Agency Contracting Officer which states:

"The NCI 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 NCI Agency from, or on behalf of (NAME OF CONTRACTOR). (NAME OF CONTRACTOR) has, therefore, not fulfilled its obligations under Contract No. _____ dated _____ between NCI Agency and (NAME OF CONTRACTOR), and the NCI 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.

8. The Beneficiary may not present the certificate described in paragraph 7 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.

9. Multiple partial drawings are allowed to the maximum value of the standby letter of credit.

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

9. PARTICIPATING COUNTRIES

9.1 Unless prior written authorisation of the Purchaser has been obtained, none of the Work, shall be performed other than by firms from and within NATO Participating Countries. Unless otherwise specified in the Contract Special Provisions, the Participating Countries are the twenty-eight (28) Member Nations of the North Atlantic Treaty Organisation.

9.2 Unless prior written authorisation of the Purchaser has been obtained, 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 NATO Participating Country.

9.3 The Contractor shall not place any Sub-contracts outside the NATO Participating Countries without the prior written authorisation of the Purchaser.

9.4 Unless prior written authorisation of the Purchaser has been obtained, the intellectual property rights for all software and documentation incorporated by the Contractor and/or its Sub-contractors into the Work shall vest with persons or legal entities from and within NATO participating nations and no royalties or licence fees for such software and documentation shall be paid by the Contractor to any source that does not reside within a NATO participating nation.

9.5 Any modification in the nationality, ownership and/or change of control of the Contractor and/or its Sub-contractor(s) shall be immediately notified in writing to the Purchaser with all necessary details to allow the Purchaser to determine whether or not the Contractor and/or its Sub-contractors continue

to comply with the Clauses above. Non-compliance with the Clauses above, by the Contractor and/or its Subcontractor may constitute ground for termination of this Contract under Clause 39 (Termination for Default).

10. SUB-CONTRACTS

10.1 The Contractor shall place and be responsible for the administration and performance of all Sub-contracts including terms and conditions which he deems necessary to meet the requirements of this Contract in full.

10.2 Prior to the Sub-contractors being given access to any classified information, the Contractor shall ensure that any Sub-contractor that has a need to access classified information for the performance of any part of this Contract has been granted the appropriate facility and personnel security clearances by the Sub-contractor's national authorities and that such clearances are still in effect at the time the information is disclosed and remains in effect throughout the performance of the work to be carried out under the Sub-contract concerned.

10.3 The Contractor shall seek the approval in writing of the Purchaser prior to the placing of any Sub-contract if:

10.3.1 the Sub-contract was not part of the Contractor’s original proposal;

and

10.3.2 the value of the Sub-contract is known or estimated to exceed 15 per cent of the total Contract value; or

10.3.3 the Sub-contract is one of a number of Sub-contracts with a single Sub-contractor for the same or related Work under this Contract that in the aggregate are known or expected to exceed 15 per cent of the total Contract value.

10.4 The Contractor shall inform the Purchaser of any change in Sub-contractors for Sub-contracts of a value known or estimated to exceed 15 per cent of the total Contract value.

10.5 The Contractor shall submit a copy of any such proposed Sub-contract including prices when seeking approval to the Contracting Authority but such approval by the Contracting Authority shall in no way relieve the Contractor of his responsibilities to fully achieve the contractual and technical requirements of this Contract.

10.6 The Contractor shall, as far as practicable, select Sub-contractors on a competitive basis consistent with the objectives and requirements of the Contract.

11. SECURITY

11.1 The Contractor shall comply with all security measures as are prescribed by the Purchaser and the national security authority or designated security agency of each of the NATO countries in which the Contract is being performed. The Contractor shall be responsible for the safeguarding of classified information, documentation, material and equipment entrusted to him or generated by him in connection with the performance of the Contract.

11.2 In particular the Contractor undertakes to:

11.2.1 appoint an official responsible for supervising and directing security measures in relation to the Contract and communicating details of such measures to the Purchaser on request;

11.2.2 maintain, preferably through the official responsible for security measures, a continuing relationship with the national security authority or designated security agency charged with ensuring that all NATO classified information involved in the Contract is properly safeguarded;

11.2.3 abstain from copying by any means, without the authorisation of the Purchaser, the national security authority or designated security agency, any classified documents, plans, photographs or other classified material entrusted to him;

11.2.4 furnish, on request, information to the national security authority or designated security agency pertaining to all persons who will be required to have access to NATO classified information;

11.2.5 maintain at the work site a current record of his employees at the site who have been cleared for access to NATO classified information. The record should show the date of issue, the date of expiration and the level of clearance;

11.2.6 deny access to NATO classified information to any person other than those persons authorised to have such access by the national security authority or designated security agency;

11.2.7 limit the dissemination of NATO classified information to the smallest number of persons (“need to know basis”) as is consistent with the proper execution of the Contract;

11.2.8 comply with any request from the national security authority or designated security agency that persons entrusted with NATO classified information sign a statement undertaking to safeguard that information and signifying their understanding both of their obligations under national legislation affecting the safeguarding of classified information, and of their comparable obligations

under the laws of the other NATO nations in which they may have access to classified information;

11.2.9 report to the national security authority or designated security agency any breaches, suspected breaches of security, suspected sabotage, or other matters of security significance which would include any changes that may occur in the ownership, control or management of the facility or any changes that affect the security arrangements and security status of the facility and to make such other reports as may be required by the national security authority or designated security agency, e.g. reports on the holdings of NATO classified material;

11.2.10 apply to the Purchaser for approval before Sub-contracting any part of the work, if the Sub-contract would involve that the Sub-contractor would have access to NATO classified information, and to place the Sub-contractor under appropriate security obligations no less stringent than those applied to his own contract;

11.2.11 undertake not to utilise, other than for the specific purpose of the Contract, without the prior written permission of the Purchaser or his authorised representative, any NATO classified information furnished to him, including all reproductions thereof in connection with the Contract, and to return all NATO classified information referred to above as well as that developed in connection with the Contract, unless such information has been destroyed, or its retention has been duly authorised with the approval of the Purchaser. Such NATO classified information will be returned at such time as the Purchaser or his authorised representative may direct;

11.2.12 classify any produced document with the highest classification of the NATO classified information disclosed in that document.

12. RELEASE OF INFORMATION

12.1 Except as otherwise specified elsewhere in the Contract and to the extent that it is demonstratively unavoidable and without prejudice to the Clause 11 (Security), the Contractor and/or his employees shall not, without prior authorisation from the Purchaser, release to third parties any information pertaining to this Contract, its subject matter, performance there under or any other aspect thereof.

12.2 The Contractor shall seek the prior written approval of the Purchaser before publishing any press release or disclosing any other information, orally or in writing, in relation to the Contract. The approval of the Purchaser shall be required for both the opportunity and the content of the information.

12.3 This provision shall remain in effect after the termination of the Contract and shall cease to apply to any particular piece of information once that information becomes public knowledge other than through an act, default or omission of the Contractor or its Sub-contractors.

13. PURCHASER FURNISHED PROPERTY

13.1 The Purchaser shall deliver to the Contractor, for use only in connection with this Contract, the Purchaser Furnished Property at the times and locations stated in the Contract. In the event that Purchaser Furnished Property is not delivered by such time or times stated in the Schedule, or if not so stated, in sufficient time to enable the Contractor to meet such delivery or performance dates the Purchaser shall, upon timely written request made by the Contractor, and if the facts warrant such action, equitably adjust any affected provision of this Contract pursuant to Clause 16 (Changes).

13.2 In the event that Purchaser Furnished Property is received by the Contractor in a condition not suitable for its intended use, the Contractor shall immediately notify the Purchaser. The Purchaser shall within a reasonable time of receipt of such notice replace, re-issue, authorise repair or otherwise issue instructions for the disposal of Purchaser Furnished Property agreed to be unsuitable. The Purchaser shall, upon timely written request of the Contractor, equitably adjust any affected provision of this\ Contract pursuant to Clause 16 (Changes).

13.3 Title to Purchaser Furnished Property will remain in the Purchaser. The Contractor shall maintain adequate property control records of Purchaser Furnished Property in accordance with sound industrial practice and security regulations.

13.4 Unless otherwise provided in this Contract, the Contractor, upon delivery to him of any Purchaser Furnished Property, assumes the risk of, and shall be responsible for, any loss thereof or damage thereof except for reasonable wear and tear, and except to the extent that Purchaser Furnished Property is consumed in the performance of this Contract.

13.5 Upon completion of this Contract, or at such earlier dates as may be specified by the Purchaser, the Contractor shall submit, in a form acceptable to the Purchaser, inventory schedules covering all items of Purchaser Furnished Property.

13.6 The inventory shall note whether:

13.6.1 The property was consumed or incorporated in fabrication of final deliverable(s);

13.6.2 The property was otherwise destroyed;

13.6.3 The property remains in possession of the Contractor;

13.6.4 The property was previously returned

13.7 The Contractor shall prepare for shipment, deliver DDP at a destination agreed with the Purchaser, or otherwise dispose of Purchaser Furnished Property as may be directed or authorised by the Purchaser. The net proceeds of any such disposal shall be credited to the Contract price or paid to the Purchaser in such other manner as the Purchaser may direct.

13.8 The Contractor shall not modify any Purchaser Furnished Property unless specifically authorised by the Purchaser or directed by the terms of the Contract.

13.9 The Contractor shall indemnify and hold the Purchaser harmless against claims for injury to persons or damages to property of the Contractor or others arising from the Contractor's possession or use of the Purchaser Furnished Property. The Contractor shall indemnify the Purchaser for damages caused by the Contractor to the Purchaser, its property and staff and arising out of the Contractor's use of the Purchaser Furnished Property.

14. CONTRACTOR'S PERSONNEL WORKING AT PURCHASER'S FACILITIES

14.1 The term "Purchaser Facilities" as used in this Clause shall be deemed to include sites, property, utilities, ships or vessels and the term "Facility Representative" shall be deemed to refer to the authority designated by the Purchaser responsible for the site, property, utility, ship or vessel.

14.2 The Facility Representative shall provide such available administrative and technical facilities for Contractor's personnel working at Purchaser's Facilities for the purpose of the Contract as in the opinion of the Facility Representative may be necessary for the effective and economical discharge of Work. The Facility Representative shall also determine whether these facilities will be provided free of charge to the Contractor or determine what charges are payable. The Contractor shall have no claim against the Purchaser for any such additional cost or delay or any additional cost or delay occasioned by the closure for holidays of said facilities, or other reasons, where this is generally published or made known to the Contractor by the Purchaser or his authorised representatives.

14.3 The Contractor shall, except as otherwise provided for in the Contract, make good or, at the option of the Purchaser, pay compensation for all damage occurring to any Purchaser's Facilities occasioned by the Contractor, his servants, agents or Sub-contractors, arising from his or their presence and activities in, and use of, the Purchaser's Facilities; provided that this

Condition shall not apply to the extent that the Contractor is able to show that any such damage was not caused or contributed to, by his neglect, or default or the neglect or default of his servants, agents or Sub-contractors, or by any circumstances within his or their control.

14.4 All property of the Contractor while at a Purchaser Facility shall be at the risk of the Contractor, and the Purchaser shall accept no liability for any loss or damage, except to the extent that any loss or damage is the result of a wilful act or gross negligence on the part of the Purchaser's employees or agents.

15. HEALTH, SAFETY AND ACCIDENT PREVENTION

15.1 If the Purchaser notifies the Contractor in writing of any non-compliance in the performance of this Contract with safety and health rules and requirements prescribed on the date of this Contract by applicable national or local laws, ordinances and codes, and the Contractor fails to take immediate corrective action, the Purchaser may order the Contractor to stop all or part of the Work until satisfactory corrective action has been taken. Such an order shall not entitle the Contractor to an adjustment of the Contract price or other reimbursement for resulting increased costs, or to an adjustment of the delivery or performance schedule.

16. CHANGES

16.1 The Purchaser may at any time, by written order of the Contracting Authority designated or indicated to be a change order ("Change Order") make changes within the general scope of this Contract, including, without limitation, in any one or more of the following:

16.1.1 Specifications (including drawings and designs);

16.1.2 Method and manner of performance of the work, including engineering standards, quality assurance and configuration management procedures;

16.1.3 Marking and method of shipment and packing;

16.1.4 Place of delivery;

16.1.5 Amount, availability and condition of Purchaser Furnished Property.

16.2 The Purchaser shall submit a proposal for Contract amendment describing the change to the Contract.

16.3 If any such Change Order causes an increase in the Contractor's cost of, or the time required for, the performance of any part of the Work under this Contract, whether or not changed by any such order, the Contractor shall submit a written proposal for adjustment to the Purchaser describing the general nature and amount of the proposal for adjustment. The Contractor shall submit this proposal for adjustment within thirty (30) days after receipt of a written Change Order under (a) above unless this period is extended by the Purchaser.

16.4 If any such Change Order causes a decrease in the Contractor's cost of, or the time required for, the performance of any part of the Work under this Contract, whether or not changed by any such order, the Purchaser shall submit a proposal for adjustment within thirty (30) days from the issuance of the Change Order by submitting to the Contractor a written statement describing the general nature and amount of the proposal for adjustment.

16.5 Where the cost of property made obsolete or in excess as a result of a change is included in the Contractor's claim for adjustment, the Purchaser shall have the right to prescribe the manner of disposition of such property.

16.6 The Purchaser reserves the right to reject the introduction of the change, after the evaluation of the change proposal, even if the Purchaser initiated such change.

16.7 Failure to agree to any requested adjustment shall be a dispute within the meaning of the Clause 41 (Disputes). However, nothing in this Clause shall excuse the Contractor from proceeding with the Contract as changed.

16.8 No proposal for adjustment by the Contractor for an equitable adjustment shall be allowed if asserted after final payment and acceptance under this Contract.

16.9 Any other written or oral order (which, as used in this paragraph includes direction, instruction, interpretation, or determination) from the Purchaser that causes a change shall be treated as a Change Order under this Clause, provided, that the Contractor gives the Purchaser a written notice within thirty (30) Days after receipt of such order stating (i) the date, circumstances, and source of the order; (ii) that the Contractor regards the order as a Change Order; and (iii) a detailed cost and time analysis of the impact of the change, and that the Order is accepted in writing by the Purchaser as a Change Order. The timely written notice requirement, as detailed above, remains in force in all cases, even where, for example, the Purchaser has positive knowledge of the relevant facts.

16.10 All tasks and activities carried out by the Contractor in relation to the processing of the Change Order or in relation to this Clause shall form part of the Contractor’s routine work and cannot be charged as additional work.

17. STOP WORK ORDER

17.1 The Purchaser may, at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the Work called for by this Contract for a period of ninety (90) days after the order is delivered to the Contractor, and for any further period to which the Parties may agree.

17.2 Any such stop work order shall be specifically identified as a stop work order issued pursuant to this Clause (the "Stop Work Order"). The Stop Work Order may include a description of the Work to be suspended, instructions concerning the Contractor's issuance of further orders for material or services, guidance to the Contractor on actions to be taken on any Sub-contracts and any suggestion to the Contractor for minimizing costs.

17.3 Upon receipt of such a Stop Work Order, the Contractor shall forthwith comply with its terms and take all reasonable steps to minimise costs incurred allocable to the Work covered by the Stop Work Order during the period of work stoppage. Within a period of ninety (90) days after a Stop Work Order is delivered to the Contractor, or within any extension of that period to which the Parties shall have agreed, the Purchaser shall either:

17.3.1 cancel the Stop Work Order; or

17.3.2 terminate the Work covered by such Stop Work Order as provided in Clause 40 (Termination for Convenience of the Purchaser).

17.4 If a Stop Work Order issued under this Clause is cancelled or the period of the Stop Work Order or any extension thereof expires, the Contractor shall resume work.

17.5 An equitable adjustment shall be made in the delivery schedule or Contract price, or both, and the Contract shall be modified in writing accordingly, if:

17.5.1 the Stop Work Order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this Contract, and;

17.5.2 the Contractor asserts a Claim for such adjustment within thirty (30) days after the end of the period of work stoppage; provided that, if the Purchaser decides the facts justify such action, he may receive and act upon any such claim asserted at a later date but prior to final payment under this Contract.

17.6 If a Stop Work Order is not cancelled and the Work covered by such Stop Work Order is terminated for the convenience of the Purchaser the reasonable costs resulting from the Stop Work Order shall be allowed in

arriving at the termination settlement.

18. CLAIMS

18.1 The Contractor shall specifically identify the Contract Clause(s) under which the Claim(s) is/are based.

18.2 Claims shall be specifically identified as such and submitted:

18.2.1 within the time specified in the Clause under which the Contractor alleges to have a Claim. If no time is specified in the Clause under which the Contractor intends to base his Claim, the time limit shall be sixty (60) days from the date the Contractor has knowledge or should have had knowledge of the facts on which he bases his Claim; and

18.2.2 before final payment, pursuant to and with the exceptions specified in Clause 33 entitled" Release of Claims".

18.2.3 Section 18.2.2 above shall only apply to those Claims for which the Contractor could not have had earlier knowledge and were not foreseeable.

18.3 The Contractor shall be foreclosed from his Claim unless he presents complete documentary evidence, justification and costs for each of his Claims within ninety (90) calendar days from the assertion date of such Claims. Claims shall be supported by specifically identified evidence (including applicable historical and planned cost and production data from the Contractor's books and records). Opinions, conclusions or judgmental assertions not supported by such evidence will be rejected by the Purchaser.

18.4 An individual breakdown of cost is required for each element of Contractor's Claims at the time of claim submission or for any material revision of the Claim.

18.5 The Contractor shall present, at the time of submission of a Claim, an attestation as follows:

> I .....the responsible senior company official authorised to commit the ..... with respect to its claims dated ..... being duly sworn, do hereby depose and say that: (i) the facts described in the claim are current, complete and accurate; and (ii) the conclusions in the claim accurately reflect the material damages or contract adjustments for which the Purchaser is allegedly liable.

.....

……..

SIGNATURE Date

18.6 Failure to comply with any of the above requirements shall result in automatic foreclosure of the Claim. This foreclosure takes effect in all cases and also where, for example, the Claim is based on additional orders, where the facts are known to the Purchaser, where the Claim is based on defective specifications of the Purchaser or an alleged negligence in the pre-contractual stage.

18.7 Claims submitted by the Contractor will be reviewed by the Contracting Authority. The Contracting Authority will respond within sixty (60) days with a preliminary decision, based on an assessment and evaluation of the facts presented by the Parties, as to whether the Contracting Authority considers the Claim to have merit for consideration. If the preliminary decision of the Contracting Authority is that the Claim, as submitted is without merit, the Contractor shall have fourteen (14) days to present a rebuttal to the Contracting Authority and request reconsideration of the Contracting Authority's decision. Within thirty (30) days receipt of the Contractor's request for reconsideration, the Contracting Authority will issue a decision. The time requirements stated herein may be extended by the Contracting Authority in order to accommodate additional preparation efforts and fact finding discussions but the Contracting Authority may not unreasonable extend such a period. A decision that the submitted claim is without merit will be identified as such, will be issued in writing by the Contracting Authority and will be conclusive. A decision may only be challenged by the Contractor through the Disputes provisions described herein.

18.8 A decision by the Purchaser that the claim has merit will result in a Contracting Authority request to enter into negotiations with the Contractor to arrive at a mutually agreed fair and equitable settlement. The Contracting Authority's decision will contain a target date for the commencement and conclusion of such operations. If the Parties are unable to arrive at an agreement on a fair and reasonable settlement by the target date for conclusion, or any extension thereto made by the Contracting Authority, the latter may declare that negotiations are at an impasse and issue a preliminary decision as to the fair and reasonable settlement and the reasons supporting this decision. The Contractor shall have a period of thirty (30) days to present a rebuttal to the Contracting Authority and request reconsideration of the Contracting Authority's decision. Within sixty (60) days of receipt of the Contractor's request for reconsideration, the Contracting Authority will issue its decision on the request for reconsideration. This timeframe will be respected unless an authorisation is needed from a NATO or other authority , the schedule for which is beyond the Contracting Authority's control. A

decision of the Contracting Authority on the reconsideration of the matter will be identified as such, will be issued in writing by the Contracting Authority and will be conclusive. A decision on the reconsideration may only be challenged by the Contractor through the Disputes provisions described herein.

18.9 No Claim arising under this Contract may be assigned by the Contractor without prior approval of the Purchaser.

18.10 The Contractor shall proceed diligently with performance of this Contract, pending final resolution of any request for relief, claim appeal, or action arising under the Contract, and comply with any decision of the Contracting Authority.

19. PRICING OF CHANGES, AMENDMENTS AND CLAIMS

19.1 Contractor's pricing proposals for Changes, amendments and Claims shall be priced in accordance with the Purchaser's Pricing Principles (Annex 1 hereto and the sample spreadsheet and its " Instructions to Complete" at Appendix 1) or the national government pricing rules and regulations for the Contractor's own country, where in force. The Contractor shall provide cost information accompanied by appropriate substantiation as required by the Purchaser in accordance with Purchaser's Pricing Principles, or such other format as may be agreed between the Contractor and the Purchaser.

19.2 With respect to Clause 19.1 above, when the price or price adjustment is based on adequate price competition, established catalogue or market price of commercial items sold in substantial quantities to the general public, or prices set by law or regulation, the Contractor shall be responsible for substantiation of such cases to the satisfaction of the Purchaser.

19.3 For the purposes of verifying that the cost or pricing data submitted in conjunction with Clause 19.1 above are accurate, complete and current, the Purchaser or any Purchaser authorised representative shall have the right of access to the Contractor's facilities to examine, until the expiration of three (3) years from the date of final payment of all sums due under the Contract:

19.3.1 those books, records, documents and other supporting data which will permit adequate evaluation and verification of the cost or pricing data submitted; and/or

19.3.2 the computations and projections which were available to the Contractor as of the date of the Contractor price proposal.

19.4 The Contractor, subject to the provisions of this Clause, shall require Sub-contractors to provide to the Purchaser, either directly or indirectly:

19.4.1 cost or pricing data;

19.4.2 access to Sub-contractor's facilities and records for the purposes of verification of such cost or pricing data; and

19.4.3 a Certificate of Current Cost or Pricing Data, when required.

19.5 If any price, including profit, negotiated in connection with this Contract was proposed, taking any of the following into account:

19.5.1 the Contractor furnished cost or pricing data which was not complete, accurate and current as certified in the Contractor's Certificate of Current Cost or Pricing Data provided in accordance with Clause 19.6 below;

19.5.2 a Sub-contractor, pursuant to Clause 19.4 above or any Sub-contract clause therein required, furnished cost or pricing data which was not complete, accurate and current as certified in the Sub-contractor's Certificate of Current Cost or Pricing Data;

19.5.3 a Sub-contractor or prospective Sub-contractor furnished cost or pricing data which was required to be complete, accurate and current and to be submitted to support a Sub-contract cost estimate furnished by the Contractor but which was not complete, accurate and current as of the date certified in the Contractor's Certificate of Current Cost or Pricing Data; or

19.5.4 the Contractor or a Sub-contractor or prospective Sub-contractor furnished any data, not within 19.5.1 through 19.5.3 above, which, as submitted, was not complete, accurate and current;

19.5.5 then the price and/or cost shall be adjusted accordingly and the Contract shall be modified in writing as may be necessary to reflect such.

19.6 At the time of negotiating any price, including profit, which is based upon the submission of cost or pricing data by the Contractor, the Contractor shall be required to submit a certificate of current cost or pricing data (“Certificate”).

19.6.1 Such Certificates will certify that, to the best of the Contractor's knowledge and belief, cost or pricing data submitted to the Purchaser in support of any proposal for a price, price adjustment or claim, are accurate, complete and current, as per the completion of the negotiations or, in the case of a claim, as per the submission date of the claim.

19.6.2 All such Certificates shall be in the format shown below and shall be dated and signed by a responsible officer of the company:

CERTIFICATE OF CURRENT COST OR PRICING DATA

This is to certify that cost or pricing data as submitted, either actually or by specific identification in writing to the Purchaser or his representative in support of.....*(Claim, Amendment, ECP#, etc.,)* are accurate, complete and current as of .....*(Date).*

By submitting the price proposal, the Contractor/sub-Contractor or prospective sub-Contractor grant the Purchaser or his authorized representative(s) the right to examine those records, data and supporting information, used as a basis for the pricing submitted.

_____

Name of Company

_____

Signature

_____

Printed Name of Signatory

_____

Title of Signatory

_____

Date of Signature

19.6.3 The Contractor shall insert the substance of this Clause 19.7 in each Sub-contract.

19.7 For all additional or follow-up agreements which are made for Work which are furnished to the Purchaser without competition, the Contractor shall offer prices on a “Preferred Customer” basis, that is offer prices which are as favourable as those extended to any Government, Agency, Company, Organisation or individual purchasing or handling like quantities of

equipment and/or Parts covered by the Contract under similar conditions. In the event that prior to completing delivery under this Contract the Contractor offers any of such items in substantially similar quantities to any customer at prices lower than those set forth herein, the Contractor shall so notify the Purchaser and the prices of such items shall be correspondingly reduced by a supplement to this Contract. Price in this sense means "Base Price" prior to applying any bonus, export tax reduction, turn-over tax exemptions and other reductions based on National Policies.

20. NOTICE OF SHIPMENT AND DELIVERY

20.1 Except as may be specified in the Contract Special Provisions, delivery of all items under this Contract shall be made by the Contractor on the basis of “Delivery Duty Paid” (DDP) as defined by the INCOTERMS 2000 (International Chamber of Commerce Publication No. 560). It shall be noted, however, that because the Purchaser is exempted from direct taxes and duty as set forth in Clause 26 (Taxes and Duties), there is no duty to be paid by the Contractor.

20.2 "Delivery" of required Work by the Contractor does not constitute "Acceptance" by the Purchaser for purposes of meeting the requirements of the Contract Schedule where Purchaser acceptance is the stated payment or schedule milestone.

20.3 Thirty (30) Days, or such other period as specified in the Contract, prior to the delivery of any shipment of Work, the Contractor shall give prepaid notice of shipment to the Purchaser. The Notice of Shipment shall contain, as appropriate, the request for customs form 302, or equivalent document, which shall enable any carrier to conduct duty free import/export clearance through customs for the Purchaser on behalf of NATO.

20.4 The customs form 302 is an official customs clearance declaration issued in advance of shipment by the Purchaser to provide certified information as to the duty free import, export, or transit of NATO consignments between NATO countries.

20.5 The Notice of Shipment and request for Form 302 or equivalent document shall contain the following information:

20.5.1 Purchaser's Contract number;

20.5.2 Contract item number, designation and quantities;

20.5.3 destination;

20.5.4 number and description of the packages (gross and net weight);

20.5.5 description of the goods and their value (for custom purpose only, not commercial value)

20.5.6 consignor's name and address;

20.5.7 consignee's name and address;

20.5.8 method of shipment (i.e. road, rail, sea, air, etc.);

20.5.9 name and address of freight forwarder.

20.6 Forwarding Agents, Carriers or other responsible organisations shall be informed by the Contractor of the availability of Form 302 or equivalent document and how the form shall be utilised to avoid the payment of custom duties. Form 302 or equivalent document shall be incorporated in all shipping documents provided to the carrier.

20.7 Upon receipt of the Notice of Shipment from the Contractor, the Purchaser may require the Contractor to send copies of the Notice of Shipment to the receiving parties and the Contractor shall comply with this requirement.

21. INSPECTION AND ACCEPTANCE OF WORK

21.1 For the purposes of this Clause, Work does not include documentation which is addressed in Clause 22 (Inspection and Acceptance of Documentation) hereafter.

21.2 Unless otherwise specifically provided for in the Contract, all Work and all Parts and equipment incorporated in the Work are to be new and of the most suitable grade of their respective kinds for the purpose, notwithstanding the requirements for testing, inspection and performance as required under this Contract. All workmanship shall be as specified under the Contract or, if no workmanship standards are specified, best commercial or “state of the art” complying with relevant (National and International) standards.

21.3 All Work may be subject to inspection and test by the Purchaser or his authorised representative(s) to the extent practicable at all times and places prior to Acceptance, including the period of manufacture, or after delivery or as otherwise specified in the Contract. For the purposes of inspection and testing the Purchaser may delegate as his representative the authorised National Quality Assurance Representative (NQAR) in accordance with STANAG 4107.

21.4 No representative or NQAR appointed by the Purchaser for the purpose of determining the Contractor's compliance with the technical requirements of the Contract shall have the authority to change any of the specifications. Such changes may only be made by the Contracting Authority in writing in accordance with Clause 16 (Changes).

21.5 The presence or absence of an NQAR or other Purchaser representative shall not relieve the Contractor from conforming to the requirements of this Contract.

21.6 Acceptance or rejection of the Work shall be made as promptly as practicable after delivery, except as otherwise provided in the Contract. Failure to timely

accept or reject the Work shall neither relieve the Contractor from responsibility for such Work nor impose liability on the Purchaser.

21.7 In the event that any Work, or lots thereof, or services are defective in design, material, workmanship or manufacturing quality, or as a result of undue wear and tear or otherwise not in conformity with the requirements of this Contract, including any characteristic or condition which is or becomes at variance to the performance specifications, to the intended function of the Work or the function to which it could reasonably be expected that the Work would perform, the Purchaser shall have the right either to reject them (with or without instructions as to their disposition) or to require their correction or replacement. Work which has been rejected or required to be corrected or replaced shall, at the expense of the Contractor, be removed, or, if permitted or required by the Contracting Authority, corrected in place by the Contractor promptly after notice, and shall not thereafter be tendered for acceptance by the Contractor unless the former rejection or requirement of correction or replacement is withdrawn. If the Contractor fails promptly to remove, replace or correct such Work the Purchaser may either:

21.7.1 by contract or otherwise return, replace or correct such Work or services and charge to the Contractor the cost incurred by the Purchaser; and/or

21.7.2 terminate this Contract for default as provided in Clause 39 (Termination for Default).

21.8 When NQAR is not applicable based on the scale of the project, the Purchaser reserves the right to perform inspections through his own staff in accordance with the latest ISO standard at the time of inspection.

21.9 Unless the Contractor corrects or replaces such Work within the delivery schedule, the Purchaser may require the delivery of such Work at a reduction in price which is equitable under the circumstances. Failure to agree to such reduction of price shall be a dispute within the meaning of Clause 41 (Disputes).

21.10 If any inspection or test is made by the Purchaser's representatives on the premises of the Contractor or Sub-contractor, the Contractor, without additional charge, shall provide all reasonable facilities and assistance for the safety and convenience of the Purchaser's representatives in the performance of their duties. The NQAR or other Purchaser representatives shall have the right of access to any area of the Contractor's or his Sub-contractor's premises where any part of the contractual work is being performed.

21.11 If Purchaser inspection or test is made at a point other than the premises of the Contractor or Sub-contractor, it shall be at the expense of the Purchaser except as otherwise provided in this Contract; provided, that in case of rejection the Purchaser shall not be liable for any reduction in value of samples used in connection with such inspection or test.

21.12 All inspections and tests by the Purchaser shall be performed in such a

manner as not to unduly delay the Work.

21.13 The Purchaser reserves the right to charge to the Contractor any additional cost of Purchaser inspection and test when Work is not ready at the time such inspection and test is requested by the Contractor or when re-inspection or retest is necessitated by prior rejection.

21.14 Acceptance or rejection of the Work shall be made as promptly as practicable after delivery, except as otherwise provided in this Contract, but failure to inspect and accept or reject Work shall neither relieve the Contractor from responsibility for such Work as are not in accordance with the Contract requirements nor impose liability on the Purchaser thereof.

21.15 The inspection and test by the Purchaser of any Work or lots thereof, or services, does not relieve the Contractor from any responsibility regarding defects or other failures to meet the Contract requirements which may be discovered prior to acceptance.

21.16 Acceptance of Work shall take place when the Contracting Authority confirms acceptance in writing of the Work in accordance with the procedure specified in the Contract, or if none is so specified then the Contracting Authority shall be deemed to have accepted the Work without prejudice to any other remedies, when and as soon as any of the following events have occurred:

21.16.1 the Purchaser has taken the Work into use, except as specifically provided by Clause 23 (Use and Possession Prior to Acceptance);

21.16.2 the Purchaser has not exercised its right of rejection of the Work within any period specified for that purpose in the Contract;

21.16.3 there being no period for exercising the right of rejection specified in the Contract, a reasonable time, all the circumstances having been taken into account, has elapsed since inspection of the Work was effected in accordance with the Contract.

21.17 Except as otherwise provided in this Contract, acceptance shall be conclusive except as regards latent defects, fraud, or such gross mistakes as amount to fraud.

21.18 Unless otherwise specified in this Contract, the Contractor shall have or establish, implement and maintain an effective and economical quality control system necessary to satisfy the Contract requirement. The system shall provide for the early and prompt detection of deficiencies, trends and conditions which could result in unsatisfactory quality and for timely and effective corrective action. Objective evidence that the system is effective shall be readily available to the Purchaser and its authorised representatives. Records of all inspection and testing work by the Contractor shall be kept complete and available to the Purchaser’s representatives during the performance of this Contract and for such longer periods as may be specified elsewhere in this Contract.

22. INSPECTION AND ACCEPTANCE OF DOCUMENTATION

22.1 The Contractor shall provide to the Purchaser a draft version of the required documentation as provided by the Contract Schedule and the Statement of Work. Review of draft documentation under this Contract will be made by the Purchaser upon the delivery of these items by the Contractor. The review will be conducted by the Purchaser through duly authorised representatives.

22.2 Upon delivery of the draft documentation, the Purchaser will have a period of review as provided by the Statement of Work. At the end of the review period or before if deemed practical by the Purchaser, the Purchaser's comments will be presented to the Contractor in writing. The substance of such comments will pertain to items of error, non-conformity, omission and guidance in relation to the requirements of the Statement of Work.

22.3 Purchaser Review of the delivered items will emphasise the conformity with the requirements of the Statement of Work, thoroughness of analysis, logical bases of conclusions and models and coherence and completeness of presentation. The review process will also examine editorial and grammatical correctness and the suitability and accuracy of graphics supporting the text.

22.4 The Contractor shall, after receipt of Purchaser comments, incorporate changes, revisions and corrections required by the Purchaser and present the revised documentation in final form to the Purchaser for inspection in accordance with the delivery date specified in the Schedule.

22.5 During the review process the Contractor is not required to halt efforts on further tasks as identified in the Statement of Work. The Purchaser, however, shall not be held liable for any work carried out by the Contractor which is based on draft documentation yet to be reviewed.

22.6 Upon receipt of the items in final form, the Purchaser will inspect the items for a period not exceeding two weeks (or as otherwise stated in the Statement of Work). At the end of the inspection, the Purchaser will notify the Contractor that:

22.6.1 the items have been accepted;

22.6.2 the acceptance of the items is deferred pending further revision;

or

22.6.3 The items are rejected and significantly fail to meet Contract requirements.

22.7 In the case of Clause 22.6.2 above, the Contractor shall only be responsible for those revisions and corrections requested by the Purchaser and the

Purchaser may not request additional revisions during inspection after required revisions have been made. However, if the Purchaser determines that a directed revision has not been made or if such directed revision was cause for revision of other portions of content which were not made by the Contractor, the Purchaser may withhold acceptance until such revisions are made by the Contractor.

22.8 The Contractor shall provide to the Purchaser on request supporting technical data, computer software, databases and background analyses in order to validate findings contained in the delivered items.

22.9 Purchaser acceptance shall be made in writing by the Contracting Authority.

23. USE AND POSSESSION PRIOR TO ACCEPTANCE

23.1 Except as otherwise provided in the Contract Special Provisions, the Purchaser shall have the right to take possession of, or use, any completed or partially completed Work under the Contract at any time, when notified by the Contracting Authority, however such possession or use shall not constitute Acceptance by the Purchaser, as defined in the Contract.

23.2 While the Purchaser has such use or is in such possession, the Contractor shall be relieved of the responsibility for loss or damage to the Work concerned other than that resulting from the Contractor's fault, negligence or defect to the Work.

23.3 If such prior possession or use by the Purchaser delays the progress of the Work or causes additional expense to the Contractor, an equitable adjustment in the Contract price or the time of delivery will be made, in accordance with the Clause 16 (Changes), and the Contract shall be modified in writing accordingly.

24. OWNERSHIP AND TITLE

24.1 Except as may be otherwise stated in the Contract Special Provisions and Clause 23 (Use and Possession prior to Acceptance), ownership and title to all Work will pass to the Purchaser only upon Acceptance by the Contracting Authority in writing. Where the Contract provides for Provisional Acceptance and Final Acceptance, ownership and title will pass to the Purchaser upon written notification of Final Acceptance.

25. INVOICES AND PAYMENT

25.1 Unless otherwise specified in the Contract Special Provisions, invoices shall only be submitted after delivery and Acceptance of the Work and for the total prices and currency(ies) as set out under the Schedule of Work.

25.2 Invoices in respect of any Work or services shall be prepared and submitted

to the Purchaser and shall contain all of the elements listed below:

25.2.1 Contract number;

25.2.2 Purchaser's Purchase Order number ;

25.2.3 accounting codes (as specified in this Contract);

25.2.4 item number (as defined in the Contract);

25.2.5 Contract description of Work or services, sizes, quantities, unit prices, and extended totals (exclusive of taxes and duties for which relief is available); and

25.2.6 extended totals. Details of Bills of Lading or Freight Warrant numbers and weight of shipment shall be identified on each invoice as appropriate.

25.3 In addition, documentary evidence of Acceptance including copies of certificates of conformity shall be submitted together with each invoice. Invoices shall not be submitted to the Purchaser without Acceptance having been previously made by the Purchaser.

25.4 Each copy of the invoice shall contain the following certificate which shall be signed by a duly authorised company official on the designated original invoice:

"I certify that the above invoice is true and correct, that the delivery of the above described items has been duly carried out and the payment thereof has not been received.

*Order placed for official use. Exemption from VAT Article 42,§3&3*of VAT Code for Belgium or Article 151, §1b of the Council Directive 2006/112/EC dd. 28 November 2006 on intra-community purchases and/or services.".*

25.5 All invoices shall be addressed to the NCI Agency - Financial Management

Either at the following addresses:

NCI Agency * If used for NCI Agency Brussels

NATO Communications and Information Agency
Finance, Accounting & Operations
Batiment Z
Av du Bourget 140
B-1140 Belgium

OR

shall be addressed to Financial Management at the following electronic address:
"NCIA-CAPDEV-FMU-BEL_E-INVOICES@NCIA.NATO.INT (note there is an underscore between BEL and E-INVOICES)

Note: When used for NCI Agency The Hague or Mons the addresses shall be dictated in the Contract Special Provisions

Once the manner of forwarding the invoice is chosen, the contractor shall keep this manner throughout the contract.

25.6 All invoices submitted shall include the address of the bank to which payment shall be made, together with **either** pertinent information concerning the International Bank Account Number (IBAN) and BIC/SWIFT address **or** pertinent information concerning transit number/sort code, account number and SWIFT address. The Purchaser makes payment only by wire transfer and therefore wire transfer particulars shall be included on the invoice.

25.7 Invoices will be settled by the Purchaser within sixty (60) days of receipt of a properly prepared and submitted invoice.

25.8 The Contractor shall mention on the invoice the payment conditions in line with the Contract.

26. TAXES AND DUTIES

26.1 The Purchaser, by virtue of his 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, certifies that the prices stipulated in this Contract do not include amounts to cover such direct taxes or customs duties.

26.2 The Contractor shall be responsible for ensuring that his respective Sub-contractors are aware that the Purchaser is exempt from taxes and customs duties. The Contractor (and his 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.

26.3 The Purchaser shall give reasonable assistance in providing evidence/documents which might be required by the Contractor to ensure that NCI Agency receives tax exemption by virtue of its status under the Ottawa Agreement.

26.4 If, after complying with all national and local legal and administrative

procedures, the authorities persist in attempting to impose taxes or duties on goods provided under this Contract, the Contractor shall inform the Contracting Authority providing the particulars of the situation, the procedures which have been followed and the point of contact at the national authority which is attempting to impose taxation or duty. The Contracting Authority will examine the situation and attempt to clarify the legal and administrative basis of the difficulty. If the Contracting Authority so directs, the Contractor shall pay the required taxes and duties and file for reimbursement or rebate from the national authorities in accordance with national legislative and administrative procedures.

26.5 In the event that the petition for reimbursement or rebate is denied by the national authorities concerned and providing that the Contractor and/or his Sub-contractor have complied with the national legislative and administrative procedures, the Purchaser shall reimburse the full amount of the payment(s) upon receipt of the Contractor's invoice indicating such tax or duty as a separate item of cost and fully identified by reference to any governmental law, regulation and/or instruction pursuant to which such tax or duty is enforced. The Contractor shall offer assistance and execute any such document that may be useful or required to ensure that Purchaser obtains the reimbursement of any tax or duty retained by a national authority.

26.6 In the event of the Contractor and/or Sub-contractor not complying with national legislative or administrative procedures, taxes and duties paid by the Contractor and/or Sub-contractors shall not be reimbursed by the Purchaser.

26.7 Following payment by the Purchaser of the taxes and/or duties pursuant to Clause 26.4 above, should the Contractor subsequently receive a rebate of any amount paid by the Purchaser, the Contractor shall immediately notify the Purchaser and the amount of such rebate shall be credited or reimbursed to the Purchaser, as directed. The Contractor shall be responsible for taking any and all action that could reasonably be required in order to obtain such rebate.

26.8 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 himself of his liability in each country where such liability may arise.

27. WARRANTY OF WORK (Exclusive of Software)

27.1 For the purpose of this Clause:

27.1.1 “Acceptance” shall mean the act of an authorised representative of the Purchaser by which the Purchaser

assumes title and ownership of delivered Work rendered as partial or complete performance of the Contract. "Acceptance" in this regard, unless specifically provided otherwise in the Contract Contract Special Provisions, means final Acceptance where the Contract provides for Provisional or Partial Acceptance;

27.1.2 "Correction" shall mean the elimination of a defect;

27.1.3 "Work" shall not include software.

27.2 The Contractor shall not be responsible under this Clause for the Correction of Defects in Purchaser Furnished Property, except for Defects in Contractor performed installation, unless the Contractor performs, or is obligated to perform, any modifications or other work on Purchaser Furnished Property. In that event, the Contractor shall be responsible for Correction of Defects that result from the modifications or other Work.

27.3 Unless another period of time is indicated in the Contract Contract Special Provisions, the duration of the warranty provided by the Contractor and its Subcontractors shall be twelve (12) months from the date of Acceptance under this Contract as notified in writing by the Contracting Authority.

27.4 Any Work or parts thereof corrected or furnished in replacement and any services re-performed shall also be subject to the conditions of this Clause 27 to the same extent as Work initially accepted. The warranty, with respect to these Work, or parts thereof shall be equal in duration to that set forth in Clause 27.3, and shall run from the date of delivery of the corrected or replaced Work.

27.5 If the Contractor becomes aware at any time before Acceptance by the Purchaser (whether before or after tender to the Purchaser) or at a later time, that a Defect exists in any Work, the Contractor shall either promptly correct the Defect or promptly notify the Purchaser, in writing, of the Defect, using the same procedures prescribed in Clause 27.8.

27.6 The Purchaser will notify in writing the Contractor of the existence of a Failed Component and return to the Contractor the Failed Component within thirty (30) Days of the discovery of such failure. The transport of the Failed Component shall be at the expense of the Purchaser. The notification of the failure will include as much information as practicable about the circumstances and operating environment at the time of the failure. Upon receipt of such notification by the Purchaser (which may precede receipt of the Failed Component), the Contractor shall ship to the location of the Failed Component an identical component for installation by Purchaser personnel. The Contractor shall ship such replacement component(s) Delivery Duty Paid. Such transportation and replenishment charges are included in the cost of line item of the Contract identified as the warranty.

27.7 In such rare cases where the Failed Component is either too large to be

easily transported or the Failed Component cannot be readily identified and isolated within the larger entity, the Contractor shall be notified by the Purchaser of the failure immediately by telephone, fax or e-mail. The Contractor shall provide technical support to the Purchaser personnel in identifying the Failed Component so as to afford the Purchaser the opportunity to return the Failed Component. In such a case where the Failed Component cannot be identified or is not cost effective or practical to ship to the Contractor's facility, the Contractor may elect to send field service personnel to the site of the failure and repair such equipment on location. In this event, such field service personnel shall be dispatched to the site of the failure within forty-eight (48) hours of initial notification. The expense of the technical support and field service shall be borne by the Contractor.

27.8 The Contractor shall conduct analysis of all Failed Components which are returned to him by the Purchaser or repaired in the field by Contractor field service personnel to determine the cause of the failure. The Contractor shall issue a report to the Purchaser within thirty (30) days of receipt of a returned item or field repair which contains the results of the analysis. The report shall contain the conclusion of the Contractor as to whether the cause of the failure was due to a Manufacturing Defect or a Design Defect and declare what course of remedial action the Contractor shall implement to prevent further failures of a similar nature. Repetitive failures of the same component may be grounds for a de facto determination by the Purchaser that a Design Defect exists.

27.9 If the Purchaser determines that a Design Defect exists in any of the Work accepted by the Purchaser under this Contract, the Purchaser shall promptly notify the Contractor of the Defect, in writing, within ninety (90) days after discovery of the Defect. Upon timely notification of the existence of a Defect, or if the Contractor independently discovers a Design Defect or Manufacturing Defect in accepted Work, the Contractor shall submit to the Purchaser, in writing within thirty (30) days, a recommendation for corrective actions, together with supporting information in sufficient detail for the Purchaser to determine what corrective action, if any, shall be undertaken.

27.10 The Contractor shall also prepare and furnish to the Purchaser data and reports applicable to any Correction required under this Clause (including revision and updating of all other affected data and already accepted documentation called for under this Contract) at no increase in the Contract price.

27.11 In the event of timely notice of a decision not to correct or only to partially correct, the Contractor shall submit a technical and cost proposal within forty-five (45) days to amend the Contract to permit Acceptance of the affected Work in accordance with the revised requirement, and an equitable reduction in the Contract price shall promptly be negotiated by the Parties and be reflected in a supplemental agreement to this Contract.

27.12 Within thirty (30) days after receipt of the Contractor's recommendations for corrective action and adequate supporting information in accordance with

Clause 27.9, the Purchaser using sole discretion, shall give the Contractor written notice not to correct any Defect, or to correct or partially correct any Defect within a reasonable time.

27.13 The Contractor shall promptly comply with any timely written direction from the Purchaser to correct or partially correct a manufacturing or Design Defect, at no increase in the Contract price.

27.14 The Purchaser shall give the Contractor a written notice specifying any failure or refusal of the Contractor to:

27.14.1 conduct analyses of Failed components and implement a course of remedial action as required by Clauses 27.7 and 27.8;

27.14.2 provide replacement components, technical support or on-location field repair service in accordance with Clauses 27.6 and 27.7; or

27.14.3 prepare and furnish data and reports as required by Clause 27.10.

27.15 The notice referred to in Clause 27.14 shall specify a period of time following receipt of the notice by the Contractor in which the Contractor must remedy the failure or refusal specified in the notice.

27.16 If the Contractor does not comply with the Purchaser's written notice in Clause 27.14, the Purchaser may by Contract or otherwise:

27.16.1 Obtain detailed recommendations for corrective action from its own resources or third parties and either:

27.16.2 correct the Work;

27.16.3 replace the Work, and if the Contractor fails to furnish timely disposition instructions, the Purchaser may dispose of the non-confirming Work for the Purchaser's account in a reasonable manner, in which case the Purchaser is entitled to reimbursement from the Contractor, or from the proceeds, for the reasonable expenses of care and disposition, as well as for excess costs incurred or to be incurred;

27.16.3.1 obtain applicable data and reports; and/or

27.16.3.2 charge the Contractor for the costs incurred by the Purchaser.

27.17 In no event shall the Purchaser be responsible for any extension or delays in the scheduled deliveries or periods of performance under this Contract as a result of the Contractor's obligations to correct Defects, nor shall there be any adjustment of the delivery schedule or period of performance as a result of the Correction of Defects unless provided by a supplemental agreement with adequate consideration.

27.18 The rights and remedies of the Purchaser provided in this Clause shall not be affected in any way by any terms or conditions of this Contract concerning the conclusiveness of inspection and Acceptance and are in addition to, and do not limit, any rights afforded to the Purchaser by any other Clause of this Contract or applicable law.

28. RIGHT OF ACCESS, EXAMINATION OF RECORDS

28.1 The Contractor shall give to the Purchaser and/or his representative(s) full and free access to his premises as and when required for the purpose of this Contract and shall ensure the same right of access to the premises of his Sub-contractors, by the inclusion in any such Sub-contracts of a provision substantially as set forth in this Clause.

28.2 The Purchaser and/or his representative(s) shall continue to have such right of access and examination of records as set forth in Clause 28.1 above until final payment under the Contract or the end of the warranty provisions under the Contract, whichever occurs later.

28.3 The expiration of the Purchaser's rights as set forth in Clause 28.2 is further subject to the provisions of Clause 19 (Pricing of Changes, Amendments and Claims), where a three (3) year right is established following the agreement of contractual amendments or the settlement of claims based upon the submission of cost and pricing data.

28.4 The period of access and examination described in Clause 28.1 above for records not related to cost aspects of a dispute or claim but which relate to issues of fact arising under either proceedings under Clause 41 (Disputes) or Clause 42 (Arbitration), or the settlement of claims made by either Party pursuant to the performance of this Contract, shall continue until such appeals, litigation or claims have been disposed of.

29. PATENT AND COPYRIGHT INDEMNITY

29.1 The Contractor shall assume all liability against any and all third party claims that the services, Work and/or parts thereof, in whole or in part, infringe(s) an IPR in force in any countries, arising out of the manufacture, import, export, performance of the services or delivery of Work and/or out of the use or disposal by, or for the account of, the Purchaser of such Services and/or Work. The Contractor shall reimburse and/or indemnify the Purchaser, its officers, agents, employees and/or consultants: (i) for all costs, fees, damages, awards, settlement amounts and any other expenses awarded to the third party right holder against Purchaser and/or the final beneficiaries of the Work in relation to said third party claim; and (ii) for the costs and expenses incurred by the Purchaser in relation to said third party claims, including attorney fees. The Contractor shall be responsible for obtaining any licences necessary for the performance of this Contract and for making all other arrangements required to indemnify

the Purchaser from any liability for IPR infringement in said countries.

29.2 Each Party shall immediately notify the other of any intellectual property infringement claims of which he has knowledge and which pertain to the Work under this Contract.

29.3 This indemnity shall not apply under the following circumstances:

29.3.1 Patents or copyright which may be withheld from issue by order of the applicable government whether due to security regulations or otherwise;

29.3.2 An infringement resulting from specific written instructions from the Purchaser under this Contract;

29.3.3 An infringement resulting from changes made to the Work by the Purchaser without the Contractor prior written consent;

29.3.4 An infringement resulting from changes or additions to the Work subsequent to final delivery and Acceptance under this Contract.

30. INTELLECTUAL PROPERTY

30.1 ***Purchaser Background IPR***

30.1.1 The Contractor is licensed to use, non-exclusively and royalty-free any Purchaser Background IPR that is or will be made available for the sole purpose of carrying out the Work.

30.1.2 The Contractor shall not use any Purchaser Background IPR other than for the purpose of carrying out the Work without the prior written agreement of the Purchaser. Any such agreement shall include the terms relating to such use.

30.1.3 The Purchaser gives no warranty as to the validity of any Purchaser Background IPR. The Contractor shall not do anything or act in any way which is inconsistent with or prejudicial to the ownership by the Purchaser of any Purchaser Background IPR.

30.2 ***Contractor Background IPR***

30.2.1 Any use of Contractor Background IPR for the purpose of carrying out the Work pursuant to the Contract shall be free of any charge to Purchaser. The Contractor hereby grants to NATO a non-exclusive, royalty-free and irrevocable licence to use and authorise others to use any Contractor Background IPR for the purpose of exploiting or otherwise using the Foreground IPR.

30.2.2 Any use of Contractor Background IPR is not limited to the number of users or the number of licenses required by the Contract for the use of system. The Purchaser reserves the right to use the Contractor Background IPR for any number of users and number of licenses as required, at no additional cost to the Purchaser.

30.3 ***Foreground IPR***

30.3.1 All Foreground IPR is the property of the Purchaser on behalf of NATO. Consequently, no statement shall be made restricting the rights of the Purchaser in the Foreground IPR.

30.3.2 The Contractor shall ensure that suitable arrangements are in place between its employees, agents, consultants and itself regarding Foreground IPR generated by said employees, agents, Subcontractors and consultants to allow the Contractor to fulfil its obligations under Clause 30.3.1 above.

30.3.3 The Contractor shall be entitled to use Foreground IPR on a non-exclusive, royalty free basis solely for the purpose of carrying out the Work.

30.3.4 The Contractor shall not use any Foreground IPR other than for the purpose of carrying out the Work without the Purchaser's prior written agreement. Any such agreement shall include terms relating to such use.

30.3.5 The Contractor shall provide the Purchaser, at the latest upon delivery of the Work and thereafter for the duration of the warranty and any purchased CLS agreement period, with full documented records of information in relation to the Work, including but not limited to, all drawings, specifications and other data that is necessary or useful to further develop, maintain and operate the Work.

30.3.6 The Contractor shall:

30.3.6.1 do all things necessary and sign all necessary or useful documents to enable the Purchaser to obtain the registration of the Foreground IPR as the Purchaser may require and select; and

30.3.6.2 to execute any formal assignment or other documents as may be necessary or useful to vest title to any Foreground IPR in the Purchaser.

30.3.7 The Contractor undertakes:

30.3.7.1 to notify the Purchaser promptly of any invention or improvement to an invention or any design conceived or made by the Contractor; and

30.3.7.2 to provide the Purchaser with such information as the Purchaser may reasonably request in order to: (i) determine the patentability of such invention or improvement; (ii) assess the need for registering such invention or improvement; and (iii) evaluate the potential value to the Purchaser of such a patent or registration if issued.

30.3.8 If the Purchaser determines that it wishes to apply for one or more patents for the disclosed invention or improvement or for a registration for the disclosed design, it will prosecute such application(s) at its own expense. The Contractor undertakes to provide the Purchaser, at the Purchaser's expense, with such information and assistance as the Purchaser shall reasonably require to prosecute such application(s).

30.4 ***Third Party IPR***

30.4.1 Any use of Third Party IPR for the purpose of carrying out the Work pursuant to the Contract shall be free of any charge to the Purchaser. The Contractor hereby grants to NATO a non-exclusive, royalty-free and irrevocable licence to use and authorise others to use any Third Party IPR for the purpose of exploiting or otherwise using the Foreground IPR.

30.4.2 With the exception of COTS items, any use of Third Party IPR is not limited to the number of users or the number of licenses required by the Contract for the use of system. With the exception of COTS items, the Purchaser reserves the right to use the Third Party IPR for any number of users and number of licenses as required, at no additional cost to the Purchaser.

30.4.3 For COTS items, the Contractor shall be responsible for obtaining licences from the Third Party in line with the requirements of the Statement of Work (including numbers and locations of licences).

30.4.4 Where Third Party IPR is the subject of a licence or other agreement between the third party and the Purchaser or the Contractor, the Contractor shall not use any Third Party IPR for the purposes of carrying out work pursuant to the Contract

without the prior written approval of the Purchaser. Contractor shall inform Purchaser in advance of any restrictions on the Purchaser's use.

30.4.5 If, after the award of the Contract, the Contractor becomes aware of the existence of any Third Party IPR which the Contractor is using or believes is needed for the performance of the Contract, the Contractor shall immediately give the Purchaser a written report identifying such IPR and if they are compliant with the other provisions in the contract. Any Third Party IPR under this clause is subject to the prior written approval by the Purchaser.

30.4.6 The Purchaser may consider open source solutions alongside proprietary ones in developments provided that such solutions are fully compliant with the requirements of this Contract. Contractor shall disclose in advance the open source license associated with the contemplated open source solution. The Purchaser reserves the right to refuse the incorporation of open source solutions that are deemed inadequate for incorporation in a NATO application (e.g. post-back obligations).

30.5 *Subcontractor IPR*

30.5.1 When placing a Sub-contract which is concerned with or involves the creation of IPR, the Contractor shall ensure that the Sub-contractor enters into the same agreement for the use of the IPR as stipulated in this Contract in such a way that the Purchaser will be entitled to use the IPR as agreed between the Purchaser and the Contractor. The Contractor shall include in the Sub-contract the content of the provisions of this Clause.

31. **SOFTWARE WARRANTY**

31.1 *Statement of the Warranties*

31.1.1 The Contractor warrants that each Software delivered under this Contract will conform to all requirements specified in the Contract. This will also include Software design specifications, including software configuration.

31.1.2 Regardless of the Purchaser initiation of or participation in developing Software design or specifications, each Software delivered under this Contract will conform to the essential Performance requirements set forth in this Contract, as those essential Performance requirements measured,

tested, and verified by tests and procedures set forth in this Contract.

31.2 *Notification Requirement*

31.2.1 The Contractor agrees to notify the Purchaser in writing immediately after he first discovers that a defect(s) may exist in Software delivered under this Contract, unless the Purchaser has first notified the Contractor, in writing, of the same defect(s).

31.2.2 The Purchaser shall notify the Contractor upon discovery that a defect(s) may exist in any Software accepted by the Purchaser under this Contract, unless the Contractor has first notified the Purchaser, in writing of the same defect(s).

31.3 Duration of the Warranty

31.3.1 For each Software delivered under this Contract, the Contractor Warranties stated in paragraph 31.1 above shall extend to all defects discovered within 12 months from the date of acceptance of the Software by the Purchaser.

31.4 Purchaser Remedies for Breach

31.4.1 The rights and remedies of the Purchaser under this Software Warranty:

31.4.2 Are in addition to any rights and remedies of the Purchaser under any other provision of this Contract, including, but not limited to, the Purchaser's rights in relation to latent defects, fraud, or gross mistakes that amount to fraud; and

31.4.3 Shall apply notwithstanding inspection, acceptance, or any other clauses or terms of this Contract;

31.4.4 In the event of any defect as defined herein with respect to a Software delivered under this Contract, the Purchaser, in its sole discretion may:

31.4.4.1 Require the Contractor to take such action as may be necessary to eliminate the defect, at no additional cost to the Purchaser for materials, labour, transportation, or otherwise;

31.4.4.2 Require the Contractor to supply, at no additional cost to the Purchaser, all materials and instructions necessary for the Purchaser to eliminate the defect and to pay costs reasonably incurred by the Purchaser in taking such action as

may be necessary to eliminate the defect, or;

31.4.4.3 Equitably reduce the contract price

31.4.5 The Purchaser may elect the remedies provided in paragraph 31.4.4.1 or 31.4.4.2 above notwithstanding any dispute respecting the existence of or responsibility for any alleged defect as defined herein with respect to any Software delivered under this contract, provided that the Contractor will not be required to pay costs incurred by the Purchaser under paragraph 31.4.4.2 until final determination of the defect. In the event that the alleged defect is subsequently determined not to be a defect subject to this warranty but the Contractor has incurred costs under paragraph 31.4.4.1 and 31.4.4.2 as required by the Contract by virtue of this paragraph 31.4.3, the contract price under this contract shall be equitably adjusted.

31.4.6 Election by the Purchaser of the remedy provided under paragraph 31.4.4.1 and 31.4.4.2 above shall not preclude subsequent election of a different remedy under paragraph 31.4.4 if the defect is not successfully eliminated under the prior election with one month of the notification under paragraph 31.4.2 above.

31.5 Limitations and Exclusions from Warranty Coverage

31.5.1 This Software Warranty shall not apply to alleged defects that the Contractor demonstrates to be in or otherwise attributable to the Purchaser furnished property as determined, tested, and verified by the tests and procedures set forth in this Contract. Notwithstanding this paragraph , a defect is not attributable to Purchaser furnished property if it is the result of installation or modification of Purchaser furnished property by the Contractor or of the integration of Purchaser furnished property into any Software delivered under this Contract.

31.5.2 Any Purchaser Furnished Property needs to be checked and approved by the Contractor. Approval is implied once the Contractor starts using the Purchaser Furnished Property.

31.6 Markings

31.6.1 All Deliverables under this Contract will identify the owner of the Deliverable and if applicable, will prominently include notice of the existence of its warranty, its substance, its duration, and instructions to notify the Purchaser promptly if the Software is found to be defective. The markings should also be included in

the operating and/or maintenance manuals or instructions accompanying such Software.

31.6.2 All Deliverables regardless of the media they are delivered onto and which are subject to export control restrictions shall be clearly marked indicating the type and nature of restriction as well as the national law imposing such restrictions. Nothing in this provision is intended to invalidate, void, or otherwise limit the rights of the Purchaser under this Contract.

32. NATO CODIFICATION

32.1 For the purposes of this Clause "Technical Data" means the drawings, specifications and technical documentation of those items designated by the Purchaser to support the equipment covered by the Contract, and required to fully identify the items and, if applicable, draft item identifications to the extent and in the form to be agreed between the Codification Authority and the Contractor.

32.2 In order to ensure the orderly identification of equipment, the Contractor shall furnish at the request of the Codification Authority the Technical Data required for the identification of the items of supply to the NATO codification system in the time scale stated in this Contract.

32.3 A recommended spare parts list or a similar data carrier prepared in accordance with instructions provided by the Purchaser as the basis for codification shall be supplied by the Contractor by the date established in this Contract.

32.4 The Contractor shall supply or require his Sub-contractor(s)/supplier(s) to supply on request for the period of time specified in the Contract the relevant Technical Data for all items and sub-contracted items to the Codification Authority and the Purchaser. The Contractor shall require that each Sub-contractor/supplier shall include identical conditions in any subsequent order which he may place.

32.5 The drawings, specifications, related documentation and, if applicable, draft item identifications, prepared when possible by the true manufacturer of the item, shall be supplied by the Contractor or his Sub-contractor(s)/supplier(s) direct to the Codification Authority and, if required, to the Purchaser as and when they become available or, at the latest within the time limits specified in the Contract. The Contractor shall inform the Codification Authority and Purchaser within 21 Days of receipt of the request if the required Technical Data are not immediately available, and shall impose a similar obligation upon his Sub-contractor(s)/supplier(s).

32.6 Except as hereinafter provided, the Contractor shall require the Sub-

contractor(s)/supplier(s) to furnish on request the information direct to the Codification Authority in the Sub-contractor(s)/supplier(s)' country, but the Contractor shall remain responsible for ensuring that the information is so furnished. In the event of a Sub-contract order being placed with a manufacturer in a non-NATO country, the Contractor shall be responsible for obtaining Technical Data from the Sub-contractor/supplier and furnishing it to the Purchaser.

32.7 Technical Data relating to any Sub-contractor's/supplier's items shall include but not be limited to the name and address of the true manufacturer(s), his/their true reference number(s), drawing or item Part number(s) and applicable data in addition to any Part or reference number(s) allocated by the Contractor, plus draft item identification(s) if required by the Codification Authority.

32.8 The Contractor shall provide the Technical Data required for codification of those items ordered with this Contract and also for the pertaining support items ordered with future contracts, including updating information regarding all agreed modifications, design or drawing changes made to the equipment or detailed Parts.

32.9 If the Contractor has previously supplied Technical Data (for the purpose stated in Clause 31.2), the Contractor is to state this fact and indicate to whom they were supplied and the Contractor shall not under normal circumstances be required to make a further supply of the Technical Data already provided. The Technical Data furnished by the Contractor and Sub-contractor(s)/supplier(s) are to be presented in accordance with the requirements for the preparation of item identification(s) as outlined in the Guide for Industry provided by the Codification Authority.

32.10 The Contractor should contact the Codification Authority for any information concerning the NATO codification system. This information is to be found at: "http://www.nato.int/structur/ac/135/ncs_guide/e_guide.htm"

32.11 Markings

32.11.1 All Deliverables under this Contract will identify the owner of the Deliverable and,if applicable, will prominently include notice of the existence of its warranty, its substance, its duration, and instructions to notify the Purchaser promptly if the Software is found to be defective. The markings should also be included in the operating and/or maintenance manuals or instructions accompanying such Software.

32.11.2 All Deliverables regardless of the media they are delivered onto

and which are subject to export control restrictions shall be clearly marked indicating the type and nature of restriction as well as the national law imposing such restrictions. Nothing in this provision is intended to invalidate, void, or otherwise limit the rights of the Purchaser under this Contract.

33. RELEASE FROM CLAIMS

33.1 Prior to final payment under this Contract, the Contractor and each assignee under this Contract shall execute and deliver a release discharging the Purchaser, its officers, agents and employees from all liabilities, obligations and claims arising out of or under this Contract subject only to the following exceptions:

33.1.1 specified claims in stated amounts or in estimated amounts where the amounts are not susceptible to exact statement by the Contractor;

33.1.2 claims for reimbursement of costs (other than expenses of the Contractor by reason of his indemnification of the Purchaser against patent liability) including reasonable expenses incidental thereto, incurred by the Contractor under the provisions of this Contract relating to patents.

33.1.3 a patent infringement resulting from specific written instructions from the Purchaser under this Contract.

33.1.4 a patent infringement resulting from changes or additions to the goods and services subsequent to final delivery and acceptance under this Contract.

34. ASSIGNMENT OF CONTRACT

34.1 The Purchaser reserves the right to assign this Contract, in whole or in part, to another NATO body, agency or representative within NATO or NATO Nations. In such a case, the Purchaser shall notify the Contractor accordingly in writing.

34.2 NATO shall remain responsible for its obligations under the Contract and for the actions of the body, agency or representative to which this Contract may be assigned.

35. TRANSFER AND SUB-LETTING

35.1 The Contractor shall not give, bargain, sell, assign, sub-let or otherwise dispose of the Contract or any part thereof or the benefit or advantage of the

Contract or any part thereof without the prior written consent of the Purchaser.

36. PURCHASER DELAY OF WORK

36.1 If the performance of all or any part of the Work is delayed or interrupted by an act of the Purchaser in the administration of this Contract, which act is not expressly or implicitly authorised by this Contract, or by the Purchaser's failure to act within the time specified in this Contract (or within a reasonable time if no time is specified), an adjustment shall be made for any increase in the cost of performance of this Contract caused by such delay or interruption and the Contract modified in writing accordingly.

36.2 Adjustment shall be made also in the delivery or performance dates and any other contractual provision affected by such delay or interruption. However, no adjustment shall be made under this Clause for any delay or interruption:

36.2.1 to the extent that performance would have been delayed or interrupted by any other cause, including the fault or negligence of the Contractor; or

36.2.2 for which an adjustment is provided or excluded under any other provision of this Contract.

36.3 No claim under this Clause shall be allowed:

36.3.1 if the Contractor has failed to notify the Purchaser in writing of the act or failure to act, indicating that this act or failure to act will result in a delay or increased costs;

36.3.2 for any costs incurred more than twenty (20) Days before the Contractor shall have notified the Purchaser in writing of the act or failure to act involved; and

36.3.3 unless the monetary claim, in an amount stated, is asserted in writing as soon as practicable after the termination of such delay or interruption, but not later than the date of final payment under the Contract.

37. CONTRACTOR NOTICE OF DELAY

37.1 In the event that the Contractor encounters difficulty in complying with the Contract schedule date(s) for whatever reason, including actual or potential labour disputes, the Contractor shall immediately notify the Contracting Authority in writing, giving pertinent details. This data shall be deemed to be informational in character and shall not be construed as a waiver by the Purchaser of any schedule or date, or of any rights or remedies provided by law or under this Contract.

37.2 Notwithstanding the above the Contractor shall be deemed to be in delay without notice from the Purchaser and only by simple expiry of the due date.

38. LIQUIDATED DAMAGES

38.1 If the Contractor:

38.1.1 fails to meet the delivery schedule of the Work or any performance milestones specified in the Schedule of Work to this Contract, or any extension thereof, or

38.1.2 fails to obtain acceptance of the delivered Work as specified in the Contract, or, if no time for acceptance is specified in the contract within a reasonable time after work is delivered.

the actual damage to the Purchaser for the delay will be difficult or impossible to determine. Therefore, in lieu of actual damages the Contractor shall pay to the Purchaser, for each day of delinquency in achieving the deadline or milestone, fixed and agreed liquidated damages of .1% (one tenth of per cent) per day of the associated payment set forth in the Schedule of Payments provided in the Contract Special Provisions. If no Schedule of Payments is specifically set forth in the Contract Special Provisions, the liquidated damages will be assessed against the price of the applicable contract line item (CLIN) of the Schedule of Supplies, Services and Prices.

38.2 In addition to the liquidated damages referred to above, the Purchaser shall have the possibility of terminating this Contract in whole or in part, as provided in Clause 39 (Termination for Default). In the event of such termination, the Contractor shall be liable to pay the excess costs provided in Clause 38.5.

38.3 The Contractor shall not be charged with liquidated damages when the delay arises out of causes beyond the control and without the fault or negligence of the Contractor as defined in Clause 39.6 (Termination for Default). In such event, subject to the provisions of Clause 41 (Disputes), the Purchaser shall ascertain the facts and extent of the delay and shall extend the time for performance of the Contract when in his judgement the findings of the fact justify an extension.

38.4 Liquidated damages shall be payable to the Purchaser from the first day of delinquency and shall accrue at the rate specified in Clause 38.1 to 20% of the value of each line item individually not to exceed 15% of the value of the total Contract. These liquidated damages shall accrue automatically and without any further notice being required.

38.5 The rights and remedies of the Purchaser under this clause are in addition to any other rights and remedies provided by law or under this Contract.

39. TERMINATION FOR DEFAULT

39.1 The Purchaser may, subject to Clause 39.6 below, by written notice of default to the Contractor, terminate the whole or any part of this Contract if the Contractor, inclusive but not limited to:

39.1.1 fails to make delivery of all or part of the Work within the time specified in the contract or any agreed extension thereof;

39.1.2 fails to make progress as to endanger performance of this Contract in accordance with its terms;

39.1.3 fails to meet the technical requirements or the Specifications of the Contract;

39.1.4 fails to comply with Clause 11 (Security);

39.1.5 transfer this Contract without the Purchaser's prior written consent;

39.1.6 breaches any provision of this Contract; or

39.2 In the case of any of the circumstances set forth in Clause 39.1 above, the Purchaser shall issue a letter to the Contractor stating that an actual or potential default exists and requiring a response from the Contractor within ten (10) Days that identifies:

39.2.1 in the case of late delivery of Work, when the Contractor shall deliver the Work and what circumstances exist which may be considered excusable delays under Clause 39.6.

39.2.2 in the case of the other circumstances identified in Clause 39.1 above, what steps the Contractor is taking to cure such failure(s) within a period of ten Days (or such longer period as the Purchaser may authorise in writing) after receipt of notice in writing from the Purchaser specifying such failure and identifying any circumstances which exist which may be considered excusable under Clause 39.6.

39.3 The Purchaser shall evaluate the response provided by the Contractor or, in the absence of a reply within the time period mentioned in Clause 39.2, all relevant elements of the case, and make a written determination within a reasonable period of time that:

39.3.1 sufficient grounds exist to terminate the Contract in whole or in part in accordance with this Clause and that the Contract is so terminated;

39.3.2 there are mitigating circumstances and the Contract should be amended accordingly; or

39.3.3 the Purchaser will enter a period of forbearance in which the Contractor must show progress, make deliveries, or comply with the Contract provisions as specified by the Purchaser. The Purchaser may apply other remedial actions as provided by this Contract during such period of forbearance. This period of forbearance shall in no event constitute a waiver of Purchaser's rights to terminate the Contract for default.

39.4 At the end of the period of forbearance, which may be extended at the Purchaser's discretion, the Purchaser may terminate this Contract in whole or in part as provided in Clause 39.1 if the Contractor has not made adequate progress, deliveries or compliance with the Contract provisions which were the terms of the period of forbearance.

39.5 In the event the Purchaser terminates this Contract in whole or in part, as provided in Clause 39.1, the Purchaser may procure, upon such terms and in such manner as the Purchaser may deem appropriate, Work similar to those so terminated, and the Contractor shall be liable to the Purchaser for any excess costs for such similar Work; however, the Contractor shall continue the performance of this Contract to the extent not terminated under the provisions of this clause.

39.6 Except with respect to the default of Sub-contractors, the Contractor shall not be held liable for a termination of the Contract for default if the failure to perform the Contract arises out of causes beyond the control and without the fault or negligence of the Contractor.

39.6.1 Such causes may include, but are not restricted to, acts of God, acts of the public enemy, acts of the Purchaser in its contractual capacity, acts of sovereign governments which the Contractor could not reasonably have anticipated, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather; but in every case the failure to perform must be beyond the control and without the fault or negligence of the Contractor.

39.6.2 If the failure to perform is caused by the default of a Sub-contractor, and if such default arises out of causes beyond the control of both the Contractor and Sub-contractor, without the fault or negligence of either of them, the Contractor shall not be held liable for a termination for default for failure to perform unless the Work to be furnished by the Sub-contractor were obtainable from other sources in sufficient time to permit

the Contractor to meet the required delivery schedule.

39.7 If this Contract is terminated as provided in Clause 39.1, the Purchaser, in addition to any other rights provided in this Clause and the Contract, may require the Contractor to transfer title and deliver to the Purchaser, in the manner and to the extent directed by the Purchaser:

39.7.1 any completed Work with associated rights ;

39.7.2 such partially completed Work, materials, Parts, tools, dies, jigs, fixtures, plans, drawings, information, and Contract rights (hereinafter called "Manufacturing materials") with associated rights as the Contractor has specifically produced or specifically acquired for the performance of such part of this Contract as has been terminated;

39.8 In addition to Clause 39.7, the Contractor shall, upon direction of the Purchaser, protect and preserve property in the possession of the Contractor in which the Purchaser has an interest.

39.9 Payment for completed Work delivered to and accepted by the Purchaser shall be at the Contract price.

39.10 Payment for manufacturing materials delivered to and accepted by the Purchaser and for the protection and preservation of property shall be in an amount agreed upon by the Contractor and Purchaser, failure to agree to such amount shall be a dispute within the meaning of Clause 41 (Disputes).

39.11 The Purchaser may withhold from amounts otherwise due to the Contractor for such completed Work or manufacturing materials such sum as the Purchaser determines to be necessary to protect the Purchaser against loss because of outstanding liens or claims of former lien holders.

39.12 If, after notice of termination of this Contract under the provisions of this Clause, it is determined for any reason that the Contractor was not in default under the provisions of this Clause, or that the default was excusable under the provisions of this Clause, the rights and obligations of the Parties shall be the same as if the notice of termination had been issued pursuant to Clause 40 (Termination for the Convenience of the Purchaser).

39.13 If after such notice of termination of this Contract under the provisions of this Clause, it is determined for any reason that the Contractor was not in default under the provisions of this Clause and that the Parties agree that the Contract should be continued, the Contract shall be equitably adjusted to compensate for such termination and the Contract modified accordingly. Failure to agree to any such adjustment shall be a dispute within the meaning of Clause 41 (Disputes).

39.14 The rights and remedies of the Purchaser provided in this Clause shall not be

exclusive and are in addition to any other rights and remedies provided by law or under this Contract.

40. TERMINATION FOR THE CONVENIENCE OF THE PURCHASER

40.1 The performance of Work under this Contract may be terminated by the Purchaser in accordance with this Clause in whole, or from time to time in part, whenever the Purchaser shall determine that such termination is in the best interest of the Purchaser.

40.2 Any such termination shall be effected by delivery to the Contractor of a written notice of termination, signed by the Contracting Authority, specifying the extent to which performance of Work under the Contract is terminated, and the date upon which such termination becomes effective.

40.3 After receipt of a Notice of Termination and except as otherwise directed by the Contracting Authority, the Contractor shall:

40.3.1 stop the Work on the date and to the extent specified in the notice of termination;

40.3.2 place no further orders or Sub-contracts for Work, Parts, materials, services or facilities, except as may be necessary for completion of such portion of the Work under the Contract as is not terminated;

40.3.3 terminate all orders and Sub-contracts to the extent that they relate to the performance of Work terminated by the Notice of Termination;

40.3.4 assign to the Purchaser, in the manner, at the times and to the extent directed by the Purchaser, all of the right, title and interest of the Contractor under the orders and Sub-contracts so terminated, in which case the Purchaser shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and Sub-contracts;

40.3.5 settle all outstanding liabilities and all claims arising out of such termination of orders and Sub-contracts, with the approval or ratification of the Purchaser to the extent he may require, which approval or ratification shall be final for all the purposes of this Clause;

40.3.6 transfer title and deliver to the Purchaser in the manner, at the times, and to the extent, if any, directed by the Contracting Authority of:

40.3.6.1 the fabricated parts, work in process, completed work, Work, and other material produced as a part of, or acquired in connection with the performance of the Work terminated by the notice of termination, and

40.3.6.2 the completed or partially completed plans, drawings, information, and other property which, if the Contract had been completed, would have been required to be furnished to the Purchaser;

40.3.7 use his best efforts to sell, in the manner, at the times, to the extent, and at the price or prices directed or authorised by the Contracting Authority, any property of the types referred to in Clause 40.3.6 above. However, the Contractor:

40.3.7.1 shall not be required to extend credit to any Buyer; and

40.3.7.2 may acquire any such property under the conditions prescribed by and at a price or prices approved by the Purchaser; and provided further that the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by the Purchaser to the Contractor under this Contract or shall otherwise be credited to the price or cost of the Work or paid in such manner as the Contracting Authority may direct;

40.3.8 complete performance of such part of the Work as shall not have been terminated by the Notice of Termination; and

40.3.9 take such action as may be necessary, or as the Purchaser may direct, for the protection and preservation of the property related to this Contract which is in the possession of the Contractor and in which the Purchaser has or may acquire an interest.

40.4 The Contractor may submit to the Purchaser a list, certified as to quantity and quality, of any or all items of termination inventory not previously disposed of, exclusive of items the disposition of which has been directed or authorised by the Purchaser, and may request the Purchaser to remove such items or enter into a storage agreement covering the same; provided that the list submitted

shall be subject to verification by the Purchaser upon removal of the items, or if the items are stored, within forty-five (45) Days from the date of submission of the list, and any necessary adjustment to correct the list as submitted shall be made prior to final settlement.

40.5 After receipt of a notice of termination, the Contractor shall submit to the Purchaser his termination Claim for the Work covered by the notice of termination, in the form and with certification prescribed by the Purchaser. Such claim shall be submitted promptly but in no event later than six (6) months from the effective date of termination, unless one or more extensions are granted in writing by the Purchaser, upon request of the Contractor made in writing within such six-month period or authorised extension thereof. However, if the Purchaser determines that the facts justify such action, the Purchaser may receive and act upon any such termination claim at any time after such six-month period or any extension thereof. Upon failure of the Contractor to submit his termination claim within the time allowed, the Purchaser may determine on the basis of information available to him, the amount, if any, due to the Contractor by reason of the termination and shall thereupon pay to the Contractor the amount so determined.

40.6 Subject to the provisions of Clause 40.5, the Contractor and the Purchaser may agree upon the whole or any part of the amount or amounts to be paid to the Contractor by reason of the total or partial termination of Work pursuant to this Clause, which amount or amounts may include a reasonable allowance for profit on work done; provided that such agreed amount or amounts exclusive of settlement costs shall not exceed total Contract price as reduced by the amount of payments otherwise made and as further reduced by the Contract price of the Work not terminated. The Contract shall be amended accordingly and the Contractor shall be paid the amount agreed.

40.7 In the event of the failure of the Contractor and the Purchaser to agree as provided in Clause 40.6 upon the whole amount to be paid to the Contractor by reason of the termination of Work pursuant to Clause 40, the Purchaser shall pay to the Contractor the amounts determined by the Purchaser as follows, but without duplication of any amounts agreed upon in accordance with Clause 40.6 the total of:

40.7.1 for completed Work accepted by the Purchaser (or sold or acquired as provided in Clause 40.3 above) and not therefore paid for, a sum equivalent to the aggregate price for such Work computed in accordance with the price or prices specified in the Contract, appropriately adjusted for any saving of freight or other charges;

40.7.2 the costs incurred in the performance of the Work terminated including initial costs and preparatory expense allocable thereto, but exclusive of any costs attributable

to Work paid or to be paid for under Clause 40.7.1;

40.7.3 the cost of settling and paying claims arising out of the termination of work under Sub-contracts or orders, as provided in Clause 40.3.5, which are properly chargeable to the terminated portion of the Contract, exclusive of amounts paid or payable on account of Work or materials delivered or services furnished by Sub-contractors or vendors prior to the effective date of the notice of termination, which amounts shall be included in the costs payable under Clause 40.7.2; and

40.7.4 a sum, as profit on Clause 40.7.1 above, determined by the Purchaser to be fair and reasonable; provided, however, that if it appears that the Contractor would have sustained a loss on the entire Contract, had it been completed, no profit shall be included or allowed and an appropriate adjustment shall be made reducing the amount of the settlement to reflect the indicated rate of loss; and

40.7.5 the reasonable costs of settlement, including accounting, legal, clerical and other expenses reasonably necessary for the preparation of settlement claims and supporting data with respect to the terminated portion of the Contract and for the termination and settlement of Sub-contracts there under, together with reasonable storage, transportation, and other costs incurred in connection with the protection, or disposition of property allocable to this Contract.

40.8 The total sum to be paid to the Contractor under Clause 40.7 shall not exceed the total Contract price as reduced by the amount of payments otherwise made and as further reduced by the Contract price of Work not terminated.

40.9 Except for normal spoilage, and except to the extent that the Purchaser shall have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to the Contractor, as provided in Clause 40.7 above, the fair value, as determined by the Purchaser, of property which is destroyed, lost, stolen, or damaged so as to become undeliverable to the Purchaser, or to a buyer pursuant to Clause 40.3.7 above.

40.10 The Contractor shall have the right to dispute, under the Clause 41 (Disputes), any determination made by the Purchaser under Clauses 40.5 and 40.7, except that if the Contractor has failed to submit his claim within the time provided in Clause 40.5 and has failed to request extension of such time, the Contractor shall be foreclosed from his right to dispute said determination. In

any case where the Purchaser has made a determination of the amount due under Clauses 40.5 and 40.7, the Purchaser shall pay the Contractor the following:

40.10.1 if there is no right of appeal hereunder or if no timely appeal has been taken, the amount so determined by the Purchaser, or

40.10.2 if an appeal has been taken, the amount finally determined on such appeal.

40.11 In arriving at the amount due to the Contractor under this Clause there shall be deducted:

40.11.1 all unliquidated advance or other payments on account theretofore made to the Contractor, applicable to the terminated portion of this Contract;

40.11.2 any claim which the Purchaser may have against the Contractor in connection with this Contract; and

40.11.3 the agreed price for, or the proceeds of the sale of, any materials, Work, or other things acquired by the Contractor or sold, pursuant to the provisions of this Clause, and not otherwise recovered by or credited to the Purchaser.

40.12 If the termination hereunder is partial, prior to the settlement of the terminated portion of this Contract, the Contractor may file with the Purchaser, in accordance with Clause 16 (Changes), a request in writing for an equitable adjustment of the price or prices relating to the continued portion of the Contract (the portion not terminated by the notice of termination), and such equitable adjustment as may be agreed upon shall be made in such price or prices.

40.13 The Purchaser may from time to time, under such terms and conditions as it may prescribe, make partial payments and payments on account against costs incurred by the Contractor in connection with the terminated portion of this Contract whenever in the opinion of the Purchaser the aggregate of such payments shall be within the amount to which the Contractor will be entitled hereunder. If the total of such payment is in excess of the amount finally agreed or determined to be due under this Clause, such excess shall be payable by the Contractor to the Purchaser upon demand, together with interest calculated using the average of the official base rate(s) per annum of the deposit facility rate as notified by the European Central Bank or such other official source as may be determined by the Purchaser, for the period from the date the excess is received by the Contractor to the date such excess is repaid to the Purchaser, provided, however, that no interest shall be charged with respect to any such excess payment attributed to a reduction in the

Contractor's claim by reason of retention or other disposition of termination inventory until ten days after the date of such retention or disposition or such later date as determined by the Purchaser by reason of the circumstances.

40.14 Unless otherwise provided for in this Contract, the Contractor, from the effective date of termination and for a period of three years after final settlement under this Contract, shall preserve and make available to the Purchaser at all reasonable times at the office of the Contractor, but without direct charge to the Purchaser, all his books, records, documents, computer files and other evidence bearing on the costs and expenses of the Contractor under this Contract and relating to the work terminated hereunder, or, to the extent approved by the Purchaser, photographs, micro-photographs, or other authentic reproductions thereof.

41. DISPUTES

41.1 Except to the extent to which special provision is made elsewhere in the Contract, all disputes, differences or questions which are not disposed of by agreement between the Parties to the Contract with respect to any matter arising out of or relating to the Contract, other than a matter as to which the decision of the Contracting Authority under the Contract is said to be final and conclusive, shall be decided by the Contracting Authority. The Contracting Authority shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Contractor.

41.2 The Contracting Authority shall not proceed with the evaluation and decision in respect of any claim until and unless the Contractor has submitted the attestation as foreseen in Clause 18 (Claims), as well as the complete proof and evidence of the claim (either by submission or by identification of the relevant documentation).

41.3 The Contracting Authority's decision shall be final and conclusive unless, within 30 Days from the date of receipt of such copy, the Contractor mails or otherwise furnishes to the Contracting Authority his decision to open arbitration proceedings in accordance with the Clause 42 (Arbitration). The burden of proof for both receipt and delivery of such documentation shall be by signed and dated registered mail receipt or by hand receipt as acknowledged and signed by the Contracting Authority.

41.4 Pending final decision of a dispute, the Contractor shall proceed diligently with the performance of the Contract, unless otherwise instructed by the Contracting Authority.

42. ARBITRATION

42.1 Within a period of thirty days from the date of receipt of the notification referred to in Clause 41.3 above, the Parties shall jointly appoint an arbitrator. In the event of failure to appoint an arbitrator, the dispute or disputes shall be

submitted to an Arbitration Tribunal consisting of three arbitrators, one being appointed by the Purchaser, another by the other contracting party and the third, who shall act as President of the Tribunal, by these two arbitrators. Should one of the Parties fail to appoint an arbitrator during the fifteen days following the expiration of the first period of thirty days, or should the two arbitrators be unable to agree on the choice of the third member of the Arbitration Tribunal within thirty days following the expiration of the said first period, the appointment shall be made, within twenty-one days, at the request of the Party instituting the proceedings, by the Secretary General of the Permanent Court of Arbitration at The Hague.

42.2 Regardless of the procedure concerning the appointment of this Arbitration Tribunal, the third arbitrator will have to be of a nationality different from the nationality of the other two members of the Tribunal.

42.3 Any arbitrator must be of the nationality of any one of the member states of NATO and shall be bound by the rules of security in force within NATO.

42.4 Any person appearing before the Arbitration Tribunal in the capacity of an expert witness shall, if he is of the nationality of one of the member states of NATO, be bound by the rules of security in force within NATO. If he is of another nationality, no NATO classified documents or information shall be communicated to him.

42.5 An arbitrator, who, for any reason whatsoever, ceases to act as an arbitrator, shall be replaced under the procedure laid down in Clause 42.1 above.

42.6 The Contractor agrees to submit to the Arbitration Tribunal only such issues, facts, evidence and proof which the Contractor had beforehand identified and submitted to the Contracting Authority for decision in accordance with Clause 41 (Disputes). The jurisdictional authority of the Arbitration Tribunal shall be restricted to consider only those identical issues, facts, evidence and proof so identified and submitted to the Contracting Authority.

42.7 The Purchaser likewise agrees to restrict its submissions only to the information on which the Contracting Authority based its decision and not to introduce new information and arguments which cannot reasonably be deduced or inferred from the written decision of the Contracting Authority in response to the original dispute.

42.8 The Arbitration Tribunal will take its decisions by a majority vote. It shall decide where it will meet and, unless it decides otherwise, shall follow the arbitration procedures of the International Chamber of Commerce in force at the date of signature of the present Contract.

42.9 The awards of the arbitrator or of the Arbitration Tribunal shall be final and there shall be no right of appeal or recourse of any kind. These awards shall

determine the apportionment of the arbitration expenses.

42.10 Pending final decision of a dispute, the Contractor shall proceed diligently with the performance of the Contract, unless otherwise instructed by the Contracting Authority.

43. SEVERABILITY

43.1 If one or more of the provisions of this Contract is declared to be invalid, illegal or unenforceable in any respect under any applicable law, the validity, legality and enforceability of the remaining provisions shall not be affected. Each of the Parties shall use its best efforts to immediately and in good faith negotiate a legally valid replacement provision.

44. APPLICABLE LAW

44.1 This Contract shall be governed, interpreted and construed in accordance with the private contract law of the Kingdom of Belgium.

* *

ANNEX 1 TO GENERAL PROVISONS: PURCHASER'S PRICING PRINCIPLES

A. General

1. With regard to all actions included in Clause 19," Pricing of Changes, Amendments and Claims", the Parties agree that the Purchaser's Pricing Principles contained herein shall govern.

2. As may be requested by the Purchaser, the Contractor shall provide documentation. that the standards or principles employed in the submission of cost or pricing data are in conformance with governing national policies and regulation. The Contractor, when submitting a price proposal based upon national standards and regulations, shall provide a point of contact within the national body governing such standards and regulations in order to allow Purchaser verification and audit.

3. Where such conformance cannot be demonstrated to the satisfaction of the Purchaser, the Purchaser's Pricing Principles will govern.

4. The Contractor shall clearly state whether national standards and rules or the Purchaser's Pricing Principles and formats are the basis for the price proposal.

5. Whether national standards or Purchaser pricing principles are applied, all cost and pricing data shall be verifiable, factual and include information reasonably required to explain the estimating process.

6. The Contractor shall also incorporate provisions corresponding to those mentioned herein in all sub-contracts, and shall require price and cost analysis provisions be included therein.

B. Purchaser's Pricing Principles

1. Allowable cost

A cost is allowable for consideration by the Purchaser if the following conditions are fulfilled:

(a) it is incurred specifically for the Contract or benefits both the Contract and other work or is necessary to the overall operation of the business although a direct relationship to any particular product or service cannot be established and is allocated to them in respective proportion according to the benefit received;

i. Direct Costs

A direct cost is any cost which can be identified specifically with a particular cost objective as generally accepted. Direct costs are not limited to items which are incorporated in the end product as material or labour.

ii. Indirect Costs

An indirect cost is one which is not readily subject to treatment as a direct cost. When presented these costs shall be accumulated in logical cost groupings in accordance with sound accounting principles and the Contractor's established practices. An indirect cost may be allocated to more than one final cost objective. An indirect cost shall not be allocated to a final cost objective if other costs incurred for the same purpose, in like circumstances, have been included as a direct cost of that or any other final cost objective. Such costs shall be presented as overhead rates and be applied to each related direct cost grouping.

(b) The Contractor shall specify the allocation of costs to either of the cost groupings. The method by which costs are accumulated and distributed as part of direct or indirect costs cannot be modified during the duration of the Contract.

(c) it is reasonable and expedient in its nature and amount and does not exceed that which would be incurred by an ordinary prudent person in the conduct of competitive business;

(d) it is not liable to any limitations or exclusion as to types or amounts of cost items as set forth herein.

(e) The Purchaser will review other costs presented against the contract and will determine if they would be allowable.

2. Unallowable Costs

In general all costs which cannot be shown by the contractor to be directly or indirectly of benefit to the Contract are totally unallowable. =Examples of such costs are, among others:

(a) Advertising costs

(b) Costs of remuneration, having the nature of profit sharing.

(c) Costs of maintaining, repairing and housing idle and excess facilities.

(d) Fines and penalties as well as legal and administrative expenses resulting from a violation of laws and regulations.

(e) Losses on other contracts or on expected follow-on contracts

(f) Costs incurred for the creation of reserves for general contingencies or other reserves (e.g. for bad debts, including losses).

(g) Losses on bad debts, including legal expenses and collection costs in connection with bad debts.

(h) Costs incurred to raise capital.

(i) Gains and losses of any nature arising from the sale or exchange of capital assets other than depreciable property.

(j) Taxes on profits.

(k) Contractual penalties incurred.

(l) Commissions and gratuities.

(m) Interest on borrowings.

3. Rates and Factors

(a) The Contractor shall inform the Purchaser of his rates and factors the basis upon which they were computed.

(b) If the Contractor's rates and factors for similar contracts placed with national or international public services have not been established or approved by a government agency or an agency accepted by his government, the Contractor shall provide the necessary data to support the proposed rates.

(c) The term "provisional " used in the title of a rate or factor means a tentative rate established for interim billing purposes pending negotiation and agreement to the final rate or factor.

(d) A rate or factor is pre-determined if it is fixed before or during a certain period and based on (estimated) costs to be incurred during this period. An rate or factor is post-determined if it is fixed after a certain period and based on costs actually incurred during this period. Pre-determined rates or factors shall be agreed upon as final rates whenever possible; otherwise the provisions of paragraph 3c above shall apply pending agreement to post-determined rates or factors.

(e) Such rates or factors shall be determined on the basis of Contractor's properly supported actual cost experience.

(f) If the rates or factors of the Contractor for similar contracts placed by national or international public services have been established or approved by a government agency or an agency accepted by his government and the Contractor proposes the application of these rates, he shall state the name and address of the agency which has accepted or approved the rates and the period for which they were established. If he proposes rates which vary from the rates mentioned above, he shall furthermore provide a justification for the difference.

4. Profit/Benefit

(a) Over the entire life cycle of a given acquisition, Profit and/or Benefit may be subject to negotiation.

(b) Subcontracting profit/benefit amounts are dependent upon the size, nature and oversight needs of the subcontract(s) the prime contractor will use for work performance period.

(c) Profit/benefit is considered by the Purchaser to be directly related to the anticipated risk of the Contractor during the performance of the Contract.

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BOOK II - PART IV
STATEMENT OF WORK (SOW)

- VERSION HISTORY

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0.02	DORGAN	08 Jul 2019	Significant updates to SOW	0.01
0.03	DORGAN	17 Jul 2019	Added security and more updates	0.02

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SECTION 1 : INTRODUCTION

1.1. Background

NATO had three IKM Tools to support information management for Document Management (Document Handling System - DHS), for Tasking (Tasker Tracker Enterprise - TTE) and for publishing information (NATO Information Portal - NIP). NCIA upgraded DHS to Enterprise Document Management System (EDMS) and TTE to Tasker Tracker Plus (TT+) in the operational network (ON) and Protected Business Network (PBN) networks under Project P95 Step 1. Step 1 included the Upgrade and migration of DHS and TTE applications, from MOSS2007 to SharePoint 2013 and centralised them in NCI Agency Data Centres.

The ITM platform is a centralised platform currently being deployed to support all NATO systems in a centralised way via Data Centres.

1.2. Purpose

The purpose of this project is to provide Information Administration Services (IAS) and it is intended to upgrade the existing NATO Information Portal (NIP), Enterprise Document Management Services (EDMS), the Tasker Tracker Plus (TT+) workflow management system and underlying hardware infrastructure ensuring it uses ITM-approved hardware components. In addition, the project intends to proliferate IAS across a range of network domains - currently this capability is primarily available at the NATO SECRET (ON) level although a small number of instances on other domains require implementation as well.

1.2.1. P95 Step 2 will deliver:

- P95 Step 1 upgraded the IKM tools to be hosted on a SharePoint 2013 platform. Since the Step 2 solution will run on top of the ITM hosted SharePoint platform (SPS2016 onwards), an upgrade and migration of the P95 Step 1 deliverables (including data) from SharePoint 2013 to the ITM SharePoint is required.
- Extend the IKM tools deployment to the PBN and ON networks and two dedicated Mission Networks (MIR) as well as to the Training network. Architect, procure and install the required hardware, based on the proposed IKM tools solution, and ensure it integrates, and is compliant with, the ITM-approved hardware list.

  Additional IKM functions will be included:
  - Analytics: to process and analyse large amounts of data and report it in different ways to users.
  - Workflow application: to provide a general-purpose, highly customizable workflow capability usable by the Commands.
  - Collaborative Workspace: to enhance collaboration among users when sharing information products: documents, images, emails, and pdfs.
  - Distribution and Archiving to extend the information awareness to external partners and domains and to securely store information for long-term preservation.
- (Optional) Provide 5 years Operations and Maintenance (O&M) for IKM Tools.

1.2.2. Standards for Interpretation of the SoW

The use of shall is defined as follows:

- shall: This requirement is mandatory and must be implemented.

- shall NOT: means that the definition is an absolute prohibition of the specification.

The top priority in the execution of this contract is the achievement of the project milestones described in SECTION 3.

[SOW 1] The Contractor shall observe this priority in their planning and execution of the work.

[SOW 2] The Contractor shall take due account of all the elements of purpose described in this SOW and ensure during the execution of the contract that the purpose described in this SOW is completely addressed in the products and services provided.

1.3. Scope

[SOW 3] The Contractor shall provide all necessary resources including services, personnel, materials, components, equipment, management products, data and documentation needed (except PFE) to meet all deliverables of the project in a timely manner.

The scope includes completing the following applications, services and supporting hardware infrastructure:

[SOW 4] The Contractor shall complete the Collaborative Workspace Application as the evolution of Step 1 – Initial Collaborative Workspace;

[SOW 5] The Contractor shall complete the Content Management Services as standard CMS service;

[SOW 6] The Contractor shall complete the Workflow Application as an evolution of the Step 1 – TT+.

[SOW 7] The Contractor shall complete the Workflow Service as a standard service.

[SOW 8] The Contractor shall implement solution supporting cross domain information sharing.

[SOW 9] The Contractor shall implement information archiving.

[SOW 10] The Contractor shall use COTS Applications and Services when available and only perform integration efforts when required.

[SOW 11] The Contractor shall deploy the IAS into the sites listed at ANNEX D, located in the following environments:

a. The Operational Network (ON)
b. The protected Business Network (PBN)
c. The Mission Networks at SHAPE (Mons, Belgium) and Naples, Italy
d. The Training Networks at JWC and JFTC

[SOW 12] The Contactor shall install and configure the necessary hardware components to ensure the system operates according to the requirements described in the SOW and ANNEX G.

[SOW 13] The Contractor shall ensure adherence to the ITM design documentation and principles when installing and configuring hardware.

[SOW 14] The Contractor shall make sure hardware is installed and configured as described in the Contractor provided hardware design documentation.

[SOW 15] The Contractor shall operate and maintain the delivered capabilities until Final System Acceptance (FSA).

[SOW 16] The Contractor shall take due account of all the elements of purpose described in this SOW and ensure during the execution of the contract that the purpose described in this SOW is completely addressed in the products and services provided.

[SOW 17] The Contractor shall define the service transition activities required to maintain the capability during migration and transition to the IAS capability.

[SOW 18] The Contractor shall upgrade the NIP, TT+ and EDMS to the latest ITM platform.

[SOW 19] The Contractor shall make Enterprise Search available to the entire NATO enterprise via Federated Search for External Data Sources.

[SOW 20] The Contractor shall develop the hardware specifications needed to run the systems as part of the System Design Specification and ensure the system is and remains compatible with the ITM Infrastructure for the duration of the O&M period specified the contract.

[SOW 21] The Contractor shall NOT purchase the hardware needed to run the systems before approval of the System Design Documentation by the Purchaser.

[SOW 22] The Contractor shall purchase the hardware for the system after Purchaser approval of the System Design Specification, ensuring it will be forward compatible with the ITM infrastructure.

SECTION 2 : APPLICABLE DOCUMENTS

[SOW 23] The Contractor shall be aware of and comply with the documents listed in SECTION 2 throughout the Contract.

2.1. NATO Documents

Reference documents for Quality Assurance purposes

Abbreviation	Full document Name and Reference
[STANAG 4107, Ed.11]	Mutual Acceptance of Government Quality Assurance and Usage of the Allied Quality Assurance Publications. Ed.11, 2019.
[AQAP-2110, Ed.D, Ver.1]	NATO Quality Assurance Requirements for Design, Development and Production. Ed.D, Ver.1, 2016.
[AQAP-2210, Ed.A, Ver.2]	NATO Supplementary Software Quality Assurance Requirements to AQAP-2110 or AQAP-2310. Ed.A, Ver.2, 2015.
[AQAP-2310, Ed.B, Ver.1]	NATO Quality Assurance Requirements for Aviation, Space and Defence Suppliers. Ed.B, Ver.1, 2017.
AD 06.03.04	AGENCY DIRECTIVE TEST, VERIFICATION AND VALIDATION.

Table 1 Quality Assurance Reference Documents

Documents for Configuration Management Purposes

Abbreviation	Full document Name and Reference
[STANAG 4427, Ed.3]	Configuration Management in System Life Cycle Management. Ed.3, 2014.
[ACMP-2009, Ed.A, Ver.2]	Guidance on Configuration Management. Ed.A, Ver.2, 2017.

Table 2 Configuration Management Reference Documents

Documents for SRS Purposes:

Abbreviation	Full document Name and Reference
[NAC AC/317-D/71 (Revised), 1996]	AC/317-D/71 (Revised) "NATO COTS Software Policy and Acquisition Guidelines", dated 27 June 1996.
[NAC AC/322-D(2004)0024-REV2, 2008]	AC/322-D(2004)0024-REV2, North Atlantic Council, “NATO Public Key Infrastructure (NPKI) Certificate Policy”, 25 January 2008.
[NAC AC/322-D(2019)0038, 2019	AC/322-D(2019)0038, “CIS Security Technical and Implementation Directive for the Security of Web Applications”; 10 September 2019.
[NAC AC/322-D(2005)0037, 2005]	AC/322-D(2005)0037, “Bi-SC AIS Reference Architecture (RA), Version 2”, 27 September 2005 (NATO Restricted).
[NAC AC/322-N(2011)0205, 2011]	AC/322-N(2011)0205 “Core Enterprise Services Standards Recommendations. The Service Oriented Architecture (SOA) Baseline Profile”, 7 December 2011.
[NAC ADatP-34(G)-REV1, 2013]	“NATO Interoperability Standards and Profiles. Volume 4, Annex F - Core Enterprise Services Implementation Specification.”, 8 March 2013.
[NCIA AI 06.02.01, 2015]	NATO Communications and Information Agency Instruction - INSTR TECH 06.02.01, "Service Interface Profile for Security Services", 4 February 2015 (NATO Unclassified).
[NCIA AI 06.02.02, 2015]	NATO Communications and Information Agency Instruction - INSTR TECH 06.02.02, "Service Interface Profile for REST Security Services", 4 February 2015 (NATO Unclassified).
[NCIA AI 06.02.07, 2015]	NATO Communications and Information Agency Instruction - INSTR TECH 06.02.07, "Service Interface Profile for REST Messaging", 4 February 2015 (NATO Unclassified).
[SHAPE 3050/SH/CCD CIS/CAR/335/13-301388, 2013	SHAPE: 3050/SH/CCD CIS/CAR/335/13-301388 and SACT: 5000 TSC-FCR0010/TT-8846/Ser: NU0005 “Bi-SC AIS Service Employment in Support of the NATO Command Structure”, 11 February 2013.
[CO-13703]	CONTRACT Between NATO COMMUNICATIONS AND INFORMATION AGENCY and General Dynamics IT, 30 March 2017.
[STANAG 5636]	” NATO Core Metadata Specification (NCMS).
AC/324-WP(2013)0005-REV1,	“Directive on the Preservation of NATO Digital Information of Permanent Value”, 22 April 2014.
AC/322(CP/1)N(2015)0021 / AC/322(CP/4)N(2015)0008 ADatP-4774	Confidentiality Labelling for Information Sharing.
AC/322(CP/1)N(2015)0020 / AC/322(CP/4)N(2015)0007 ADatP-4778	Metadata Binding Mechanism for Information Sharing.

Abbreviation	Full document Name and Reference
ACO SH/CCD J6/SM FCIS/336/14-307704 - SACT 6300 MFX 240/TT-11179/Ser:NU0040	“Bi-Strategic Command Statement Of Requirement (SOR) for BI-SC AIS service employment at 2019”, 13 Nov 2014.
SACT 6300/TSC FCI-0010/TT-11069/Ser: NU 0635	“Submission of Supplemental Information Document in Support of implementation of bundled projects 0IS03095 (Information Administration Services) Increment 1 and 0IS03100 (Information Portal Services) Increment 1”, 15 July 2014.
TR-2017-SPW011855-01	"Capability Audit of CP9C0150 Requirements - Confirmation Phase".
NATO Visual Identity Guidelines v. 3 (on-line)	https://www.nato.int/vigs/pdf/NATO-VIGs-2016-en.pdf, Nov 2016.
TR-2012 -SPW007959-02	“NATO Metadata Binding Service", April 2012.
C-M(2002)49-COR12	“SECURITY WITHIN THE NORTH ATLANTIC TREATY ORGANISATION (NATO)”, https://roadmap.nr.ncia/English/C-M(2002)49-COR1-12.pdf.
[AC/322-D (2004)0021]	INFOSEC Technical & Implementation Guidance for Electronic Labelling of NATO Information.
[AC/322-D/0048-REV3]	INFOSEC Technical & Implementation Directive for CIS Security”, 18 Nov. 2019.
C-M(2015)0041-REV2,	ALLIANCE CONSULTATION, COMMAND, AND CONTROL POLICY14 December 2018.
AC/322-D0030-Rev5	NATO Technical and Implementation Directive for the Interconnection of CIS.

Table 3 SRS Reference Documents

Other NATO Documents

Abbreviation	Full document Name and Reference
Incident Management	
Change Management	
Problem Management	

Table 4 NATO Reference Documents

Abbreviation	Full document Name and Reference
[ISO/IEC 15288, 2015]	Systems and software engineering -- System life cycle processes.
[ISO/IEC 12207, 2017]	Systems and software engineering -- Software life cycle processes.
[ISO/IEC 25010, 2011]	Systems and software engineering — Systems and Software Quality Requirements and Evaluation (SQuaRE) — System and software quality models.
[IEC 60050]	International Electrotechnical Vocabulary (IEV). (www.electropedia.org).
[AIA/ASD SX000i, 2018]	International guide for the use of the S-Series Integrated Logistic Support (ILS) specifications. Issue 1.2, 2018.
[AIA/ASD S1000D, 2016]	International Specification for Technical Publications. Issue 4.2, 2016.
[AIA/ASD S2000M, 2017]	International Specification for Material Management. Issue 6.1, 2017.
[AIA/ASD S3000L, 2014]	International Specification for Logistics Support Analysis – LSA. Issue 1.1, 2014.
[ISO 9001, 2015]	ISO 9000 Series – Quality management systems – Requirements.
[ISO 9000, 2015]	ISO 9000 Series – Quality management systems – Fundamentals and vocabulary.
[ISO 10012, 2003]	ISO 10012 (Version 2003) – Measurement Management Systems – Requirements for measurement processes and measuring equipment.
[IEEE 15288.2, 2014]	IEEE Standard for Technical Reviews and Audits on Defence Programs.
[IETF RFC 2119, 1997)]	Internet Engineering Task Force Request for Comments 2119, "Key Words for Use in RFCs to Indicate Requirement Levels", S. Bradner, IETF, Sterling, Virginia, US, March 1997.
[IETF RFC 2616, 1999]:	*Internet Engineering Task Force (on-line) http://www.ietf.org Request for Comments 3986, "Hypertext Transfer Protocol -- HTTP/1.1" R. Fielding et al., at http://tools.ietf.org/html/rfc2616, June 1999*
[IETF RFC 3986 2005]	*Internet Engineering Task Force (on-line) http://www.ietf.org Request for Comments 3986, "Uniform Resource Identifier (URI): Generic Syntax", T. Berners-Lee, R. Fielding, L. Masinter, at http://tools.ietf.org/html/rfc3986, January 2005*

[Software boundaries and limits for SharePoint Servers 2016 and 2019]	01/08/2018 at *https://docs.microsoft.com/en-us/sharepoint/install/software-boundaries-and-limits-0*
[Plan enterprise search architecture in SharePoint Server]	09/08/2017 at https://docs.microsoft.com/en-us/sharepoint/search/plan-enterprise-search-architecture#BKMK_MinHWSmall

Abbreviation	Full document Name and Reference
[ISO 3166 (ALPHA-3)]	Country Codes - ISO 3166
[ISO/TS 18152:2010]	Ergonomics of human-system interaction
[ISO 9241]	Ergonomics of human-system interaction
[ISO 9241-12:1998]	Ergonomic requirements for office work with visual display terminals (VDTs) -- Part 12: Presentation of information
[ISO 9241-13:1998]	Ergonomic requirements for office work with visual display terminals (VDTs) -- Part 13: User guidance
[ISO 9241-14:1997]	Ergonomic requirements for office work with visual display terminals (VDTs) -- Part 14: Menu dialogues
[ISO 9241-16:1999]	Ergonomic requirements for office work with visual display terminals (VDTs) -- Part 16: Direct manipulation dialogues
[ISO 9241-143:2012]	Ergonomics of human-system interaction) -- Part 143: Forms
[ISO 9241-171:2008]	Ergonomics of human-system interaction -- Part 171: Guidance on software accessibility
[ISO 9241-110:2006]	Ergonomics of human-system interaction -- Part 110: dialogue principles
[X.841, Oct 2000]	SERIES X: DATA NETWORKS AND OPEN SYSTEM COMMUNICATIONS – Security Information technology – Security techniques – Security information objects for access control
[SD-22]	Diminishing Manufacturing Sources and Material Shortages (DMSMS) - A Guidebook of Best Practices for Implementing a Robust DMSMS Management Program

Table 5 Non-NATO Reference Documents

SECTION 3 : MILESTONES

3.1. Introduction

This Section provides a view of the IAS project logical schedule, as well as the criteria to be met by the Contractor to achieve the following milestones:

- Effective Date of Contract (EDC)
- System Requirements Review (SRR)
- Joint Technical Review (JTR)
- System Design Review
  - Preliminary Design Review (PDR)
  - Critical Design Review (CDR)
- Factory Acceptance Test (FAT)
- System Integration Test (SIT)
- Deployment Authorisation (DA) Release
- System Acceptance Test (SAT)
- Provisional System Acceptance (PSA)
- Final Release - Final System Acceptance (FSA)

[SOW 24] The Contractor shall note that the above milestones have been defined in a chronological order. The start of activities leading to a milestone requires the acceptance of the previous milestone (for example, the start of system implementation activities requires the prior acceptance of the Deployment Authorization milestone).

[SOW 25] The Contractor shall meet or “exceed” the dates mentioned in the table below. (Note: “Exceed” is to be understood as a situation where the Contractor has delivered earlier than the dates (i.e., EDC + ‘x’ months) mentioned in the schedule and the Purchaser has accepted the milestone accordingly).

[SOW 26] The Contractor shall propose the implementation sequence of the sites that form part of PSA in a Site Activation Plan.

[SOW 27] The Contractor shall propose the implementation sequence of the sites that form FSA.

Milestone	Delivery Date
Effective Date of Contract (EDC)	EDC
System Requirements Review (SRR)	EDC + 0.25 Months
Joint Technical Review (JTR)	EDC + 0.5 Months
Preliminary Design Review (PDR)	EDC + 1 Months
Critical Design Review (CDR)	EDC + 1.5 Months
Hardware Purchase	EDC + 1.75 Months
Hardware Installation (H&I) and HW Acceptance	EDC + 5 Months
System Acceptance Test (SAT)	EDC + 9 Months
Pre-Deployment	EDC + 11.5
Factory Acceptance Test (FAT)	EDC + 10 Months
System Integration Test (SIT)	EDC + 11 Months

User Acceptance Test (UAT)	EDC + 11.5 Months
Pilot (SHAPE (Primary) & Lago Patria (Backup)) –	EDC + 14 Months
Deployment Authorization	EDC + 11.5 Months
Installation	EDC + 12 Months
Migration	EDC + 13 Months
Training	EDC + 13 Months
Site Acceptance	EDC + 14 Months
Provisional System Acceptance (PSA) (Remaining Sites)	EDC + 18 Months
Final Release - Final System Acceptance (FSA) (All sites on all networks)	EDC + 19 Months

Table 6 Milestone dates

3.2. Effective Date Contract

[SOW 28] The Effective Date of Contract (EDC) will be established at the time of Contract Award (CAW).

3.3. System Requirements Review (SRR)

[SOW 29] The Contractor shall perform a System Requirements Review. The achievement of SRR is subject to the Purchaser approval.

[SOW 30] The Contractor shall execute all project management activities (see **Error! Reference source not found.**) due up to this milestone, and shall achieve Purchaser approval of all associated deliverables (in particular: PMP, QAP, CMP, Risk Log, Issue Log).

[SOW 31] The Contractor shall propose the implementation sequence of the sites that form part of PSA in a Site Activation Plan.

[SOW 32] The Contractor shall propose the implementation sequence of the sites that form FSA.

3.4. Joint Technical Review (JTR)

[SOW 33] The Contractor shall organise and conduct a Joint Technical Review, no later than 2 weeks after EDC.

[SOW 34] The JTR shall to address and resolve critical technical issues in advance.

[SOW 35] The Joint Technical Review shall be held at NCI Agency Brussels or Mons, Belgium.

[SOW 36] The Contractor shall deliver the following information at least two (1) weeks prior the review:

a. - Meeting agenda.

b. - Presentation of Issues and Risks from Risk Assumption Issue Dependency (RAID) Log that require reviewing during the meeting.

[SOW 37] The Contractor shall deliver meeting minutes within one week after the review, which will include an extract of the RAID Log items that have been reviewed with any change requests that are the conclusion of the meeting.

3.5. Preliminary Design Review

The PDR milestone involves a meeting between Contractor and purchaser where the Contractor presents the proposed solution and takes into account required information by the purchaser, which is to be reflected in the PDR template. After the meeting compliancy is recorded in the PDR template where the Contractor must take action before the next CDR milestone.

[SOW 38] The Contractor shall perform a Preliminary Design Review based on the following content:

The Contractor SHALL include the following areas in the Design Review:

a. IKM Tools overall system architecture and interactions;

b. System functionality, modularity and interfaces, breakdown into lowest-level Configuration Items (see 17.3 for Configuration Item Identification and Documentation);

c. Off-the-shelf products to be used in the system: the Contractor SHALL identify the intended product and version, and note if any additional elements (such as macros or plug-ins) are required;

d. Interfaces with other relevant systems;

e. System security design: Presentation of the Risk Assessment Methodology that the Contractor intends to use for the Project, Results of the Risk Analysis, Definition and implementation of the Security measures to counter the risks identified in the Security Risk Assessment. This presentation SHALL be done as a separate item;

f. Sequence and scope of system tests of the Allocated Baseline and any requirements for Purchaser support and participation;

g. Any change request or off-specification;

h. Any changes to the PBS and PFD;

i. Any changes to the PMS;

j. Cost considerations;

k. Risk assessment of proposed changes and an update of the Risk Log and Issue Log;

l. Requirements Traceability Matrix (RTM).

[SOW 39] The Contractor shall populate the PDR entry criteria found in the “PDR checklist”.

The achievement of the PDR milestone is subject to Purchaser approval.

3.6. Critical Design Review (CDR)

[SOW 40] The Contractor shall perform a System Design Review as defined in SECTION 11.2.1.4.

[SOW 41] The Contractor shall include all updates and fixed as agreed in the PDR Milestone. The achievement of the CDR milestone is subject to Purchaser approval.

3.7. System Implementation Milestones

3.7.1. Pre Deployment

[SOW 42] The Contractor shall successfully demonstrate the Factory Test (Core IKM Functionality) is successful in order for the Purchaser approve the deployment into the Purchaser's test environment. (SECTION 4: Pre-deployment tests).

[SOW 43] The Contractor shall support activities on the Purchasers premises in the Purchaser's reference environment in order to successfully pass SIT, SAT Migration Test, UAT and Security tests. (SECTION 4: Pre-deployment tests).

[SOW 44] The Contractor shall complete the site survey process as defined in Site Surveys or the initial Deployment Authorization (DA) Site.

3.7.2. Pilot Release

[SOW 45] The Contractor Shall hold a pilot release meeting with the purchaser and shall support the Purchaser in completion and approval by the Security Accreditation Authority (SAA) of the Security Accreditation Documentation (see 12.2), handle any change in system design and documentation required by the SAA to satisfy the security requirements. (SECTION 4 **Error! Not a valid bookmark self-reference.**).

[SOW 46] The Contractor shall support the activities for achieving Deployment Authorization and to deploy the pilot release to the pilot sites. In particular, the

[SOW 47] Contractor shall execute all activities required to have all IKM Tools software components on the Approved Field Product List (AFPL). (SECTION 4 **Error! Not a valid bookmark self-reference.**).

3.7.3. Provisional Site Acceptance

[SOW 48] The Contractor shall support the deployment of the IKM tools to the remaining sites to PSA. (Provisional Site Acceptance) (SECTION 4 **Error! Reference source not found.**).

3.7.4. Final System Acceptance

[SOW 49] The Contractor shall implement the latest Major release, considering all lessons learned from previous sites, and achieve Operational Site Acceptance.

[SOW 50] The Contractor shall support (SECTION 4 **Error! Reference source not found.**).

The delivery of the IKM tools capability in the locations identified in ANNEX D is subject to Purchaser acceptance and approval.

SECTION 4 : PRE-DEPLOYMENT TESTS

The scope of the following work is to be first deployed in a test environment.

Factory Acceptance Test (on Contractor's premises) tests the core functionality of the tools and the migration.

[SOW 51] The Contractor shall perform a Factory Test to ensure the service meets the requirements stated in the ANNEX A SRS.

[SOW 52] The Factory Acceptance test shall include:

a. Functional tests

b. Non-functional tests

c. Use cases

After successful FAT:

[SOW 53] The Contractor shall prepare and deliver the upgraded IKM Tools capability to the testing environment IREEN at SHAPE Mons, Belgium.

[SOW 54] The Contractor shall prepare and deliver the System Test and Verification Plan.

The purchaser has the right to conduct ad hoc user testing (minimum 3 days).

System Integration Test – (on Purchasers premises on IREEN) – Integration with the rest of the ITM environment (Domain, Security Policies, exchange).

[SOW 55] The Contractor shall prepare and deliver the upgraded IKM Tools capability to the testing environment IREEN at SHAPE Mons, Belgium.

[SOW 56] The Contractor shall perform the SIT successfully to demonstrate the IKM Tools are interoperable with the dependant services and systems (ref: SECTION 10).

After successful FAT and SIT the Purchaser will conduct an IV&V assessment and security test on Purchasers premises on IREEN.

[SOW 57] The Contractor shall perform the FAT and Security tests on Purchasers premises.

[SOW 58] The Contractor shall comply and deliver in line with the CAB/RFC process (See ANNEX F).

Migration Test – (on Purchasers premises on IREEN), in order for the Purchaser to get assurance the migration is considering all important aspects: metadata, content and right access.

[SOW 59] The Contractor shall perform a Migration Test on the Purchaser's premises.

4.1.1. User Acceptance Test (UAT)

The User Acceptance Test consists of formal testing to determine whether or not a system satisfies user needs, requirements and user workflow processes and to enable the User, Purchasers or other authorised entity to determine whether or not to accept the system.

The UAT will be performed by the Purchaser. The UAT shall be performed at the Reference Environment after successful pre-IV&V and Security Tests in 2 phases:

a. A Preliminary User Acceptance Test (Pre-UAT) will be performed at the Reference Environment (RE) after successful IV&V Assessment and Security tests. The Preliminary UAT will allow the Purchaser to assess the system/application's suitability to initiate the Purchaser's Change Management Process for Deployment at Operational Sites.

b. And the User Acceptance Tests (UAT) which are performed on the live system at the Operational Sites.

Any references in this section of UAT covers both the Preliminary and On-Site Tests unless otherwise specifically stated.

The Pre UAT is expected to be minimum of one week long.

The Purchaser will call a TRR prior to start of UAT. After successful completion of the TRR meeting, the Purchaser will execute the UAT.

[SOW 60] The Contractor shall provide the User Acceptance Test Plan and User Acceptance Test cases and Specification to the Purchaser for review and approval.

[SOW 61] The Contractor shall develop the user cases, user scenarios and business processes and workflows based on the Purchaser's designated user's inputs and guidelines.

[SOW 62] The Contractor shall specify the required test cases at the User Acceptance Test phase to enable the Purchaser and users designated by the Purchaser to determine whether the system / application satisfies user needs, requirements, and business workflow processes.

[SOW 63] The Contractor shall specify test cases to exercise the interactions with other systems by means of user cases, user scenarios and business processes.

[SOW 64] The Contractor shall ensure that all the UAT Test Plan and UAT Test cases are approved by the Purchaser prior to start of pre-UAT activities.

[SOW 65] The Contractor shall provide User training to the Purchaser that will allow User to perform UAT at a Purchaser's designated Reference Environment.

[SOW 66] The User training shall take place at least 2 weeks before the Preliminary UAT.

[SOW 67] The Contractor shall facilitate and support pre-UAT at the Purchaser's Reference Environment.

[SOW 68] The Contractor shall investigate Purchaser's reported faults and any anomalies identified during the UAT (both Pre-UAT and Site/System UAT).

[SOW 69] The Contractor shall correct all failures with severity "Critical", "Major" are corrected and re-tested successfully during the UAT (both Pre-UAT and Site/System UAT).

[SOW 70] The Contractor shall provide an action plan to be agreed by the Purchaser for failures with severity "Minor" and "Cosmetic".

[SOW 71] The Contractor shall perform regression testing to demonstrate to the Purchaser that all the raised incidents during the pre-UAT are fixed and working correctly.

[SOW 72] The Contractor shall support the Purchaser's UAT for recording the test execution in Test Logs.

If a new build or version is produced during the Preliminary UAT, the Purchaser will verify the fixes by conducting additional tests on the same facility.

The Purchaser has a right to perform additional Security Tests prior to Deployment Approval process.

The Purchaser will call a STR at the end of Pre-UAT and only after successful STR the Purchaser will declare that the Pre-UAT is successful before the Contractor is seeking Deployment Approval on the NATO networks.

Deployment authorization

Change Advisory Board Process – (on Purchasers Premises) - There is a Change Advisory Board Process (CAB) that needs to be successfully achieved.

[SOW 73] The Contractor shall successfully pass DA in order to deploy the pilot and PSA Sites.

4.1.2. Request For Change (RFC) Evaluation

The achievement of the Deployment Authority (DA) milestone is subject to the Purchaser approval. This process will be triggered with a Request for Change (RFC) by the NATO assigned PM. The last Purchaser approved baseline for the RFC process will be used. The RFC will be submitted to the Purchaser's Change Advisory Board (CAB) for screening. The CAB will decide if further or other tests are required. If all the RFC required final documents are submitted and the production baseline is successfully tested by the Purchaser's internal test activities, the CAB may grant the approval to be deployed on NATO Operational targeted Networks. As part of this process the new baseline is incorporated into the relevant Approved Fielded Products List (AFPLs). The table at ANNEX F outlines the required documents for each RFC submission, where software needs to be uploaded to the AFPL.

If the Contractor has produced a new build or baseline version after any contractual test activities to include internal Purchaser's RFC tests as well as on-site tests The Contractor SHALL follow the Purchaser's internal Change Management test activities. (IV&V, Security and UAT) will be conducted as deemed necessary by the CAB.

[SOW 74] The Contractor shall comply and support Purchaser's internal Change Management Process in order to obtain the Deployment Authorization Approval through the Change Advisory Board (CAB).

[SOW 75] If the Contractor has produced a new build or baseline version the Contractor shall follow Purchaser's internal Change Management process and test activities.

[SOW 76] The Contractor shall note that system implementation activities in operational environment will not start until the DA milestone is approved by the Purchaser.

[SOW 77] The Contractor shall support the Purchaser in preparing a Request For Change (RFC) to meet the requirements of the Purchaser's Change Evaluation process.

SECTION 5 PILOT RELEASE

5.1. General/ Description/ Purpose

The purpose of this section is to detail the delivery and implementation of the IKM tools during Pilot capability release.

Once the tests have successfully completed, the IKM Tools will then be installed at the Pilot locations.

5.2. Locations

[SOW 78] The Contractor shall install the Pilot sites on the ON and PBN at SHAPE Campus, Mons, Belgium and Lago Patria, Italy.

5.3. Engineering, Integration and Tests

[SOW 79] The Contractor shall meet the Engineering requirements listed in the SRS.

[SOW 80] The Contractor shall meet the Test requirements listed in **Error! Reference source not found.**, namely:

a. Functional test.

b. Non-Functional test (Stress load and Performance tests).

c. Migration test.

d. SIT.

e. UAT.

f. Failover.

g. Disaster Recovery.

h. Security test.

i. Operational System Acceptance.

[SOW 81] The Contractor shall complete the site survey process as defined in 11.2.2 for the initial Pilot Site.

5.3.1. Site Acceptance Plan (SAP)

Site Acceptance Plan explains the activities and the prerequisites that are required to achieve the Site Acceptance.

As referenced in this contract, the term Sites refers to all types of sites as specified in this contract, including Data Centre, Standard Node, Enhanced Node, Service Operations Centre, Remotes Nodes, Training sites, etc.

[SOW 82] The Contactor shall submit Site Acceptance Test Plan for the Purchaser's approval to ensure that the service meets the requirements stated in the SRS.

[SOW 83] The Contractor shall propose a subset of FAT, SIT and Security tests cases to incorporate into the SAT.

[SOW 84] In the Site Acceptance Plan the Contractor shall explain in detail as a minimum the following:

a. The Site Activation activities.

b. Installation and integration activities.

c. Data Migration activities.

d. UAT activities.

e. Interoperability with the systems in the SRS.

f. Stress, Load and Performance Tests.

g. Use of test cases and user workflow and scenarios.

[SOW 85] The Contractor shall ensure that IKM Tools components are fully compatible with ITM IaaS network architecture.

[SOW 86] The Contractor shall follow the security requirements stated in **Error! Reference source not found.**.

5.3.2. Implementation

[SOW 87] The Contractor shall agree with the Purchaser in advance the Site Acceptance Plan (including test cases and user scenarios) prior to site installation.

[SOW 88] The Contractor shall have installed, migrated, tested and activated all the IKM Tools components at the Pilot Sites as defined in the ANNEX A.

[SOW 89] The Contractor shall migrate the IKM Tools according to SECTION 8

[SOW 90] The Contractor shall submit any changes to the Purchaser that may be required during the IKM Tools components installation at the Sites.

[SOW 91] The Contractor shall ensure that the Site specific configuration files are recorded, justified why it is required to be agreed by the Purchaser.

[SOW 92] The Contractor shall have successfully passed the Site Acceptance including:

A. The Site is operationally working successfully.

B. The Data migration is performed successfully.

C. IKM Tools are fully interoperable with the prescribed systems contained in the SIT.

D. The User Acceptance Test is successfully performed.

E. The Performance Tests successfully performed. (Stress, load and performance tests).

F. The Site Activation checklist is successfully completed.

[SOW 93] The Contractor shall ensure that Logistic (ILS) requirements deliver as stated in this contract and SRS are successfully implemented.

[SOW 94] The Contractor shall ensure that all Site and System security requirements as set forth in this contract are successfully implemented.

[SOW 95] The Contractor shall have handled any change to satisfy the security requirements.

[SOW 96] The Contractor shall have executed all activities required to have all IKM Tools software components on the AFPL.

[SOW 97] The Contractor shall take all lessons learned from the delivery and implementation of the Pilot sites and incorporate them into the design and baseline documentation for future releases.

5.4. Training

[SOW 98] The Contractor shall perform the Training Needs Analysis (TNA) for the Pilot site for approval by Purchaser, as defined in Section 13.3.2.

[SOW 99] The Contractor shall train all the designated system operators, functional administrators and supporting staff.

[SOW 100] The Contractor shall deliver the Training section of the Integrated Logistics Support Plan (ILSP) for the Pilot sites for approval by the Purchaser, as defined in section Training **Error! Reference source not found.**.

5.5. The achievement of Pilot Release is subject to the Purchaser approval.

SECTION 6 : PROVISIONAL SYSTEM ACCEPTANCE

6.1. General/ Description/ Purpose

The purpose of this section is to deploy the approved Pilot Baseline (**Error! Reference source not found.**) to the remaining locations.

[SOW 101] The Contractor shall integrate the IKM Tools as described in the ANNEX A SRS.

[SOW 102] The Contractor shall deploy the approved baseline to all remaining sites located at ANNEX D.

[SOW 103] Any release shall incorporate user feedback from the Pilot Release and integration with other systems/projects.

6.2. Project Management

[SOW 104] The Contractor shall meet the requirements listed in SECTION 11 Project Management.

6.3. Location

[SOW 105] The Contractor shall prepare and deliver the IKM Tools capability to the Datacentres listed in ANNEX D.

6.4. Engineering, Integration and Tests

[SOW 106] The Contractor shall meet the Engineering requirements listed in the SRS.

[SOW 107] The Contractor shall incorporate in the system design lessons learned from the pilot release, in agreement with the Purchaser.

[SOW 108] The Contractor shall meet the Test requirements listed in SECTION 15.

6.4.1. System Integration Test (SIT)

[SOW 109] The Contractor shall perform a System Integration Test to ensure that the IKM Tools meets the requirements stated in the SRS and the detail of the testing and acceptance protocols detailed in SECTION 15.

6.5. Implementation

[SOW 110] The Contractor shall complete the site survey process as defined in 11.2.2 Site Surveys for the PSA Sites.

[SOW 111] The Contractor shall perform the Training Needs Analysis (TNA) for the sites that form PSA scope (ANNEX D) for approval by Purchaser, as defined in Section Training Needs Analysis (TNA) 13.3.2.

[SOW 112] The Contractor shall deliver the updated Training Plan section of the Integrated Logistics Support Plan (ILSP) for the PSA sites (ANNEX D) for approval by Purchaser, as defined in **Error! Reference source not found.**.

[SOW 113] The Contractor shall deliver the System Implementation Plan (SIP) for the sites that form PSA scope (ANNEX D) for approval by Purchaser.

6.6. Operational System Acceptance

The requirements apply individually to each optional site which has been activated under this contract. Therefore the requirements in this section shall– Operational System Acceptance (OSA)

[SOW 114] The Contractor shall have passed the Site Acceptance Test successfully at each of the sites prior to start of OSA.

[SOW 115] The Contractor shall have demonstrated that all the data migration at the sites are successfully achieved.

[SOW 116] The Contractor shall have confirmed Tests are successfully executed at the Sites Stress/Load.

[SOW 117] The Contractor shall have successfully integrated all of the Operational Sites.

[SOW 118] The Contractor shall ensure that the User Acceptance Tests are performed successfully.

6.7. The achievement of PSA is subject to the Purchaser approval.

SECTION 7 : FINAL SYSTEM ACCEPTANCE

7.1. General/ Description/ Purpose

The purpose of this section is to describe Contractor responsibilities for the delivery and implementation of the remaining IKM Tools capabilities to achieve Final System Acceptance (FSA).

[SOW 119] The Contractor shall deliver the capability of the IKM Tools system as described in the SRS at ANNEX A.

7.2. Location

[SOW 120] The Contractor shall deliver the Final Release capability at IKM Tools Sites in line with ANNEX D.

7.3. Engineering, Integration and Tests

[SOW 121] The Contractor shall meet the Engineering requirements listed in the SRS.

[SOW 122] The Contractor shall meet the Test requirements listed in Testing, Verification and Validation (TVV) Requirements SECTION 15.

7.4. Implementation

[SOW 123] The Contractor shall deliver the Final Release, which shall incorporate all lessons learned from previous releases.

[SOW 124] The Contractor shall meet the Implementation requirements listed in SECTION 6

7.5. Final System Acceptance (FSA)

FSA is the act by which the Purchaser has evaluated and determined that the implemented capability meets the requirements of the Contract, and that the Contractor has fully delivered all requirements.

- The following criteria shall be met to achieve FSA:

  [SOW 125] All PSA milestone requirements (see section 6.6 Operational System Acceptance) and Site Activation milestone requirements (shall be met for all the sites to be implemented under this contract).

  [SOW 126] The Contractor shall execute all milestones according to SECTION 3 and all implementation activities at all the sites to be implemented under this contract .

  [SOW 127] Operational System Acceptance shall be successfully completed and passed.

  [SOW 128] The Contractor shall ensure User Acceptance Tests have passed successfully.

  [SOW 129] The Contractor shall ensure Purchaser produced Operational Acceptance Criteria have been passed successfully.

  [SOW 130] The Contractor shall ensure that the Site Activation checklist are successfully completed at each site.

  [SOW 131] The Contractor shall ensure that each site is integrated and Site Activation Tests are approved and signed.

[SOW 132] The Contractor shall train all System Users according to the training plan.

[SOW 133] The Contractor shall ensure that Logistic (ILS) requirements as stated in this contract and SRS are successfully implemented at each site.

[SOW 134] The Contractor shall successfully execute (“PASS”) all agreed test cases and provide an FSA report.

[SOW 135] All failures with severity “Critical”, “Major” or “Moderate” (defined in section Classification of Defects[1]) shall be corrected and re-tested “OK”.

[SOW 136] An action plan shall be agreed for failures with severity “Minor” and “Cosmetic”.

[SOW 137] The Contractor shall deliver all deliverables, and conduct all activities, as specified in this contract.

7.6. The achievement of FSA is subject to the Purchaser approval.

SECTION 8 MIGRATION

8.1. NIP Content

[SOW 138] The Contractor shall migrate all NIP content: articles, links, announcements and related pages with no data loss or corruption.

[SOW 139] The Contractor shall migrate all NIP content in agreement with the Purchaser when selecting specific versions or metadata.

[SOW 140] If not stated otherwise by the Purchaser the Contractor shall migrate the content along with its metadata with no loss or corruption.

[SOW 141] The Contractor shall preserve the logical structure in the migration of the content: hierarchies and dependencies and web content linkages.

[SOW 142] The Contractor shall preserve the security restrictions of the content in alignment with the original one and within the new IKM Tools domain.

8.2. EDMS Content

[SOW 143] The following defined areas of EDMS application shall be migrated into a landing zone:

a. Local departments' EDMS office workspace. Commands will identify their local EDMS based document repositories. From these identified repositories, only documents created or modified in the prior 12 months shall be migrated.

b. Commands Records Centre(s). Each command will identify its EDMS Records Centre(s). All documents from these Record Centre(s) shall be migrated into the landing zone.

[SOW 144] The Contractor shall migrate up to the 10 most recent versions regardless of whether they are minor or major versions. Documents not part of the migration scope shall remain available to the user community for an agreed period with the Purchaser on the old EDMS.

[SOW 145] The Contractor shall ensure that during migration no documents will be deleted and data sources will remain read only.

[SOW 146] NCIA will provide an agreed metadata schema for the landing zone and an agreed EDMS metadata list for migration to the Contractor as a base for the following activities. The Contractor shall treat the metadata defined in EDMS information architecture as the baseline for migration.

[SOW 147] EDMS to landing zone Metadata mapping. As part of the migration strategy the Contractor shall, in coordination with NCIA, deliver a mapping matrix from EDMS metadata to landing zone metadata.

[SOW 148] EDMS to landing zone metadata migration. The Contractor shall migrate document specific EDMS metadata together with the content from the EDMS source to the landing zone.

[SOW 149] Migration of user account mapping. The Contractor shall ensure that the original created by or modified by information will be migrated. If the original information is no longer in the system, the process shall foresee the usage of an orphaned user account.

[SOW 150] Orphaned metadata values. If metadata values can no longer be retrieved due to configuration changes, technical mis-configuration or errors in the source system, the Contractor's migration tool shall use an upfront agreed pre-defined standard value in the landing zone.

[SOW 151] Orphaned user accounts. If user accounts used in metadata cannot longer be retrieved an orphaned user account identified during site survey shall be used as a corresponding value in the landing zone.

8.3. TT+ Content

[SOW 152] The Contractor shall migrate closed taskers from Tasker Tracker + to new upgraded IKM Tools TT+.

[SOW 153] Active Tasker Migration. A cut-off date for closed taskers shall be agreed up-front with the Purchaser; all taskers active after this date shall be recreated in TT+ by the command.

[SOW 154] Migration of configuration settings. In addition to the document and metadata migration the Contractor shall conduct or support the migration or recreation of the following configuration settings:

a. Permission Migration. During Site Survey the Contractor shall capture current access control concept of EDMS and provide the command a mapping table to match existing permission groups to the landing zone access control concept based on the "bucket" principle.

b. Document library public views. During Site Survey the Contractor shall capture the configuration of one command instance wide required document library public view.

[SOW 155] The Contractor, in agreement with Purchaser, shall provide a landing zone architecture strategy as a base for the following activities.

a. Command structure hierarchy. The Contractor shall together with the commands authority develop a structure mapping matrix from the current commands EDMS structure to EDMS.

b. Commands document repository mapping. The Contractor shall together with the commands authority develop a migration mapping matrix from the current commands EDMS folder based structure to EDMS bucket principle.

c. EDMS Folder to landing zone bucket migration. The Contractor shall migrate only the contents in the BISC, COMMAND and OFFICE security folder from EDMS not the folder itself.

[SOW 156] The Contractor shall gather the current commands TT+ workflow configuration based on the TT+ delivered information architecture during the site survey.

a. TT+ workflow configuration analysis. The Contractor shall identify functionalities of the TT+ command workflow configuration that are lost during migration to new TT+.

b. TT+ command workflow configuration. The Contractor shall support the command with information from the site survey to assist in the development of an TT+ command workflow configuration.

c. TT+ command workflow implementation. The Contractor shall implement the agreed TT+ command specific workflow in the commands TT+ instance.

[SOW 157] The Contractor shall provide mechanisms of error handling and logging to trace successful or unsuccessful data migration attempts and shall report on any parts of the EDMS that could be lost during migration.

[SOW 158] The Contractor shall provide reports generated for the migration showing successful and unsuccessful migrated items.

[SOW 159] The Contractor shall complete the Site survey analysis and report on parts of the EDMS that could be lost during migration.

[SOW 160] The Contractor shall provide an online and an offline way of migration to support migration of commands with low bandwidth connectivity.

[SOW 161] The Contractor shall provide the following migration methodologies:

a. Online Migration. For those sites providing a sustainable bandwidth network usage time and network usage capacity for migration the Contractor shall be able to migrate from EDMS to the landing zone over network.

b. Offline Migration. For those sites providing no sustainable bandwidth, network usage time and network usage capacity for migration, the Contractor shall be able to migrate from EDMS to the landing zone using an alternative path, via offline file transfer. The Contractor shall be able to capture files and metadata on site: These captured files will be transferred to the Datacentre by NATO crypto courier. The Contractor shall be able to upload these files in the Datacentre to the landing zone.

c. Online delta Migration. The Contractor shall be able to identify files changed since an initial full migration and migrate theses identified files as a delta.

[SOW 162] The Contractor shall develop a migration plan per command, based on the findings during the site survey. The plan shall include if the site is an online or offline candidate scenario and if migration will be conducted either on command or office level.

[SOW 163] The Contractor shall provide the technical document describing the sequence of migration activities prior to the first site migration to be approved by the Purchaser. The documents, as minimum, shall indicate:

a. Command requests. Information requested from the Command on EDMS status.

b. Migration schedule. Detailed migration schedule, including eventual down time.

c. Site requirement. Site personnel involved in upgrade.

d. Information not covered. Indication on EDMS part that could be lost during migration.

e. Migration Test. Test to be executed during and at the end of migration.

[SOW 164] Migration acceptance. The Contractor shall develop a migration acceptance document to formally state the success of migration.

[SOW 165] The Contractor shall provide a Migration Toolset to allow mass migration of documents including metadata limited to EDMS metadata baseline.

[SOW 166] The Contractor shall support the Migration Toolset IV&V process, if this is considered as applicable by the Purchaser.

SECTION 9 HARDWARE

9.1. Installation

The IKM Tools Hardware is to be installed in the NCI Agency DataCentres and therefore will need to be accommodated to the existing infrastructure, in terms of technology (power, cables, models etc.) and processes (HW registration, shipping and access to DCs).

The Contractor will procure the HW and the Purchaser will install it in the Data Centres, which may require some help from the Contractor. The Purchaser will also configure the Virtual Machines environment and associated VMs, with the Operating System (OS) and added to the Domain. In addition the Purchaser will install the NCIRC software.

[SOW 167] The Contractor shall provide the required help and support for the Purchaser to properly install the HW into the Data Centres and configure the VMs.

The following supportive infrastructure is going to be provided by the Purchaser as PFE:

- Power
- UPS
- Air Conditioning
- Firewall

Other Hardware and materiel not specified above will need to be provided by the Contractor, i.e.: application servers, storage servers, cabling, racks, load balancer, switches.

[SOW 168] The Contractor shall procure all required hardware to support the proposed architecture as described in the CDR.

[SOW 169] The Contractor shall procure all the hardware from the ITM list (See ANNEX C).

[SOW 170] The Contractor shall ship all hardware components as detailed in SECTION Packaging, Handling, Storage, Transportation (PHST).

[SOW 171] The Contractor shall provide all the information required in the “IaaS/ITM Joining Instructions”.

[SOW 172] The Contractor shall deliver and activate the IKM Tools.

[SOW 173] During the Site Surveys activities the Contractor shall determine the necessary installation preparations and support arrangements and collect all system implementation-relevant information:

a. Identification of any input (item of equipment, documentation, information) or work required from the Purchaser and from the Site with indication of suspense date;

b. Identification of any potential DataCentre related requirements for the IKM Tools equipment; Hardware configuration, processes, rack space;

c. List of all system CIs (nature and quantities) to be installed in the site.

d. Register all findings that require modification of the site infrastructure or change of the agreed implementation scope. For each of the changes the Contractor shall produce a formal change proposal.

e. For each out of scope item that requires either technical support or procurement activity, the Contractor shall offer a proposal to the Purchaser with his recommended solution.

The Purchaser will provide the Contractor with the exact shipment addresses and NATO POC for subsequent equipment delivery.

The Purchaser reserves the right to suspend the Contractor's installation and/or or activation work for up to ten (10) working days to avoid interfering with or disrupting other activities.

[SOW 174] The Contractor shall ensure the overall implementation at the site respects the achievement of milestones as described in SECTION 3.

9.2. Preparations for Installation

[SOW 175] The Contractor shall provide the Purchaser Project Manager with a draft list of hardware and software to be shipped, and a list of Contractor's personnel together with a copy of each person's Personnel Security Clearance (PSC) for those who will be involved in site installation and activation work.

[SOW 176] The Contractor shall monitor the progress of any required Site facilities preparations, and the progress of any required provision of input by the Purchaser and the Site, to ensure timeliness and quality of the preparatory work required from the Purchaser.

[SOW 177] The Contractor shall ensure that anything that may delay installation is brought to the attention of the Purchaser Project Manager promptly.

[SOW 178] The Contractor shall coordinate the start date of the planned installation no later than three weeks before the Hardware Installation Milestone (Ref SECTION 3).

[SOW 179] Although the Purchaser will provide the facilities in which the IKM Tools will be installed and the external systems to which it will be interfaced, the Contractor shall be responsible for timely and complete delivery of all relevant supplies.

[SOW 180] The Contractor shall ensure that the equipment to be installed (as identified by the site during the site survey) has been tested and certified to operate at the "facility's zone level" as applicable. The Contractor shall provide relevant evidence to the site before installing any IKM Tools piece of equipment.

[SOW 181] The Contractor shall configure all IKM Tools Platform Services equipment (software, IaaS), in accordance with **Error! Reference source not found.**, and the CDR.

SECTION 10 INTERFACES WITH OTHER PROJECTS / SYSTEMS

10.1. IAS Step 1

10.1.1. The IAS project has already delivered some capabilities under the Step 1 iteration. Namely the Tasker Tracker Plus (TT+) and the Enterprise Document Management System (EDMS). They provide staff tasking and document management functionalities respectively for the Commands. Both are composed of a set of services and applications based on the Microsoft Share Point 2013 platform.

10.1.2. Currently the IAS Step 1 is installed in the SHAPE Data Centre as a service for a set of Bi-SC AIS sites in the ON environment, and as standalone in some networks.

10.2. IT Modernization (ITM)

10.2.1. The Information Technology Modernisation (ITM) project will deliver a private, on premises cloud, providing Infrastructure as a Service (IaaS) supporting IT services up to and including the NATO RESTRICTED (NR) level on the Protected Business Network (PBN) domain and up to and including the NATO SECRET (NS) level on the Operational Network (ON) domain. The single, resilient, logically integrated but geographically dispersed infrastructure will host all of NATO's applications supporting static locations.

10.2.2. IT Modernisation will transform NATO's fixed IT infrastructure into a modernised service-based single enterprise.

10.2.3. The Functional Scope of the ITM Project consists of the implementation of four ITM services:

Infrastructure as a Service that offers the backend infrastructure services to provide the user applications at the required service levels based on an efficient service delivery method.

Thereafter in this document, a "site" is defined to include all of the 7 (Seven) elements below:

A. Datacentre Node: key centralised IaaS location where the bulk of computing will take place. Initially two datacentres will be available.

B. Standard Node: Location with limited amount of computing in support of local user services access.

C. Enhanced Node: Location with enhanced computing capabilities in order to support applications that are not deemed to be centralise-able for technical or other reasons.

D. Service Operations Centre: The NCI Agency will operate two Service Operations Centres from which it will administer, and operate all of the NCI Agency provisioned C4ISR services.

E. Client Provisioning that will allow NATO applications to be accessed from any approved client appliance form factor from authorised locations by authorised users.

F. Service Management and Control that will manage and control the provision and operation of services identified above.

G. Enterprise Core Services for mail, Instant Messaging, Presence Indicator and portal hosting.

[SOW 182] IKM Tools shall be hosted on the ITM infrastructure and integrated with ITM services. More specifically hosted in the Data Centre Nodes for the centralised sites (see the site locations at ANNEX D).

10.3. NATO Information Portal (NIP)

10.3.1. The NIP is the main portal for NATO in the NATO SECRET network.

10.3.2. It uses the NIP Core component that provides Enterprise IKM Search Services, Metadata Services (e.g., SharePoint term store), templates and other auxiliary portal services.

10.3.3. Currently the NIP is only available on NATO Secret network, however, this project will deploy the NIP tool on ON, PBN and limited standalone networks as required in ANNEX D.

[SOW 183] The NIP components shall be upgraded to the latest approved ITM SharePoint Version.

10.4. SOA & IdM Platform

10.4.1. The SOA & IdM provides the fundamental mechanisms for service messaging, service composition & orchestration and security services to securely authenticate and authorize access to services.

10.4.2. The SOA & IdM can be used as middleware service. Its services comply with the Service Interface Profiles (SIPs) following the broadly accepted industry standards for web services protocols and data formats.

10.4.3. Among other services the SOA & IdM offers Information Search Services for an enriched search capability using rules to finding and composing information. It is based on Ontologies and Taxonomies and uses a query language to infer search results.

[SOW 184] The Contractor shall ensure that the IKM Tools Search Service uses the SOA & IdM services whenever possible and integrates them (See SRS).

10.5. Enterprise-NATO Public Key Infrastructure (E-NPKI)

10.5.1. The E-NPKI is based on the Public Key Infrastructure model and comprises the hardware, the software, the documentation and the processes. It forms the framework to provide services for the management of public key certificates. It thus enables secure communications among NATO organizations and between NATO organizations and Nations.

10.5.2. The E-NPKI is available in ON and PBN networks.

10.5.3. The following are specific functions required by IAS that are performed by the E-NPKI:

Certificate holders can digitally sign and or encrypt information products (e.g., documents);

Clients are enabled to verify the validity of digital signatures and/or decrypt information products;

[SOW 185] The IAS shall use E-NPKI services for any related PKI operations. In particular for digitally signing information products and verifying their signature.

SECTION 11 PROJECT MANAGEMENT

11.1. Project Management Scope

[SOW 186] The Contractor shall identify the following key personnel: Project Manager, Senior System Engineer Lead, Implementation Manager and Test Director/Test Engineer.

[SOW 187] The Contractor shall ensure all key personnel possess the following qualifications throughout the lifecycle of the project:

a. Project Manager – Prince2 Practitioner, or PMP certification

b. Senior System Engineer Lead – ITIL Intermediate Service Design or DEVOPS or Agile Certified Scrum Master

c. Implementation Manager - ITIL Intermediate Service Transition or Service Operations

d. Software Engineer - MS SQL Server 2016 Database Certifications, MS SharePoint 2016 Administering certified and MS SharePoint 2016 Applications certified

e. Test Director – ITIL Intermediate Service Transition or Service Operations, MS SharePoint 2016 Applications certified

[SOW 188] The Contractor shall at all times ensure that:

a. Adequate resources are applied to all activities undertaken under the contract;

b. Milestones are achieved in a timely manner;

c. The project status information is comprehensively reported to the Purchaser in a timely manner;

d. All risks to project achievement are identified and managed;

e. Professional standards of project activities and deliverables through the application of QA techniques are applied;

[SOW 189] The Contractor shall proactively coordinate and collaborate with other parties (NATO, Contractors) as required for the implementation of this project, in close coordination with the Purchaser.

[SOW 190] The Contractor shall attend, organise and conduct meetings as required by the Purchaser.

[SOW 191] The Contractor shall respect ILS, QA, CM, Testing, and Security requirements.

[SOW 192] The Contractor shall build and maintain a website with all project artefacts available via the PBN domain.

11.1.1. Project Management Documentation

11.1.1.1. Project Management Plan (PMP)

[SOW 193] The Contractor shall establish and maintain a PMP which shall describe how the Contractor will implement the totality of the project as specified in this SOW.

[SOW 194] The Contractor shall produce a PMP that covers all aspects of the project implementation including its management structure and project management processes,

personnel assignments, external relationships necessary appropriate to provide the capability as required by this Contract, subject to approval from the Purchaser.

[SOW 195] The Contractor shall produce a PMP that is sufficiently detailed to ensure that the Purchaser is able to assess the Contractor plans with insight into the Contractor's plans, capabilities, and ability to satisfactorily implement the entire project in conformance with the requirements as specified in this SOW.

[SOW 196] The Contractor shall produce a PMP that follows the outline recommended in this SOW 18.6 that is provided to the purchaser for acceptance.

11.1.1.2. Project Master Schedule (PMS)

[SOW 197] The Contractor shall establish, maintain and deliver as required a PMS (Microsoft Project format) containing all tasks and milestones. The PMS shall be baselined upon approval by the Purchaser.

[SOW 198] Unless otherwise authorised by the purchaser beforehand, in writing, the Contractor shall produce a PMS that:

- Contain all events and milestones, in particular site survey, site preparation, site installation and activation, planned outages (if any), and ILS-related elements.
- Defines delivery times of all documentation to be provided to the Purchaser.
- Correlates with the products defined in the PBS.
- Is provided in Microsoft Project format.
- Identifies the critical path for the overall project.
- Identifies the start and finish dates, duration, predecessors, constraints (as necessary) and the total slack of each task.
- Identifies the main project milestones.
- Identifies the "physical" progress for each task.
- Identifies the applicable baseline, and shows progress against the baseline.
- Minimises the use of constraints and absolute dates.
- Identifies the main deliverables.
- Contains the resourced assigned to each task (and in particular the Purchaser's resource eventually needed for the task).

11.1.1.3. Product Breakdown Structure (PBS)

[SOW 199] The Contractor shall establish and maintain a PBS, which:

- Identifies all products.
- Includes a hierarchical diagram of all the products having at its topmost product the final product of the overall project.
- Describes each product including its quality requirements.

11.1.1.4. Project Status Report (PSR)

[SOW 200] The Contractor shall provide a weekly PSR to the Purchaser.

[SOW 201] The Contractor's PSR shall at minimum summarise completed, ongoing and upcoming activities, as well as attached updated PMS.

[SOW 202] The Contractor shall organize monthly Project Review Meetings (PRM).

11.1.2. Meetings

[SOW 203] Except otherwise stated in the Contract, the following provisions shall apply to all meetings (including "attendance in person" meetings, video or tele conference meetings, reviews…) to be held under the Contract.

[SOW 204] The Contractor shall take meeting minutes, submit them in draft version to the Purchaser for approval within 1 week of the meeting. The minutes shall be submitted to an accelerated review cycle at Purchaser's discretion.

[SOW 205] The participants and mainly the Contractor's representatives shall not regard these minutes as a mechanism to change the terms, conditions or specifications of the Contract nor as a vehicle to alter the design or configuration of equipment or systems. Any such changes shall only be made by authorised mechanisms as set forth in the Contract.

11.1.3. Documentation Delivery and Review

[SOW 206] The Contractor shall deliver all documents to the Purchaser in electronic format (MS Office unless otherwise stated in this SOW) for review and approval. The Purchaser shall provide reasonable effort to review and approve these documents in a timely manner.

[SOW 207] The Contractor shall ensure that any documentation delivered to the Purchaser has been properly reviewed according to Contractor quality management process.

[SOW 208] The Contractor shall take into account Purchaser comments and shall issue / update other documentation versions as required.

The acceptance of documents by the Purchaser signifies only that the Purchaser agrees to the Contractor's approach in meeting the requirements. This acceptance in no way relieves the Contractor from its responsibilities to meet the requirements stated in this Contract.

[SOW 209] The Contractor shall remain responsible for updating the documents in the course of the project (to correct errors, inconsistencies, omissions, etc. and to reflect changes in the system design, system implementation, support arrangements) and shall deliver up-to-date versions at FSA.

11.2. Design activities

[SOW 210] This section outlines the System Engineering, Integration, Tests, Sites Surveys and implementation of the infrastructure, and IKM Tools (NIP, TT+ and EDMS). The Contractor shall be responsible for the implementation of the overall design and integration with other services necessary to allow the IKM Tool Applications to function, obtaining security accreditation throughout the Contract period of performance. When needed, the Contractor is required to provide reasonable effort for the integration with other services necessary to allow the IKM tools applications to function.

[SOW 211] The Contractor shall provide an initial version of the IKM Tools Services high-level design. The Contractor shall update the initial version of the high-level design and produce the detailed System Design Documentation Package based on an analysis of the requirements.

[SOW 212] The Contractor shall integrate all necessary components to establish the Service Baseline, and plan and execute a series of tests to confirm that this baseline meets its requirements, in accordance with **Error! Reference source not found.**.

11.2.1. System Design

11.2.1.1. System Design Specification (SDS)

[SOW 213] The Contractor SDS shall describe the systems to a level of detail that is sufficient for the Purchaser to be able to ensure that the requirements in the SRS and the security requirements (see **Error! Reference source not found.**B) are implemented.

[SOW 214] The Contractor shall coordinate with the Purchaser to clarify which Security Mechanisms mentioned at ANNEX AB will fall under his responsibility.

[SOW 215] The SDS shall be developed as per the detailed contents indicated in section System Design Specification (SDS).

11.2.1.2. Security Accreditation Documentation Package

[SOW 216] The Contractor shall ensure that the Security Accreditation Documentation Package comprises all documentation mentioned in11.4 Section Security Accreditation.

11.2.1.3. Requirements Traceability Matrix (RTM)

[SOW 217] The Contractor shall develop and maintain an RTM (see Requirements Traceability Matrix (RTM)) that establishes a complete cross-reference between, on the one hand, the requirements stated in the SRS, System Security Requirements Statement (SSRS), and on the other hand the detailed contents of the SDS in terms of SDS statements and lowest-level CIs.

11.2.1.4. Design Review

[SOW 218] The Contractor shall organize a Design Review for pilot release and a critical design review for the major final release.

[SOW 219] The Contractor shall address the following areas in the Design Review:

a. IKM Tools overall system architecture and interactions.

b. System functionality, modularity and interfaces, breakdown into lowest-level Configuration Items.

c. Off-the-shelf products to be used in the system: the Contractor shall identify the intended product and version, and note if any additional elements (such as macros or plug-ins) are required.

d. Interfaces with other relevant systems.

e. System security design: Presentation of the Risk Assessment Methodology that the Contractor intends to use for the Project, Results of the Risk Analysis, Definition and implementation of the Security measures to counter the risks identified in the Security Risk Assessment (SRA) and in compliance with ANNEX A.

f. Sequence and scope of system tests of the Allocated Baseline and any requirements for Purchaser support and participation.

g. Any change request or off-specification.

h. Any changes to the PBS.

i. Any changes to the PMS.

j. Cost considerations, as applicable.

k. Risk assessment.

l. Project Master Test Plan (PMTP) traceable to system system/component requirements and acceptance criteria.

[SOW 220] The Contractor shall provide a Design Review Report.

[SOW 221] The Contractor shall update the Design Documentation Package as per the result of the Design Review.

11.2.2. Site Surveys

The purpose of the Site Survey is to gather all information of interest in view of the preparation, installation, configuration, on-site testing and support. This section outlines the requirements applicable for site surveys.

[SOW 222] The Contractor shall respect requirements below for every site survey.

[SOW 223] For each site survey, the Contractor shall conduct site survey preparatory work, visit the site subject to site survey, and collect data to support project activities.

[SOW 224] The Contractor shall ensure coherence between site survey results and project documentation (e.g., System Design Documentation Package) at any time.

11.2.2.1. Site Survey Preparatory work

Site Survey Work Book (SSWB)

[SOW 225] The Contractor shall prepare a SSWB of checklists, fill-in forms, installation sketches, contact information, installation specifications, and site data to be collected by the Contractor during the site survey and any other documentation required to perform site surveys.

[SOW 226] The Contractor shall make the SSWB available for Purchaser review and comment before the site survey and shall maintain and update as necessary during the site survey process.

[SOW 227] After the Site Survey the Contractor shall present to the Purchaser his site engineering and installation drawing(s) and identify actions and follow-on activities.

Outcomes

[SOW 228] The Contractor shall produce and deliver a Site Survey Report. The report shall detail accurately and formally the findings from the site survey and all preparatory work required from the Site.

[SOW 229] The Contractor shall provide the Site Survey Reports within one week after the respective Site Survey is completed.

[SOW 230] At minimum, the Site Survey Report shall include:

Serial	Requirement
1	Installation & Activation: • Stakeholders communication • Schedule of installation activities
2	Logistics • Available system location & space • Technical infrastructure • Delivery details • Storage requirements • Handling and lifting devices • Site/Building access requirements for equipment and personnel • Packaging disposal plan

- The Purchaser will provide the Contractor with the exact shipment addresses and NATO POC for subsequent equipment delivery.

11.3. Implementation activities

- The Purchaser reserves the right to suspend the Contractor's installation and/or or activation work for up to ten (10) working days to avoid interfering with or disrupting other activities.

[SOW 231] The Contractor shall ensure the overall implementation at the site respects the achievement of milestones as described in SECTION 3.

[SOW 232] The Contractor shall execute implementation activities in several steps:

a. The Contractor shall conduct site preparation activities – see Site Surveys.

b. The Contractor shall conduct site installation and activation activities – see Site Surveys.

11.3.1. Preparations for Installation

[SOW 233] The Contractor shall monitor the progress of any required Site facilities preparations and the progress of any required provision of input by the Purchaser and the Site, to ensure timeliness and quality of the preparatory work required from the Purchaser.

[SOW 234] The Contractor shall ensure that anything that may delay installation is brought to the attention of the Purchaser Project Manager promptly.

11.3.2. Site Configuration and Activation

[SOW 235] The Contractor shall perform site configuration and activation, which comprises the following activities:

a. Perform site configuration of any Hosting Platform Services elements (Hardware, Software), including establishment of network connectivity between all required components, in accordance with **Error! Reference source not found.**).

b. Perform site activation.

c. Deliver all documentation associated to site configuration and activation.

[SOW 236] The Contractor shall co-ordinate the start date of the planned configuration no later than three weeks before that start date.

[SOW 237] The Contractor shall turn on all equipment and configure hardware and software settings to match the PBL and site configuration.

11.4. Security Accreditation

11.4.1.1. Introduction

IAS must achieve security accreditation for it to be granted the authority to go live. To achieve this, the system will need to go through a Security Accreditation process and obtain the security accreditation statement from Security Accreditation Authorities to use IAS. IAS will need to demonstrate compliance with the NATO relevant Security Policy, supporting directives and system-specific documentation (e.g., System Security Requirement Statements (SSRS)).

[SOW 238] The Contractor shall support any security testing, including security audits undertaken by the Purchaser.

[SOW 239] The Contractor shall attend Information Assurance Task Force (IATF) meetings as requested by the Purchaser and shall provide briefings if needed.

[SOW 240] The Contractor shall support security audits.

[SOW 241] The Contractor shall take action to follow, carry out the necessary work, and to implement the advice, instructions and changes required by the SAA and/or resulting from the security audit(s).

[SOW 242] The Contractor shall designate Security SMEs as points of contact for security accreditation and security-related issues.

[SOW 243] The Contractor shall request Approval for Testing (AfT) before initiating any testing activity. The Contractor shall justify the request by describing the security posture of the system.

[SOW 244] The Contractor may need to request Approval for Pilot (AfP) before the interim Security Accreditation (iSA) can be requested to the SAA. The AfP will have to be agreed by the Purchaser with the SAA, in order to define to what extent the solution may be operated during a period of time ad until iSA is requested and granted.

11.4.1.2. Security Accreditation Documentation

The achievement of security accreditation will require a prescribed set of security documentation to be produced, using security accreditation documentation templates. The templates will be made available to the Contractor after the CAW.

[SOW 245] The Contractor shall produce security accreditation documentation and/or provide inputs to documents in support of the IAS security accreditation.

[SOW 246] The Contractor shall identify and document any COTS products included in the system in the security documentation.

The documentation to be developed to support the Services security accreditation process is listed in the table; which also summarises responsibilities related to the development of each document Column “Baseline/Guidance” lists available templates, relevant NATO Security Directives and Guidance and similar documentation existing NATO CIS which can be used as an example or initial input. All Security Accreditation documents will be subject to Purchaser and SAA approval.

Document	Baseline/Guidance	Contractor Responsibility (The Contractor shall)	Purchaser Responsibility
Generic documentation			
Security Accreditation Plan (SAP)	Latest approved SAP template	None	The Purchaser will provide if required by the SAA.
CIS description	CIS description template NR Reference Baseline	• Update the CIS description document based on the CIS description template provided by the Purchaser. • Demonstrate adherence to the NATO CIS Security Reference Baseline.	• Provide template and guidance to the Contractor • Review • Coordination with the SAA
Security Risk Assessment (SRA)	SRA template Tool for formal SRA: NATO PILAR	• Provide support to Purchaser for SRA development • Address additional technical security requirements from the SRA	• Provide guidance to the Contractor for support • Review • Coordination with the SAA
System Specific Security Requirements Statement Statement (SSRS)	SSRS template	• Provide support to Purchaser for SSRS development	• Provide template • Review • Coordination with the SAA
Security Test & Verification Plan (STVP)	STVP template	• Support development of STVP	• Provide template and guidance to the Contractor • Review • Coordination with the SAA
Security Test Report (STR)	STR template	• Execute testing • Record results	• Provide test report template

Document	Baseline/Guidance	Contractor Responsibility (The Contractor shall)	Purchaser Responsibility
			• Supervise/witness testing
Security Operating Procedures (SecOPs)	SecOPs	Production and delivery of SecOPs	• Provide generic SecOPs template • Review • Coordination with the SAA

Table 7 Security Accreditation Documentation and Contractor Responsibility

CIS Description

[SOW 247] The Contractor shall create a CIS description document based on the CIS description template provided by the Purchaser, maintain the CIS description during the project, including all relevant information taken from the System Design Documentation Package as required to understand the content of the CIS description document. CIS description shall be a standalone document and shall not refer to any document from System Design Documentation Package.

Security Risk Assessments (SRA)

[SOW 248] The Contractor shall support the development of the SRA, including risks related to modern CIS technologies IAS specific risks.

[SOW 249] The Contractor shall consider any change to be within the technical and financial scope of this Contract whenever the implementation of security measures results in the modification of the design (without introducing additional components), other documentation requirements, and changes to configuration of components; no ECP shall be generated.

System-specific Security Requirements Statement (SSRS)

A SSRS will be developed, as directed by the SAA, defining the security requirements for IAS.

[SOW 250] The Contractor shall support the development of the SSRS to include the minimum levels of security deemed necessary.

Security Test and Verification Plan (STVP)

The STVP provides a plan of all security tests.

[SOW 251] The Contractor shall support the development of STVP, using the STVP template provided by the Purchaser.

[SOW 252] The Contractor shall ensure all security mechanisms are planned for testing.

[SOW 253] The Contractor shall execute the STVPs on site, under Purchaser's supervision.

Security Test Report (STR)

The STR provides results of all security tests specified in the STVP.

[SOW 254] The Contractor shall produce and deliver a STR, containing results of all security tests specified in the STVP, using the STR template provided by the Purchaser.

[SOW 255] The Contractor shall ensure security test identifiers are preserved in the Report as defined in the STVP.

Security Operating Procedures (SecOPs)

SecOPs will be developed for the centrally managed IKM Tools.

[SOW 256] The Contractor shall deliver and present the version of the SecOPs to the SAA for approval, using the template provided by the Purchaser.

[SOW 257] The Contractor shall take into account any comments from the reviewers and SAA and shall update the document in order to gain SAA approval of Services localised SecOPs for the site.

11.4.1.3. Security Documentation Review

All documents for security accreditation will be subject to Purchaser and SAA review and approval.

The Contractor should expect a number of review rounds per document before it will be approved.

[SOW 258] The Contractor shall produce Security Documentation under the close supervision and guidance of Purchaser's specialists.

[SOW 259] The Contractor shall submit Security Documentation to the Purchaser for review before submission to SAA for approval.

[SOW 260] The Contractor shall take into account any comments from the reviewers and SAA and shall update Security Documentation in order to gain SAA approval.

11.4.1.4. Security Mechanisms to be implemented by IAS.

The Security Mechanism (SM) to be implemented IAS will be based on:

a. The outcome of the SRA

b. The CIS Security Reference Baseline (see ANNEX A).

[SOW 261] The Contractor shall address SRA-recommended changes in security mechanisms in the design.

[SOW 262] The Contractor, in the Services design, shall include implementation of the Security Mechanisms and provide full traceability of high level security measures requirements down to the implementation level.

[SOW 263] The Contractor shall maintain an end-to-end traceability of the required security measures throughout the project.

[SOW 264] The Contractor shall include any additional security measures resulting from the follow-on risk assessments as part of the end-to-end traceability.

[SOW 265] The Contractor shall design the security mechanisms for Services to be complementary to and do not overlap with the NATO wide IA Services capability already provided by other NATO systems.

[SOW 266] The Contractor shall design the security mechanisms to integrate with the existing NATO wide IA Services capability.

[SOW 267] The Contractor shall implement the security mechanisms, approved by the Purchaser after coordination with the SAA, as a part of the design and security accreditation work and shall produce the associated documentation.

11.4.2. Physical Configuration Audit (PCA)

[SOW 268] The Contractor shall schedule and chair the PCA.

[SOW 269] The Contractor shall co-ordinate the PCA with the Purchaser's Site POC.

[SOW 270] The Contractor shall produce and deliver a PCA Report.

11.4.3. Documentation

[SOW 271] The Contractor shall deliver up-to-date security documentation as a result of implementation activities.

11.5. Project Controls

11.5.1. Risk Management

[SOW 272] The Contractor shall establish and maintain a Risk Management process for the project, compliant with [NCIA PDED 06.00.03, 2015] and described in the RMP.

[SOW 273] The Contractor's Risk Management process shall at minimum enable and define identification of all types of risks, evaluation and prioritization of each risk, definition of proposed response strategy, owner and actions and suggested monitor and control mechanisms.

[SOW 274] The Contractor shall document and maintain status of all risks in the Risk Log where he shall record and track all project risks regardless of their status.

[SOW 275] The Contractor shall update Risk Log at minimum on a monthly basis as an input for the PSR.

[SOW 276] The Contractor shall add to the Risk Log additional risks identified by the Purchaser.

[SOW 277] Upon Purchaser request, the Contractor shall deliver the Risk Log to the Purchaser, throughout the duration of the Contract.

11.5.2. Issue management

- A Project Issue is anything that could have an effect on the Project, either detrimental or beneficial (e.g. problem, error, anomaly, risk occurring, query, change in the project environment, change request, off-specification).

[SOW 278] The Contractor shall establish and maintain a process for identifying, tracking, reviewing, reporting, and resolving all project issues.

[SOW 279] The Contractor shall describe the Issue Management Process in the CMP (see section 17.2).

[SOW 280] The Contractor shall develop and maintain an Issue Log (see Section 11.5.2) where he shall record and track all project issues regardless of their status.

[SOW 281] The Contractor shall include the Issue Log in the Configuration Management process and keep it under configuration control and in the Configuration Management Database (CMDB).

[SOW 282] The Contractor shall update Issue Log at minimum on a monthly basis as an input for the PSR.

[SOW 283] The Contractor shall add to the Issue Log additional issues identified by the Purchaser.

[SOW 284] Upon Purchaser request, the Contractor shall deliver the Issue Log to the Purchaser, throughout the duration of the Contract.

SECTION 12 : SECURITY

12.1. Introduction

[SOW 285] This section describes the security requirements applicable to the Contractor. The Contractor shall support any security testing, including security audits undertaken by the Purchaser.

[SOW 286] The Purchaser will give advice and instructions to the Contractor on any security implication or any proposed change based on the findings and results of the security audits.

[SOW 287] Three (3) main types of deliverables and activities relate the security accreditation process:

a. Security Working Group (SWG) – see **Error! Reference source not found.**

b. Documentation

c. Software approval – see 12.2

[SOW 288] Following contract award, a Security Working Group (SWG) will be established with membership of the Contractor's security representative, the purchaser's security subject matter experts.

[SOW 289] The Security Working Group provides the forum for the Contractor to discuss IAS related security issues with the other attendees.

[SOW 290] The Contractor's security specialist shall prepare for and attend each SWG meeting.

12.1.1. The purchaser will prepare the agenda for each SWG meeting in collaboration with all parties of the IAS project.

[SOW 291] During each SWG meeting, the Contractor shall participate in a security review with the purchaser and the SAA's representative of the IAS Capability.

[SOW 292] During the SWG meetings the Contractor shall present any relevant item. For example: proposed IAS solution, proposed definition and implementation of the security measures, produced security documents, security test plans, procedures and results, etc.

[SOW 293] A SWG meeting shall be held every 8 weeks up to PSA. After PSA, SWG meetings shall be held every 4 months. The Contractor, the purchaser or the SAA may request an out of cycle SWG meeting to resolve an urgent issue.

[SOW 294] Each Security Working Group meeting shall be held at the premises of the purchaser (in Belgium or The Netherlands).

[SOW 295] The Contractor shall deliver to the Purchaser all necessary documentation to support the security review and any other topics listed on the agenda for the SWG at least 10 working days before the planned start of the SWG meeting.

[SOW 296] The Contractor shall deliver SWG meeting minutes.

12.1.2. System Description

[SOW 297] The current initial system description shall be completed with the details of the system implementation.

[SOW 298] The system description shall follow template provided by the Purchaser at a minimum include the following information:

a. Detailed technical description showing the main components and the high level information flows.

b. Description of all internal and external interconnections of the system.

c. List of HW and software components used, and the physical locations where they are deployed.

d. High level overview of the security mechanism implemented.

12.2. Software Approval process

12.2.1. Any software to be deployed on NATO networks and in NATO operational environments is subject to security screening and approval by NATO. In particular, the software must be included in the NATO operational baseline as described in the NATO Approved Fielded Product List (AFPL) for the particular network on which the software is to be deployed.

[SOW 299] The Contractor shall be responsible for the successful listing of each of the IAS software component on the NATO AFPL for the networks on which the IAS component is to be deployed.

12.2.2. The software approval process is divided into multiple complementary activities.

12.2.3. Request for Change (RFC). The software and supporting documentation to be approved will be submitted to the NCI Agency Configuration Control Board for approval.

12.2.4. Software Security and Technical Tests (i.e. vulnerability assessment and penetration tests). The software itself and the software documentation is subject to in-depth security technical assessment by NATO.

12.2.5. IV&V testing by NCIA IV&V Service Line. The Product Baseline is subject to independent testing (e.g. compatibility testing, interoperability testing, network and performance testing, usability testing, reliability testing, functional testing.

[SOW 300] The Contractor shall support the software approval process and tests by delivering the Software approval documentation Package and ensuring the Contractor's technical staff are present during and actively participate in the preparation and execution of test sessions.

12.2.6. Two Software Security and Technical Tests sessions are foreseen, each of duration of 10 (ten) working days. However, the test sessions shall be repeated until the software successfully completes the tests for listing on the AFPL for the networks on which the IAS components are to be deployed. The Contractor shall support the Software Security and Technical Tests sessions by preparing and delivering the appropriate documentation as required by the Purchaser. Software Security and Technical tests will normally be performed after BLAT testing, although the two test sessions may overlap.

12.2.7. Two NCI Agency IV&V Service Line test sessions are foreseen, for total of 30 working days. However, the test sessions shall be repeated until the software successfully completes the tests for listing on the AFPL for the networks on which the IAS components are to be deployed.

[SOW 301] The Contractor shall support the NCI Agency IV&V Service Line test sessions by preparing and delivering the appropriate documentation as required by the Purchaser.

12.2.8. As part of IV&V testing, interoperability tests shall be performed between the IAS and other applications as requested by the Purchaser. These applications will be defined by the Purchaser in correspondence to the Contractor concerning the System Test Plan.

12.2.9. The Purchaser will provide the Contractor with a test report at the end of each test session. If not successful the test report will state the reason for failure and remedial actions will be indicated.

[SOW 302] The Contractor shall update the Product Baseline as a result of the above-described test sessions.

[SOW 303] The successful completion of testing shall be the Contractor’s responsibility and any additional testing session required, as a direct or indirect result of the test failure shall be borne by the Contractor.

[SOW 304] The software approval tests are to be defined by the Purchaser and shall be performed on the IAS Reference System at Purchaser premises.

[SOW 305] The installation instructions shall be followed precisely during the installing of the software to be tested.

[SOW 306] The Contractor shall supply detailed operating instructions for the IAS software component to be tested.

[SOW 307] The operating instructions shall be followed precisely during the testing of the software to be tested.

[SOW 308] The Purchaser reserves the right to perform user produced test scenarios during this test. The Contractor shall be responsible for ensuring the IAS components successfully pass these test scenarios.

SECTION 13 : INTEGRATED LOGISTICS SUPPORT (ILS)

Integrated Logistic Support is the time period from contract award through the warranty period (1 year after FSA).

[SOW 309] The Contractor shall use the [AIA/ASD SX000i, 2018] specification as guidance when establishing and conducting the ILS Process, in accordance with the requirements of the contract.

13.1. Integrated Logistics Support Plan (ILSP)

The ILSP is a standalone Product Lifecycle document that will survive the project after FSA. The acceptance of the ILSP by the Purchaser signifies only that the Purchaser agrees to the Contractor's approach in meeting the requirements. This acceptance in no way relieves the Contractor from its responsibilities to meet the requirements stated in this Contract.

[SOW 310] The Contractor shall provide and maintain an ILSP, tailored to the Project, incorporating Purchaser ILS approved changes (in the Project Baselines, in the SOW, or in support arrangements), establishing/describing the policies, procedures, and methodologies to ensure the logistic requirements are achieved and to refine the support to the system throughout the system lifetime. shall

[SOW 311] The Contractor shall provide a draft version of the ILSP at the Invitation For Bid Stage.

[SOW 312] The Contractor shall provide a more detailed draft version of the ILSP including the Maintenance and Support concept at PDR.

[SOW 313] The Contractor shall provide the final ILSP including the Maintenance and Support concept at CDR.

[SOW 314] As a minimum, the ILSP shall describe the Contractor's:

[SOW 315] Plans for the management control, interface and integration of all elements of the Contractor's Integrated Logistics Support Programme with the system engineering and design processes.

[SOW 316] Organizational structure, procedures and activities implemented, followed and performed to ensure that logistics and the logistics support elements influence and interface with system design and other functional areas, to satisfy supportability criteria approach for each of the following logistics element:

a. Logistics Support Analysis (LSA) including Logistic Data, Supply Support and the Maintenance and Support concept.

b. Training.

c. Packaging Handling Storage and Transportation (PHST).

d. Parts Obsolescence Management.

e. ILS structure and the overall design process with his sub-contractors, vendors and suppliers.

f. Schedule of the ILS tasks, deliveries and a detailed description of the interaction of the ILS activities with the other activities performed.

[SOW 317] The Contractor shall define the 2nd and 3rd Level Support process interfaces to the other processes, including the existing NCIA Service Desk (1st Level of Support).

13.2. Maintenance and Support concept

[SOW 318] The Contractor shall develop and maintain the IAS System Maintenance and Support Concept that defines the maintenance and support environment, constraints, locations, procedures, artefacts, organisation and personnel skills to maintain the capability. An initial more detailed draft version of the Maintenance and Support Concept shall be delivered not later than the Preliminary Design Review as part of the ILSP.

[SOW 319] The Contractor shall ensure the Maintenance and Support Concept defines the Maintenance and Support tasks at any level of support and at any level of maintenance.

[SOW 320] The Contractor shall ensure the procedural description includes objective(s), triggering event(s), input(s), output(s), task(s), roles and responsibilities (Responsible, Accountable, Support, Consulted and Informed (RASCI) format), constraints, exceptional case(s), and tool(s) support.

[SOW 321] The Contractor shall ensure the IKM Tools ILSP is based on the established Support Concept.

[SOW 322] The Maintenance and Support concept and related Logistics Support Analysis shall support the Reliability, Maintainability and Availability (RMA) requirements set out in the Annex A (SRS) and KPI's (Section 14) of this SoW.

13.2.1. Technical Documentation

[SOW 323] The Contractor shall provide all the technical documentation for the hardware and software used in the IKM Tools. All nomenclatures and technical data used shall be consistent throughout all documentation of the project.

[SOW 324] The Contractor shall update the technical documentation and release the updated versions free of charge after every change during the warranty period, if required. The Contractor shall introduce the updates in the revision history of the manual including chapter/page numbers.

[SOW 325] Technical Documentation shall be subject to Configuration Management.

[SOW 326] Technical documentation shall be provided in English, as soft copy and shall be delivered using the Microsoft Office Formats and shall be editable and shall consist (as a minimum) of:

[SOW 327] The Contractor shall produce a User Guide: a user-readable description of the features of the Application.

[SOW 328] The Contractor shall produce an Administrator Guide: a step-by-step guide for performing the following activities:

a. Start/Stop of the Applications.
b. Backup/Restore.
c. Monitoring.
d. Log management.
e. Event management.
f. Batch processes management.
g. Every other activity needed to operate and maintain the Applications.

[SOW 329] The Contractor shall produce OEM manuals for COTS products (Hardware and Software).

[SOW 330] The Contractor shall produce an As-built System Requirement Statement: a description of the functional and not-functional requirements of the Applications as they have been implemented at FSA.

[SOW 331] As-built Technical Architecture shall contain: Description of the current architecture of the Application in all its the environments (Development, Test and Production):

a. Farm Topology.

b. Servers information (name, CPU, RAM, HD, etc.).

c. Protocols.

[SOW 332] The Contractor shall provide and maintain the following documents:

a. As-built System Design Document.

d. Installation and Configuration Guide: a step-by-step guide to install and configure the Application from scratch.

e. Deployment Guide: a step-by-step guide to deploy the subsequent Application Solutions.

f. Build Guide: a step-by-step guide to compile the custom Solutions.

g. As-built Test Cases Suite: the complete Test Cases Suite used to test the IKM Tools.

h. Software baseline: a list of all the COTS/Custom Solutions/DLLs included into the final release of each Application and their “build date”.

i. Known Issue Register: a list of all the known issues and the related workarounds Roles and Groups Register: a list of all the user roles, their description (the list of the functionalities available to each role) and the corresponding Active Directory Groups.

j. Web Service Reference Guide.

k. Maintenance Manuals.

[SOW 333] The Contractor shall develop, provide and maintain the Maintenance and Administration Manuals.

[SOW 334] The Contractor shall develop, provide and maintain the Disaster Recovery manual.

[SOW 335] The Contractor shall ensure the Maintenance and Administration Manual contains Scheduled and Unscheduled maintenance and administration procedures.

[SOW 336] The Contractor shall ensure the Maintenance and Administration Manuals contains a full product breakdown list.

[SOW 337] The Contractor’s Maintenance and Administration Manual shall define the in-depth, step-by-step procedure how to perform the 1st, 2nd and 3rd level corrective and preventive maintenance tasks.

[SOW 338] The Contractor shall ensure the Maintenance and Administration manual includes an annex with troubleshooting information that provides breakdowns of actions to be performed to solve a full range of (potential) problems or provide workarounds.

[SOW 339] The Contractor shall ensure the Maintenance and Administration manual contains all required configuration information and settings.

[SOW 340] The Contractor shall ensure the Maintenance and Administration Manual includes all information, illustrations, and procedures required for the installation, configuration, provisioning, testing, repair, replacement, and troubleshooting of an item CI.

[SOW 341] The Contractor shall ensure that for each Maintenance and Administration task the following is addressed:

a. The support level to be assigned.

b. Location/facility involved (if the operation is performed remotely, it has to be specified).

c. Personnel skills required.

d. Task duration and frequency (if applicable).

e. Manpower required.

f. Tools and special tools required (if any).

g. The steps needed to perform the task.

13.3. Training

13.3.1. General Requirements:

[SOW 342] The Contractor shall provide training for all system administrators, functional administrators and users of the new system through a combination of self-study aids, including System User and Administrative Manuals (hard copy and interactive electronic), residential, instructor-led training, on-the-job (OTJ) training, Computer-Based Training (CBT) and eLearning Training Materials, in accordance with the NATO Bi-SC DIR 75-7, September 2015, and AIS specific training requirements. The training shall enable personnel appointed by the Purchaser to safely test, operate/use, troubleshoot, restore and maintain all HW and SW of the IAS System procured through this contract.

[SOW 343] As part of the training process the Contractor shall provide the Train the Trainer courses for a number of instructors designated by the purchaser.

[SOW 344] The purpose of the On-the-Job Training (OJT) is to provide hands-on training to the operational users in a normal working situation. The OJT shall include helping the operational user to perform initial operational tasks.

[SOW 345] The Contractor shall train the System Administrators (and Testers if required) through on-site classroom and/or on-the-job trainings.

[SOW 346] The Contractor shall propose a training approach (training plan) as per Training Plan 13.3.3:

[SOW 347] As part of the system implementation, the Contractor shall provide on-site training to all support staff designated by the Purchaser and on all tasks required to operate, maintain, administrate, and recover.

[SOW 348] Each session of a Training Course shall last no less than two (2) days and no longer than five (5) days. The actual duration for each course shall be determined according to the TNA.

[SOW 349] The Reference and Testing Facility staff shall be trained to operate the Reference and Testing Facility, through attending a maximum one day, on-site training course, prepared, organised and led by the Contractor.

[SOW 350] The Contractor shall provide all other facilities, services and equipment (including servers and workstations for students and teachers, network equipment, all required SW, etc…) necessary to carry out the On-Site Training activities.

[SOW 351] The Contractor shall provide all training material as a soft copy in Microsoft Office Formats and shall be Editable.

13.3.2. Training Needs Analysis (TNA)

[SOW 352] The Training Process and Procedures shall be based on the results of the Training Needs Analysis (TNA) to be performed by the Contractor.

[SOW 353] The Contractor shall conduct a Training Needs Analysis (TNA) in accordance with the [BiSC D-075-007, 2015]. The TNA shall include (as a minimum).

a. Target Audience Analysis.
b. Performance Gap Analysis.
c. Difficulty, Importance and Frequency (DIF) Analysis.
d. Training Delivery Options Analysis.
e. The Training Needs Analysis shall consider all assigned staff roles involved in IAS System operation, administration, maintenance and support at all levels.

[SOW 354] The Contractor shall identify the eventual prerequisite of the personnel for training participation as part of the training needs analysis.

[SOW 355] The Contractor shall deliver a TNA Report that captures the results of the TNA. The TNA report shall include the following:

a. a description of the TNA approach and activities.
b. an account of the operation, support, corrective and preventive maintenance tasks considered in the TNA.
c. the results of the Target Audience Analysis, the Performance Gap Analysis the DIF Analysis and the Training Options Analysis.
d. the final list of Performance Objectives (LOPS) in the form of Table 2 of Annex J of [BiSC D-075-007, 2015].
e. the final list of Learning Objectives in accordance with Annex G of [BiSC D-075-007, 2015].
f. one or more Course Control Document II – Course Proposals in accordance with Annex L of [BiSCD 75-7, 2015] as summaries of the proposed E&IT solutions.

13.3.3. Training Plan

[SOW 356] The Contractor shall develop and provide IAS System Training Plan. The Training Plan shall address the results of the Training Needs Analysis.

[SOW 357] The Training Plan shall describe how it will meet the Training requirements found after the TNA for initial and follow-on training.

[SOW 358] The training plan shall describe the quality management process for training.

[SOW 359] The Training Plan shall address all stages of training development, delivery, and support covered under this Contract.

[SOW 360] The Training Plan shall describe in a coherent way how training will be designed, developed, delivered, and maintained throughout the life of the IAS System.

[SOW 361] The Training Plan shall include training design documentation using the Course Control Document III – Programme of Classes template provided in [BiSC D 75-7 2015] Annex R-4.

[SOW 362] The Contractor shall describe in this plan the approach to training, milestones, resource requirements, management structure, interrelationships and other tasks related for to training development.

[SOW 363] The Training Plan shall describe the training documentation for each course including but not limited to the syllabuses, schedules, course prerequisites (both for attendees and physical resources), evaluations and instructors.

[SOW 364] The Contractor shall recommend in this plan the mode(s) of training (e.g. formal classroom, individual computer-based, on-the-job, commercial or a combination) and the rationale for those recommendations for each type of training (User, Administrator, etc.).

[SOW 365] The training plan shall describe the transition training process to manage the change of training from the Initial Service to the full service capability.

[SOW 366] The Training Plan shall describe the support to be provided by the Purchaser (manpower, services and material).

[SOW 367]

13.3.4. Training Materials

[SOW 368] The Contractor shall provide a training plan and all the appropriate training documentation to support the Purchaser Personnel to safely test, operate/use, troubleshoot, restore and maintain the IAS System and its support equipment. As a minimum it shall be composed of the following:

a. Training Syllabus.
b. Training Plan.
c. Student Manual.
d. Instructor Guide and Material.
e. Learning guide.
f. Training Presentation.
g. eLearning Material (or other media where this is a recommended solution).
h. Quick reference card.
i. Training aids of all types including real equipment, references and job aids.
j. Upon completion, a Training Certificate.
k. Course evaluation feedback form.

[SOW 369] The Contractor shall develop and provide the Training Materials for each Training Course.

[SOW 370] The Training documentation shall conform to the standards outlined in the training Section of the SOW and SRS.

[SOW 371] The Training documentation (Including the E-Learning Material) shall be developed in accordance with the output of the TNA.

[SOW 372] The training documentation for the IAS System -specific courses shall provide all the information required to conduct the courses and maintain the training documentation.

[SOW 373] The materials shall follow an existing instructional methodology that links training objectives with course structure, instructional techniques, course content, and assessment tools.

[SOW 374] For the development of training documentation, the Contractor shall reuse existing COTS documentation and manuals to the maximum extent possible.

[SOW 375] All course content shall be referenced to commercial or Contractor-developed documentation -- preferably user or technical manuals -- that describe the subject matter and that are available on-site to students after course completion.

[SOW 376] The hands-on exercises included in the Training Program shall incorporate all IAS System implementation activities at a site.

[SOW 377] The Contractor shall ensure that the IAS System Training documentation all provided in the UK English language. It can be assumed that all Purchasers personnel selected to attend the courses will meet the minimum Standardised Language Proficiency (SLP) of 3232 in English as specified in STANAG 6001.

[SOW 378] The Training presentation materials shall include all slides or other information to be presented by the instructor during the course.

[SOW 379] The Training Course shall include a Training Syllabus containing the following elements:

a. Course title.

b. Course description.

c. Learning objectives, as identified in the Training Needs Analysis and confirmed in the Training Plan.

d. Entry profile.

e. Concepts, Functions and Features presented in the course.

f. Instructional methodologies to be employed in the delivery of the course.

g. In-class assignments or laboratories.

h. Evaluation tools.

i. Performance standards.

[SOW 380] The Contractor shall provide each student attending a Training Course with an electronic copy and printed copy of the Student Manual for the course.

[SOW 381] The Student Manual shall provide the student with necessary information on all lesson objectives and contents, guidance for all learning activities and cross-references to assist the students in achieving the course objectives.

[SOW 382] The Student Manuals shall take into account results from the DIF (Difficulty, Importance, and Frequency) analysis and shall permit students to perform their major tasks.

[SOW 383] The Student Manual shall describe the concepts, functions, and features presented in the course, including links or references to the relevant documentation included in the PBL.

[SOW 384] The System Administrator Training and related training material shall provide sufficient information to safely configure, test, troubleshoot, restore, maintain and backup the IAS system.

[SOW 385] The Contractor shall provide an Instructor's Guide for each training course. It shall contain all necessary information to prepare and conduct lessons and to evaluate students, including exercises, quizzes, and examinations and their corresponding answer sheets.

[SOW 386] The training documentation shall also provide notes to instructors to assist in conducting the lecture or exercise. Presentation materials shall be provided in Microsoft PowerPoint.

[SOW 387] The Instructor Guide shall detail the sequence of course instruction, providing references to the applicable training presentation materials, assignments and laboratories, evaluation tools and answer keys, Student Manual, and the Platform on-line help function.

[SOW 388] The Instructor Guide shall also include:

a. Materials for in-class assignments and laboratories.

b. Sample evaluation tools and answer keys.

c. Training System installation and configuration procedures.

13.3.5. Training Assessment and Evaluation

[SOW 389] The Contractor shall propose assessment and evaluation methodology to the purchaser as part of the Training Plan.

[SOW 390] Training Assessment methodology shall be based on [BiSC D 75-7 2015] sections 7-6 and 7-7 for assessment approaches and instruments and include as a minimum:

a. Examination methodologies and certification.

b. Minimum score to achieve for successfully passing the course.

c. Course(s) to be done to get the certification for each role.

d. Description of Role’s certification process.

[SOW 391] The Contractor shall ensure that each student is instructed at the end of each Instructor led or e-Learning course to complete and return the course evaluation feedback form provided as part of the course.

[SOW 392] The Contractor shall consolidate and forward student feedback to the Purchaser following each training course in the form of a Training Evaluation Report. The report shall recommend changes and improvements to the training plan based on the consolidated student feedback. The report shall address student attendance, problems encountered and actions taken to resolve the problems.

[SOW 393] The Contractor shall revise/ refine and re-issue course material and e-Learning products to reflect the consolidated student feedback and proposed improvements in the training evaluation report.

[SOW 394] The Contractor shall produce Training Certificates for each training session and student. The certificates shall be delivered not later than two weeks following the completion of the training.

13.3.6. E-Learning Training

[SOW 395] All e-Learning training material shall be prepared in compliance with the Sharable Content Object Reference Model(SCORM) 2004 4th edition.

[SOW 396] The Contractor shall provide to Purchaser, all the e-Learning assets including the SCORM packages, source code files, graphic and multimedia assets.

[SOW 397] The e-Learning material shall complement the IAS System classroom training and online help capabilities by defining and explaining key concepts and terminology of the operational processes incorporated into IAS System features and functions.

[SOW 398] The e-Learning package shall be user transparent, efficient and integrating the specific features for instructor and student without requiring special training in authoring systems technology or help from subject experts.

[SOW 399] The e-Learning Package shall allow modifications by the Purchaser to reflect changes in the training concept and/or content without any additional cost to NATO.

13.4. Supply Support

This section defines the general requirements that are applicable to all IAS System equipment Supply Support and Delivery.

13.4.1. System Inventory

[SOW 400] The Contractor shall provide the Purchaser's ILS POC with a System Inventory in electronic Microsoft Excel format at least ten (10) working days before the first delivery of equipment.

[SOW 401] The Inventory shall be updated whenever changes occur or updated data are available.

[SOW 402] The System Inventory shall be subject to approval by the Purchaser.

[SOW 403] The System Inventory is site-specific and shall include, in separate chapters, all items furnished under this Contract, as follows:

a. All main equipment – i.e. all CIS items, both COTS and Developed, down to replaceable item level, hierarchically listed conform configuration item decomposition, including groups and assemblies; all installed hardware, such as equipment racks; all LRU interconnecting equipment when they are special-to-type (e.g. special-to-type cables);

b. All ancillary equipment – i.e. all secondary items not essential to the functioning of the system, but deemed essential to the operation of the system, such as standard cables, tool box, but not the tools inside the tool box etc;

c. All Purchaser and Contractor provided software in form of a Software Distribution List (SWDL) as detailed 13.4.2 Software delivery;

d. All support equipment – i.e. all tools, test equipment, etc. (where applicable);

e. All Purchaser Furnished Equipment (PFE); (where applicable);

f. All documentation, such as manuals, handbooks and drawings;

g. All training documentation Location Reference Indicator including Building, Room, Rack number, Rack location.

[SOW 404] All equipment and cables including their connection points shall be labelled in compliance with Purchaser regulation and guidance. Labels shall at least contain the Contractor/OEM's name, part number and serial number to ensure proper and quick identification of equipment down to the LRU level.

[SOW 405] Labelling shall be accomplished in a manner that will not adversely affect the life and utility of the assembly or module. Whenever practicable, the label shall be located in such a manner as to allow it to be visible after installation.

[SOW 406] Marking shall be as permanent as the normal life expectancy of the material on which it is applied and shall be such as required for ready legibility and identification. Marking shall be capable of withstanding the same environment tests required of the part and any other tests specified for the label itself. When possible, letters, numerals, and other characters shall be of such a size as to be clearly legible.

[SOW 407] Cables shall be labelled at their termination points indicating both ends and connection points. Labelling scheme shall be in line with the Purchasers labelling guidance and reflected in related technical design and technical documentation.

[SOW 408] The Contractor shall deliver a CIS Data Sheet (CIDS) also known as Material Data Sheet (MDS). The Data Sheet is site and delivery specific and shall be submitted at least ten (10) working days before the delivery of the equipment. A template can be obtained from the Purchaser.

13.4.2. Software delivery

[SOW 409] The Contractor shall provide a detailed Software Distribution List (SWDL), which shall detail comprehensively all Computer Software Configuration Items (CSCI) and associated software, firmware or feature/performance licenses provided under this Contract upon every new release. The SWDL shall include, the following data elements:

a. CSCI identification number;

b. Nomenclature;

c. Application Name;

d. Version number;

e. Build Date;

f. License key (if applicable);

g. License renewal date (if applicable);

h. Warranty expiration date;

i. Date of distribution;

j. Distribution location (geographically);

k. Distribution target (server.

[SOW 410] The Contractor shall make sure that all licenses are registered with the NCI Agency as end-user.

13.5. Packaging, Handling, Storage, Transportation (PHST)

13.5.1. Handling and Storage

[SOW 411] The Contractor shall be responsible for all handling and storage of equipment, packages, boxes and containers during the project.

[SOW 412] The Contractor shall also be responsible for organising and operating any handling equipment and storage facilities required.

13.5.2. Shipment

- The Purchaser will not be liable for any storage, damage or any other charges involved in such transportation of supplies prior to the actual acceptance of such supplies at destination.
- The Purchaser will not accept responsibility and/or ownership of the equipment before acceptance is complete.
- The Purchaser's Point of Contact (POC) for all shipment instruction and shipment requests is:
  - Mr. Heinz Mueller-Nordmann (NCI Agency)/ILS Office.
  - E-mail: heinz.mueller-nordmann@ncia.nato.int
- All packages, boxes will be inspected visually by the Purchaser's POC at final destination to ensure that no damage has occurred during transport and that all packages, boxes and containers detailed in the packing list have been accounted for.

[SOW 413] The Contractor shall provide the Notice of Shipment ten (10) working days prior to the delivery of any shipment of supplies in accordance with the instruction of the Purchaser ten (10) working days prior to the delivery of any shipment of supplies in accordance with the instruction of the Purchaser.

[SOW 414] This notice shall be provided electronically and shall include the following information:

a. Purchaser Contract Number.
b. Contract line Item Number (CLIN), designation and quantities.
c. Name and address of the Contractor, Purchaser and Consignor.
d. Final destination address and POC.
e. Manufacturer, Manufacturer Part Number, Nomenclature, Items Description, Quantity, Serial Number.
f. Number of packages/containers, dimensions and gross weight.
g. Consignor's and Consignee's name and address.
h. Mode of shipment (e.g. road, air, sea).
i. Date of shipment.
j. Number of the Form 302 used (if required).
k. Final/Partial Shipment.

l. For each item shipped: Contract Line Item Number (CLIN) number as per the SSS; nomenclature; part number; serial number; and quantity.

m. For each box, pallet and container: box/pallet/container identification number and number of boxes/pallets/containers; weight; dimensions.

[SOW 415] The Contractor shall be responsible for completing the Custom Form 302 as required (a customs declaration form 302 is required for all shipments entering into any EU state from a non-EU Nation).

[SOW 416] Prior to a shipment by the Contractor, the Purchaser will upon request issue a Customs form 302 which in some cases may facilitate the duty free import/export of goods. The Contractor shall be responsible for requesting the issue of a form 302 at least ten (10) working days prior to shipment. The request for a Form 302 shall be included with the Notice of Shipment and accompanied by one (1) additional packing list. The request is normally processed by the Purchaser within three (3) working days. The requested 302 forms will then be sent as originals by courier to the Contractor. The original 302 forms shall accompany the shipment and therefore no fax or electronic copy will be used, nor provided to the Contractor.

[SOW 417] The Contractor shall be responsible for customs clearance of all shipments into the destination countries. It is the Contractor's responsibility to take into account delays at customs. The Contractor shall therefore consider eventual delays and arrange for shipment in time. Under no circumstances can the Purchaser be held responsible for delays incurred, even when utilising Purchaser provided Customs Form 302.

[SOW 418] If a country refuses to accept the Form 302 and requires the payment of customs duties, 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. Should such an event occur, the Contractor shall pay these customs duties and the Purchaser shall reimburse the Contractor at actual cost against presentation of pertinent supporting documents.

[SOW 419] The Contractor shall ship all required software, documentation, and installation or testing tools to the locations designated by the Purchaser.

[SOW 420] The Contractor-delivered equipment will be subject to Purchaser ILS and security checking processes. The Contractor shall take this delays into account for follow on activities.

[SOW 421] The Contractor shall be responsible for resolving any loss incurred in shipping to the NCIA facility.

[SOW 422] All goods delivered shall be delivered to the destination specified by the Purchaser. The items being returned after warranty repair shall be shipped to a purchaser defined NCIA facility at no additional cost.

[SOW 423] All materials covered under the Contract, including items being returned after warranty repair, shall be shipped Delivered Duty Paid (DDP) to the addresses specified in accordance with current INCOTERMS published by the International Chamber of Commerce.

[SOW 424] In case a shipment is composed of one or more pallets, a pallet shall be defined as the standard Euro-pallet (EUR/EPAL; 1200mm x 800mm), packed to a height as close

as practicable to a total maximum height of 1800mm, and not exceeding a total weight of 1000 Kg.

[SOW 425] The Contractor shall be responsible for any insurance covering transportation and shipment.

[SOW 426] The Purchaser reserves the right to reject any deliveries which do not fulfil the Notice of Shipment, Packing list or site access requirements.

13.5.3. Supply chain security

[SOW 427] The Contractor shall warrant that all supplies furnished under this Contract are genuine and free of malicious components, firmware and software.

[SOW 428] The Contractor shall ensure that all equipment to be delivered are protected from malicious tampering during storage and transportation up to the point of delivery.

[SOW 429] The Contractor shall confirm in the CIDS/MDS, per item, that the items to be delivered have been checked for technical integrity and protected from malicious tampering.

[SOW 430] The Contractor shall also identify in the CIDS/MDS, per item, the identity of the supplier of the item and the identities of suppliers of major components thereof.

[SOW 431] The Contractor shall allow and support ad-hoc spot checks and audits by the Purchaser of any of his supply chain security measures at any of the Contractor's locations.

[SOW 432] The Purchaser reserves the right to reject any equipment delivered which does not conform to the description provided in the CIDS/MDS or shows evidence of tampering. The Contractor shall replace such rejected goods at no cost to the Purchaser.

13.5.4. Assumptions Limitations and Exclusions

- The purchaser will not be responsible for delays incurred, even when utilizing Purchaser provided Custom Forms 302, under any circumstances.

[SOW 433] The Purchaser shall not be liable for any storage, damage, or any other charges involved in transporting of supplies prior to the actual acceptance of such supplies at the designated destinations.

[SOW 434] Items to be returned for repair/exchange from a site to the Contractor, shall be transported through Contractor arrangements.

[SOW 435] The Purchaser cannot be held responsible for any delays in implementation in the case of unavailability of facilities or materials with the exception of PFE equipment or facilities. The Contractor shall be solely responsible to acquire alternative facilities/material to assure proper storage, handling etc.

[SOW 436] The Contractor shall not be responsible for the correction of defects in Purchaser Furnished Equipment or Property.

[SOW 437] All items shall be delivered at Contractor's expense.

[SOW 438] Deliverables received at NCI Agency facilities shall remain under Contractor's responsibility until formal acceptance.

[SOW 439] The Contractor shall be responsible for all charges relating to storage, damage and ancillary costs in the transporting of all the items and supplies and for any shipment loss.

[SOW 440] The Purchaser shall not be liable for any storage, damage or any other charges involved in such transportation of supplies prior to Acceptance.

- Where manufacture is under Government Quality Assurance Authority (GQAA) surveillance, there is a requirement for Certificates of Conformance to be included with packing containers, three each per pack, one inside and two outside in a waterproof envelope.

[SOW 441] The packages or containers in which supplies are transported shall, in addition to normal mercantile marking, be marked with the following data on a separate nameplate (or transfer or stamping if nameplate is not practical): System/sub-system denomination; Purchaser Contract number; Contract Item Number Manufacturer's name and address; Shipping address.

[SOW 442] The Contractor shall be aware that, due to NATO security constraints all failed magnetic and electronic media storage (e.g.: hard disks/drives) can only be repaired or replaced on-site and cannot be removed and/or returned to the Contractor for repair. Defect magnetic and electronic media storage devices (e.g.: Compact Discs (CD), Disk Array, diskettes, hard drives, USB memory devices) will therefore be destroyed on-site by the Purchaser. Defect magnetic and electronic media shall therefore be replaced by the Original Equipment Manufacturer at no extra cost to the Purchaser.

[SOW 443] If the Contractor becomes aware at any time before acceptance by the Purchaser that a defect exists in any supplies, the Contractor shall promptly correct the defect.

13.5.5. Warranty

- Defect magnetic, solid state and electronic media storage devices (e.g., CD-ROM's, DVD's, Universal Serial Bus (USB) sticks, solid state storage drives, hard drives) will remain NATO property, at no additional cost, and not be returned to the Contractor when being replaced.

[SOW 444] The Contractor shall provide his own spare parts, tools and test equipment to maintain the system to the required performance level up to Final System Acceptance (FSA).

[SOW 445] The Contractor shall provide a warranty for a period of at least twelve (12) months for the hardware and the software starting at FSA.

[SOW 446] The Contractor shall repair repairable items received at the Contractor's plant within ten (10) days (i.e. the maximum Turn Around Time (TAT) for repairs shall not exceed ten (10) days). TAT includes in-processing, trouble shooting, repair, check-out and release to the Site or Depot.

[SOW 447] If the Contractor becomes aware at any time before acceptance by the Purchaser that a defect exists in any supplies, the Contractor shall coordinate with the Purchaser and promptly correct the defect.

[SOW 448] The Contractor shall replace any such defect storage devices with new storage devices at no additional cost to the Purchaser.

[SOW 449] The Contractor shall be responsible for the provision of any alternative or superseding items, should the original part be no longer available, ensuring compliance with the original design provided by this Contract.

[SOW 450] During the warranty period, the Contractor shall make all COTS hardware and software upgrades and updates available to the Purchaser.

[SOW 451] The Contractor shall outline the Warranty process in the ILSP.

[SOW 452] The Contractor shall provide RMA (Return Material Authorization) instructions to the Purchaser for the return of faulty items to the Contractor.

[SOW 453]

13.5.6. Disposal of Equipment

- The disposal of any legacy equipment will be the responsibility of NATO, in compliance with applicable policy.

[SOW 454] The Contractor shall be responsible for the removal of the items from the installation facilities as required, and shall work with local site personnel to ensure the controlled removal and disposal.

SECTION 14 : CONTRACTOR LOGISTIC SUPPORT

[SOW 455] This Section of the Statement of Work defines Contractor tasks and deliverables for providing limited Contractor Logistic Support (CLS) for equipment and software purchased under this project.

[SOW 456] The Contractor shall provide the following CLS services:

a. Developing and implementing a CLS Plan as defined in **A - CLS planning.**

b. Providing corrective, adaptive, preventive and minor perfective software maintenance; as defined in Section **Roles / Responsibilities**

c. **The** Contractor SHALL fulfil the activities in the L3 column marked with an R.

O&M Processes (What)			**Organization** (Who)		
Process	**Activity**	**Task**	**L1** (Centralised Service Desk)	**L2** (IAS)	**L3** (Contractor)
Operations	**Application monitoring**	Monitor Application Performance and Availability		**I**	**R**
		Analyse Performance and Availability data and historical metrics to effectively: plan for growth needs; plan upgrades, migrations, optimizations and new implementations; identify and resolve efficiency issues; and improve overall functionality		**I**	**R**
		Raise Incidents/Problems to track the resolution of Performance and Availability issues	**I**	**I**	**R**
		Monitoring of the correct replication of the Application between remote sites		**I**	**R**
		Raise Incidents to track the resolution of Application replication issues	**I**	**I**	**R**
		Monitoring and management of events (alerts, warnings, etc.)		**I**	**R**
	Log management	Monitor Application specific logs		**I**	**R**
		Monitor Application access Logs		**I**	**R**
		Periodic archiving of Application logs		**I**	**R**
	Batch Jobs management	Management of batch jobs (e.g. jobs scheduling, check of automated batch execution, run of manual jobs, etc.)		**I**	**R**
	Backup & restore	Establish Backup schedules		**I**	**R**
		Execute backups		**I**	**R**
		Execute restores		**C**	**R**

		Check the correctness of the restores		**I**	**R**
	Auditing	Forensics analysis at the Application layer		**R**	
	Service Request Fulfilment: Implement small, pre-Authorised change request ("CAT 1" change requests) that don't need to be Authorised by the iCAB (e.g. create a new department in NIP, create additional site, create a new NIP term, rename a site, etc.)	Act as the "Single Point of Contact" for the users	**R**		
		Report any Service Request/Standard Change by creating Work Order in NATO incident management toolset	**R**		
		Log Basic Information into the NATO incident management toolset	**R**		
		Categorize Work Order	**R**		
		Prioritize Work Order	**R**		
		Apply configuration changes to the IKM Tools		**I**	**R**
		Close the Work Order and update the NATO incident management toolset	**I**	**I**	**R**
		Periodically train the Purchaser about the Standard Changes implemented		**I**	**R**
	Support recurring Security Accreditations/Audits	Provide technical information for Security Accreditations/Audits/Vulnerability assessments		**C**	**R**
		Perform Risk Assessment Programs at the Application layer		**R**	
Maintenance	**Corrective Maintenance**	Act as the "Single Point of Contact" for the users	**R**		
		Report any faults by creating an incident report in NATO incident management toolset	**R**		
		Log Basic Information into the NATO incident management toolset	**R**		
		Categorize Incident	**R**		
		Prioritize Incident	**R**		
		Initial diagnosis	**R**		

		Provide end user support where necessary without administrative privileges	**R**		
		Investigate connectivity and workplace related issues	**R**		
		User service questionnaire to capture the technical details	**R**		
		Clear browser cookies by following the respective SOP	**R**		
		Restart browser	**R**		
		Reboot workstation	**R**		
		Check availability of other websites	**R**		
		Validate with a different user	**R**		
		Check local network connectivity and workplace related issues	**R**		
		Manage user access to portals as required;	**R**		
		Cookie management by advising users to clean their browser's cookies	**R**		
		Communicating with customers in person, email or phone concerning their question	**R**		
		Advising customers on the best way ahead for reported issues (ticket, change request, referral to another team, etc...)	**R**		
		Forward all the "Change Requests" to the NCI Agency Change Management Process	**R**		
		Inform users upfront about system maintenance or system upgrades	**R**		
		Advise customers why they are unable to open, share, edit documents or items	**R**		
		Escalate issues that cannot be resolved without administrative privileges	**R**		
		Analyse incidents, troubleshoot and provide a workaround		**R**	
		Resolve issues of no access to documents, by providing permissions to the users		**R**	
		Document Known errors and workarounds		**R**	
		Escalate issues that cannot be resolved without changing the configuration or the source code of the Application, creating a Problem record		**R**	**I**
		Provide specialized technical advice for Incident resolution in the form of provision of subject matter expertise		**I**	**R**
		Resolve the Incident and update the NATO incident management toolset	**R**	**R**	
		Log Basic Information of the Problem into the NATO incident management toolset		**R**	
		Categorize Problem		**R**	
		Prioritize Problem		**R**	
		Analyse Problems and troubleshoot			**R**

		Propose a technical solution to fix Problems		**I**	**R**
		Approve the technical solution to fix Problems		**R**	**I**
		Provide specialized technical advice for Problem resolution in the form of provision of subject matter expertise		**I**	**R**
		Modify the configuration of the Application (implement the technical solution)		**I**	**R**
		Modify the source code of the Application (implement the technical solution)		**I**	**R**
		Contact external vendors or third party makers for issue resolution		**R**	
		Resolve the Problem and update the NATO incident management toolset		**I**	**R**
		Raise Change Requests for deploying Patches and Minor Changes		**R**	**I**
		Provide documentation and support to CAB (iCAB, ECAB, PCAB) in review of proposed changes		**R**	**C**
		Coordinate Application outages through the ASI process		**R**	**I**
		Execute Deployments on Test Environment		**R**	**I**
		Execute Deployments on Production Environment		**R**	**I**
		Configuration Management of the Source code (check-in, check-out, merging, branching, build definition, release definition, etc.)			**R**
		Configuration Management of the Software components (i.e. update the Software baseline, update the AT&T portfolio, update the CMDB, etc.)		**R**	**I**
		Design Contractor Test Cases (Unit tests, Integration tests and System tests)			**R**
		Run Contractor Test Cases		**I**	**R**
		Design QA Test Cases		**R**	
		Run QA Test Cases		**R**	**I**
		Update As-built documentation for every Change		**I**	**R**
		Produce a post-mortem report after every High Priority Incident		**I**	**R**
		Provide monthly Performance reports regarding Problem Management		**I**	**R**
		Train the Purchaser about the technical solution implemented after the deployment of each Patch		**I**	**R**
	Preventative Maintenance	Identify and request changes needed to prevent issues		**R**	**I**
		Conducting web analytics of hosted web applications to identify under or over utilized web resources		**R**	
		Propose a technical solution to prevent issues		**I**	**R**
		Approve the technical solution to prevent issues		**R**	**I**
		Modify the configuration of the Application (implement the technical solution)		**I**	**R**

		Modify the source code of the Application (implement the technical solution)		**I**	**R**
		Raise Change Requests for deploying Patches		**R**	**I**
		Provide documentation and support to CAB (iCAB, ECAB, PCAB) in review of proposed changes		**R**	
		Coordinate Application outages through the ASI process		**R**	**I**
		Execute Deployments on Test Environment		**R**	**I**
		Execute Deployments on Production Environment		**R**	**I**
		Configuration Management of the Source code (check-in, check-out, merging, branching, build definition, release definition, etc.)			**R**
		Configuration Management of the Software components (i.e. update the Software baseline, update the AT&T portfolio, update the CMDB, etc.)		**R**	**I**
		Design Contractor Test Cases (Unit tests, Integration tests and System tests)		**I**	**R**
		Run Contractor Test Cases		**I**	**R**
		Design QA Test Cases		**R**	
		Run QA Test Cases		**R**	**I**
		Update As-built documentation for every Patch		**I**	**R**
		Provide monthly Performance reports regarding Problem Management		**I**	**R**
		Train the Purchaser about the technical solution implemented after the deployment of each Patch		**I**	**R**
	Adaptive Maintenance: - Adaptation of the Applications to the underlying environment (i.e. adapting the applications to the new minor versions of the Browser, IIS, SharePoint, SQL,	Request a Minor Change of the Application for Adaptive Maintenance		**R**	**I**
		Analyse the Change Request and propose a technical solution for Adaptive Maintenance		**I**	**R**
		Approve the technical solution for Adaptive Maintenance		**R**	**I**
		Modify the configuration of the Application (implement the technical solution)		**I**	**R**
		Modify the source code of the Application (implement the technical solution)		**I**	**R**
		Raise Change Requests for deploying Patches		**R**	**I**
		Provide documentation and support to CAB (iCAB, ECAB, PCAB) in review of proposed changes		**R**	
		Coordinate Application outages through the ASI process		**R**	**I**
		Execute Deployments on Test Environment		**R**	**I**
		Execute Deployments on Production Environment		**R**	**I**
		Install new versions of "third party" software components on top of SharePoint (Sparqube, CopyMove, Extranet manager, etc.)		**R**	**I**
		Configuration Management of the Source code (check-in, check-out, merging, branching, build definition, release definition, etc.)			**R**

	etc. Adapting to major versions will be managed by dedicated projects) - Adaptation of the Applications to new Security Accreditation requirements	Configuration Management of the Software components (i.e. update the Software baseline, update the AT&T portfolio, update the CMDB, etc.)		**R**	**I**
		Design Contractor Test Cases (Unit tests, Integration tests and System tests)		**I**	**R**
		Run Contractor Test Cases		**I**	**R**
		Design QA Test Cases		**R**	**I**
		Run QA Test Cases		**R**	**I**
		Update As-built documentation for every Patch		**I**	**R**
		Provide monthly Performance reports regarding Adaptive Maintenance		**I**	**R**
		Train the Purchaser about the technical solution implemented after the deployment of each Patch		**I**	**R**
	Minor Perfective Maintenance: development and implementation of "minor changes" of the functionalities of the IKM Tools (including: Design, Development, Testing, Change Management and Release and Deployment), until a maximum	Request a Minor Change of the Application for Minor Perfective Maintenance		**R**	**I**
		Analyse the Change Request and propose a technical solution		**I**	**R**
		Approve the technical solution for the Minor Change		**R**	**I**
		Modify the configuration of the Application (implement the technical solution)			**R**
		Modify the source code of the Application (implement the technical solution)			**R**
		Raise Change Requests for deploying Minor Changes		**R**	**I**
		Provide documentation and support to CAB (iCAB, ECAB, PCAB) in review of proposed changes		**R**	
		Coordinate Application outages through the ASI process		**R**	**I**
		Execute Deployments on Test Environment		**R**	**I**
		Execute Deployments on Production Environment		**R**	**I**
		Configuration Management of the Source code (check-in, check-out, merging, branching, build definition, release definition, etc.)			**R**
		Configuration Management of the Software components (i.e. update the Software baseline, update the AT&T portfolio, update the CMDB, etc.)		**R**	**I**
		Design Contractor Test Cases (Unit tests, Integration tests and System tests)		**I**	**R**
		Run Contractor Test Cases		**I**	**R**
		Design QA Test Cases		**R**	
		Run QA Test Cases		**R**	**I**

	number of "minor changes"/ month (max 3 minor changes/ month). The definition of a "minor change" is the one included in the SOW with the additional caveat that each change should need a maximum effort of 5 man days to be implemented.	Update As-built documentation for every Minor Change		**I**	**R**
		Provide monthly Performance reports regarding Minor Perfective Maintenance		**I**	**R**
		Train the Purchaser about the technical solution implemented after the deployment of each Minor Change		**I**	**R**
	Disaster recovery : execute disaster recovery activities related to the Application layer in the case a disaster occurs	Manual activation of the remote site		**I**	**R**
		Perform Application specific testing recovery at alternate site		**I**	**R**

Table 10 CLS Service Responsibilities

d. B - Software maintenance**.**

e. Executing application monitoring, log management, batch jobs management, backup & restore as defined in **C – IT Operations.**

f. Executing Service Request Fulfilment activities as defined in **D – Request Fulfilment.**

g. Execute Disaster Recovery activities in case a disaster occurs as defined in **E – Disaster Recovery.**

h. Providing corrective maintenance of failed equipment; as defined in Section FF - HW Maintenance

i. Providing on-site, maintenance support; as defined in Section G**G - On-site** support**.**

j. Providing training support as defined in Section **H - Training Support.**

k. Providing license management support as defined in Section **I - License Management.**

l. Updating Technical documentation as defined in Section **J - Technical documentation.**

m. Providing change management support as defined in Section **K- Configuration Management and Change Management.**

n. Conducting CLS performance reporting and reviews. As defined in Section **L - CLS Performance reporting and evaluation.**

o. Security Audits as defined in P – Security **Audits.**

p. End of Contract Activities as defined in Section S End of **contract** activities

General provisions

[SOW 457] The Contractor shall provide the CLS Service [SOW 456] starting from Pilot followed by an Optional costed and evaluated 5 (five) years period starting at FSA. The optional extension is broken down in periods as shown in the table below.

CLS Service	#	From:	To:
Initial Operational Support (Implementation)	0	Pilot	PSA
Initial Operational Support	1	PSA	FSA
Follow-on Support (Optional CLS – Costed and Evaluated)	2	FSA	FSA + 1 year
	3	FSA + 1 year	FSA + 2 years
	4	FSA + 2 years	FSA + 3 years
	5	FSA + 3 years	FSA + 4 years
	6	FSA + 4 years	FSA + 5 years

Table 8 CLS Service per period

[SOW 458] The Contractor shall provide the CLS activities as provided in Table 9 CLS Service Levels per period.

Milestone / Responsible	Pilot to PSA	PSA to FSA	FSA to end of Warranty	After Warranty
SW Operations & Maintenance without optional CLS				
Contractor	SL1, SL2, SL3	SL1, SL2, SL3	SL3 (only for Corrective Maintenance)	
Purchaser			SL1, SL2	SL1, SL2, SL3
SW Operations & Maintenance including optional CLS				
Contractor	SL1, SL2, SL3	SL1, SL2, SL3	SL3 (all the CLS services)	SL3 (all the CLS services)
Purchaser			SL1, SL2	SL1, SL2

Table 9 CLS Service Levels per period

[SOW 459] The Contractor SHALL integrate the Warranty entitlement and related processes into the CLS services.

[SOW 460] The Contractor SHALL ensure continuity of personnel assigned to the CLS services.

[SOW 461] The Contractor SHALL provide all necessary manpower and resources to meet the KPIs stated in Section M.

[SOW 462] The Contractor SHALL deliver CLS services only on-site at the Purchaser facilities. On exceptional basis the Purchaser will authorise the Contractor to perform some activities off-site (e.g. documentation, software development, advanced technical assistance).

[SOW 463] The Contractor SHALL use the Purchaser's Trouble Ticketing system (based on BMC Remedy) for logging and managing Incidents, Problems, Work Orders and Change Requests.

[SOW 464] The scope of the CLS services provided by the Contractor SHALL cover the following environments:

a. Production environment (including Disaster Recovery).

b. Test environment (IV&V, IAS).

c. Training environment.

[SOW 465] MIR environment. The scope of the CLS services provided by the Contractor SHALL cover the following system components of the IKM Tools:

a. Source code of the IKM Tools and also of the interfaces exposed by the IKM Tools (e.g. Web Services, database views, etc.).

b. Executable files of the IKM Tools and also of the interfaces exposed by the IKM Tools (e.g. Web Services, database views, etc.).

c. Middleware installed on top of SharePoint (e.g. Layer2, Sparqube, etc.).

d. SharePoint configuration.

e. As-built documentation of the IKM Tools and also of the interfaces exposed by the IKM Tools (e.g. Web Services, database views, etc.).

A - CLS planning

[SOW 466] At the start of the Initial Operating Support period, the Contractor shall further develop and complete, provide and implement a Contractor Logistics Support CLS Plan (CLSP). The CLSP shall be part of the ILSP and shall explain in detail how the Contractor intends to fulfil all requirements in this SOW. The CLS Plan also called "In Service Support Plan" (ISSP) shall address all requirements and activities taking place during the IOS and Follow on Support phases and how the services will integrate with the Purchasers Operation.

[SOW 467] The CLS Plan shall be considered a living document and as such shall be updated as necessary by the Contractor, with the Purchaser concurrence, throughout all of the CLS (IOS and Follow on) phases.

[SOW 468] The CLS plan shall clearly address (as a minimum but not limited to) the following:

a. A description of the Contractor's CLS organisation, the roles and responsibilities.

b. A description of how the Contractor will interface with the purchaser, including pertinent communication channels, points of contact and contact details.

c. A description of the CLS product baseline.

d. A description of the Contractor's pertinent procedures for all aspects of each of the services and activities specified in the CLS section of this SoW. E.g.; for Software maintenance the procedures should cover the SW maintenance process as well as the software release process; et cetera.

e. A description of the contents of the periodic performance reports.

[SOW 469] The Contractor shall conduct CLS activities in accordance with the Purchaser accepted CLS Plan. Acceptance of the CLS Plan shall not in any manner change the requirements of this contract.

Roles / Responsibilities

[SOW 470] The Contractor SHALL fulfil the activities in the L3 column marked with an R.

O&M Processes (What)			**Organization** (Who)		
Process	**Activity**	**Task**	**L1** (Centralised Service Desk)	**L2** (IAS)	**L3** (Contractor)
Operations	**Application monitoring**	Monitor Application Performance and Availability		**I**	**R**
		Analyse Performance and Availability data and historical metrics to effectively: plan for growth needs; plan upgrades, migrations, optimizations and new implementations; identify and resolve efficiency issues; and improve overall functionality		**I**	**R**
		Raise Incidents/Problems to track the resolution of Performance and Availability issues	**I**	**I**	**R**
		Monitoring of the correct replication of the Application between remote sites		**I**	**R**
		Raise Incidents to track the resolution of Application replication issues	**I**	**I**	**R**
		Monitoring and management of events (alerts, warnings, etc.)		**I**	**R**
	Log management	Monitor Application specific logs		**I**	**R**
		Monitor Application access Logs		**I**	**R**
		Periodic archiving of Application logs		**I**	**R**

	Batch Jobs management	Management of batch jobs (e.g. jobs scheduling, check of automated batch execution, run of manual jobs, etc.)		**I**	**R**
	Backup & restore	Establish Backup schedules		**I**	**R**
		Execute backups		**I**	**R**
		Execute restores		**C**	**R**
		Check the correctness of the restores		**I**	**R**
	Auditing	Forensics analysis at the Application layer		**R**	
	Service Request Fulfilment: Implement small, pre-Authorised change request ("CAT 1" change requests) that don't need to be Authorised by the iCAB (e.g. create a new department in NIP, create additional site, create a new NIP term, rename a site, etc.)	Act as the "Single Point of Contact" for the users	**R**		
		Report any Service Request/Standard Change by creating Work Order in NATO incident management toolset	**R**		
		Log Basic Information into the NATO incident management toolset	**R**		
		Categorize Work Order	**R**		
		Prioritize Work Order	**R**		
		Apply configuration changes to the IKM Tools		**I**	**R**
		Close the Work Order and update the NATO incident management toolset	**I**	**I**	**R**
		Periodically train the Purchaser about the Standard Changes implemented		**I**	**R**
	Support recurring Security Accreditations/Audits	Provide technical information for Security Accreditations/Audits/Vulnerability assessments		**C**	**R**
		Perform Risk Assessment Programs at the Application layer		**R**	
	Corrective	Act as the "Single Point of Contact" for the users	**R**		
		Report any faults by creating an incident report in NATO incident management toolset	**R**		

Maintenance	**Maintenance**	Log Basic Information into the NATO incident management toolset	**R**		
		Categorize Incident	**R**		
		Prioritize Incident	**R**		
		Initial diagnosis	**R**		
		Provide end user support where necessary without administrative privileges	**R**		
		Investigate connectivity and workplace related issues	**R**		
		User service questionnaire to capture the technical details	**R**		
		Clear browser cookies by following the respective SOP	**R**		
		Restart browser	**R**		
		Reboot workstation	**R**		
		Check availability of other websites	**R**		
		Validate with a different user	**R**		
		Check local network connectivity and workplace related issues	**R**		
		Manage user access to portals as required;	**R**		
		Cookie management by advising users to clean their browser's cookies	**R**		
		Communicating with customers in person, email or phone concerning their question	**R**		
		Advising customers on the best way ahead for reported issues (ticket, change request, referral to another team, etc...)	**R**		
		Forward all the "Change Requests" to the NCI Agency Change Management Process	**R**		
		Inform users upfront about system maintenance or system upgrades	**R**		
		Advise customers why they are unable to open, share, edit documents or items	**R**		
		Escalate issues that cannot be resolved without administrative privileges	**R**		
		Analyse incidents, troubleshoot and provide a workaround		**R**	
		Resolve issues of no access to documents, by providing permissions to the users		**R**	
		Document Known errors and workarounds		**R**	
		Escalate issues that cannot be resolved without changing the configuration or the source code of the Application, creating a Problem record		**R**	**I**
		Provide specialized technical advice for Incident resolution in the form of provision of subject matter expertise		**I**	**R**
		Resolve the Incident and update the NATO incident management toolset	**R**	**R**	

		Log Basic Information of the Problem into the NATO incident management toolset		**R**	
		Categorize Problem		**R**	
		Prioritize Problem		**R**	
		Analyse Problems and troubleshoot			**R**
		Propose a technical solution to fix Problems		**I**	**R**
		Approve the technical solution to fix Problems		**R**	**I**
		Provide specialized technical advice for Problem resolution in the form of provision of subject matter expertise		**I**	**R**
		Modify the configuration of the Application (implement the technical solution)		**I**	**R**
		Modify the source code of the Application (implement the technical solution)		**I**	**R**
		Contact external vendors or third party makers for issue resolution		**R**	
		Resolve the Problem and update the NATO incident management toolset		**I**	**R**
		Raise Change Requests for deploying Patches and Minor Changes		**R**	**I**
		Provide documentation and support to CAB (iCAB, ECAB, PCAB) in review of proposed changes		**R**	**C**
		Coordinate Application outages through the ASI process		**R**	**I**
		Execute Deployments on Test Environment		**R**	**I**
		Execute Deployments on Production Environment		**R**	**I**
		Configuration Management of the Source code (check-in, check-out, merging, branching, build definition, release definition, etc.)			**R**
		Configuration Management of the Software components (i.e. update the Software baseline, update the AT&T portfolio, update the CMDB, etc.)		**R**	**I**
		Design Contractor Test Cases (Unit tests, Integration tests and System tests)			**R**
		Run Contractor Test Cases		**I**	**R**
		Design QA Test Cases		**R**	
		Run QA Test Cases		**R**	**I**
		Update As-built documentation for every Change		**I**	**R**
		Produce a post-mortem report after every High Priority Incident		**I**	**R**
		Provide monthly Performance reports regarding Problem Management		**I**	**R**
		Train the Purchaser about the technical solution implemented after the deployment of each Patch		**I**	**R**
	Preventative	Identify and request changes needed to prevent issues		**R**	**I**

	Maintenance	Conducting web analytics of hosted web applications to identify under or over utilized web resources		**R**	
		Propose a technical solution to prevent issues		**I**	**R**
		Approve the technical solution to prevent issues		**R**	**I**
		Modify the configuration of the Application (implement the technical solution)		**I**	**R**
		Modify the source code of the Application (implement the technical solution)		**I**	**R**
		Raise Change Requests for deploying Patches		**R**	**I**
		Provide documentation and support to CAB (iCAB, ECAB, PCAB) in review of proposed changes		**R**	
		Coordinate Application outages through the ASI process		**R**	**I**
		Execute Deployments on Test Environment		**R**	**I**
		Execute Deployments on Production Environment		**R**	**I**
		Configuration Management of the Source code (check-in, check-out, merging, branching, build definition, release definition, etc.)			**R**
		Configuration Management of the Software components (i.e. update the Software baseline, update the AT&T portfolio, update the CMDB, etc.)		**R**	**I**
		Design Contractor Test Cases (Unit tests, Integration tests and System tests)		**I**	**R**
		Run Contractor Test Cases		**I**	**R**
		Design QA Test Cases		**R**	
		Run QA Test Cases		**R**	**I**
		Update As-built documentation for every Patch		**I**	**R**
		Provide monthly Performance reports regarding Problem Management		**I**	**R**
		Train the Purchaser about the technical solution implemented after the deployment of each Patch		**I**	**R**
	Adaptive Maintenance: - Adaptation of the Applications to the underlying environment (i.e. adapting the applicatio	Request a Minor Change of the Application for Adaptive Maintenance		**R**	**I**
		Analyse the Change Request and propose a technical solution for Adaptive Maintenance		**I**	**R**
		Approve the technical solution for Adaptive Maintenance		**R**	**I**
		Modify the configuration of the Application (implement the technical solution)		**I**	**R**
		Modify the source code of the Application (implement the technical solution)		**I**	**R**
		Raise Change Requests for deploying Patches		**R**	**I**
		Provide documentation and support to CAB (iCAB, ECAB, PCAB) in review of proposed changes		**R**	
		Coordinate Application outages through the ASI process		**R**	**I**

	ns to the new minor versions of the Browser, IIS, SharePoint, SQL, etc. Adapting to major versions will be managed by dedicated projects) - Adaptation of the Applications to new Security Accreditation requirements	Execute Deployments on Test Environment		**R**	**I**
		Execute Deployments on Production Environment		**R**	**I**
		Install new versions of "third party" software components on top of SharePoint (Sparqube, CopyMove, Extranet manager, etc.)		**R**	**I**
		Configuration Management of the Source code (check-in, check-out, merging, branching, build definition, release definition, etc.)			**R**
		Configuration Management of the Software components (i.e. update the Software baseline, update the AT&T portfolio, update the CMDB, etc.)		**R**	**I**
		Design Contractor Test Cases (Unit tests, Integration tests and System tests)		**I**	**R**
		Run Contractor Test Cases		**I**	**R**
		Design QA Test Cases		**R**	**I**
		Run QA Test Cases		**R**	**I**
		Update As-built documentation for every Patch		**I**	**R**
		Provide monthly Performance reports regarding Adaptive Maintenance		**I**	**R**
		Train the Purchaser about the technical solution implemented after the deployment of each Patch		**I**	**R**
	Minor Perfective Maintenance: development and implementation of "minor changes" of the functionalities of the IKM Tools (including: Design, Development, Testing, Change	Request a Minor Change of the Application for Minor Perfective Maintenance		**R**	**I**
		Analyse the Change Request and propose a technical solution		**I**	**R**
		Approve the technical solution for the Minor Change		**R**	**I**
		Modify the configuration of the Application (implement the technical solution)			**R**
		Modify the source code of the Application (implement the technical solution)			**R**
		Raise Change Requests for deploying Minor Changes		**R**	**I**
		Provide documentation and support to CAB (iCAB, ECAB, PCAB) in review of proposed changes		**R**	
		Coordinate Application outages through the ASI process		**R**	**I**
		Execute Deployments on Test Environment		**R**	**I**
		Execute Deployments on Production Environment		**R**	**I**
		Configuration Management of the Source code (check-in, check-out, merging, branching, build definition, release definition, etc.)			**R**

	Management and Release and Deployment), until a maximum number of "minor changes"/ month (max 3 minor changes/ month). The definition of a "minor change" is the one included in the SOW with the additional caveat that each change should need a maximum effort of 5 man days to be implemented.	Configuration Management of the Software components (i.e. update the Software baseline, update the AT&T portfolio, update the CMDB, etc.)		**R**	**I**
		Design Contractor Test Cases (Unit tests, Integration tests and System tests)		**I**	**R**
		Run Contractor Test Cases		**I**	**R**
		Design QA Test Cases		**R**	
		Run QA Test Cases		**R**	**I**
		Update As-built documentation for every Minor Change		**I**	**R**
		Provide monthly Performance reports regarding Minor Perfective Maintenance		**I**	**R**
		Train the Purchaser about the technical solution implemented after the deployment of each Minor Change		**I**	**R**
	Disaster recovery : execute disaster recovery activities related to the Application layer in the case a disaster occurs	Manual activation of the remote site		**I**	**R**
		Perform Application specific testing recovery at alternate site		**I**	**R**

Table 10 CLS Service Responsibilities

B - Software maintenance

[SOW 471] The Contractor shall perform the following types of SW maintenance:

a. **Corrective maintenance**: this service includes the diagnosis and the removal of the causes and the effects of any malfunction affecting the IKM Tools, due to a bug in the source code or to an erroneous SharePoint configuration. A malfunction is defined as any failure to meet a Functional Requirement or a Non-functional Requirement stated in the SRS.

b. **Preventive maintenance**: this service includes all the preventive actions needed to avoid future Incidents.

c. **Adaptive maintenance**: this service includes the adjustment of the source code and the SharePoint configuration in order to adapt the IKM Tools to the changes of the following sub system components:

    a. Modification of the underlying infrastructure (e.g. expansion of the servers, addition of a cluster, addition of a load balancer, etc.).

    b. New “minor release” of the Operating System, the Database Management System, the Browser, etc.

    c. New “minor release” of SharePoint.

    d. New “minor release” of a SharePoint add-on (e.g. Layer2, Sparqube, etc.).

d. **Minor Perfective maintenance**: this service includes the development and implementation of “minor enhancements” of the IKM Tools. A “minor enhancement” is defined as a limited change of an existing functionality or the addiction of a new functionality of the IKM Tools, that requires in total not more than **5 man days** in order to be designed, developed, tested and implemented. All the “minor enhancements” will be requested by the Purchaser (on behalf of the users), by submitting a Change Request to the Contractor issued on the Purchaser Trouble Ticketing system.

[SOW 472] The Contractor shall verify the correct functioning of all software, firmware, hardware, or configuration changes within the non-production system before recommending the changes for implementation. Implementation of changes shall be subject to the successful completion of all configuration management and testing processes.

[SOW 473] After the Purchaser’s acceptance of every change implemented by the Contractor during the Software maintenance, all the implemented changes shall become subject of all the CLS services provided by the Contractor, without any additional charge and cost for the Purchaser.

B-1 – Corrective maintenance

[SOW 474] During the CLS period, the Contractor shall provide corrective software maintenance. Corrective software maintenance shall be provided at the request of the Purchaser or, in case of regular patches and maintenance releases, shall be initiated by the Contractor.

[SOW 475] The Contractor shall fix software faults and failures, in scope of this Contract, at the highest priority and provide workarounds and patches that shall restore the software to its intended function and performance.

[SOW 476] In the case that the root cause of a malfunction is due to the underpinning sub-systems of the IKM Tools (e.g. database management system, operating system, infrastructure, storage, network, etc.), the Contractor shall forward the resolution of the malfunction to the responsible entities.

[SOW 477] The Contractor shall provide all the necessary technical support to the diagnosis of the malfunction, also in the case that the root cause of the malfunction is due to an underpinning sub-system of the IKM Tools. In all cases the Contractor shall remain responsible for monitoring the entire process for the resolution of the malfunction.

[SOW 478] The Contractor shall remove any defect/deficiency found by the Purchaser in the As-built documentation during the duration of the CLS services.

[SOW 479] Workarounds, patches and maintenance releases shall be verified by the Contractor to assess any impact on function, performance or support of the System before being released to the Purchaser. Verification shall include unit tests, integration tests and regression tests.

[SOW 480] Workarounds, patches, and maintenance releases shall be provided to the Purchaser's designated Point of Contact, together with the pertinent release notes.

The Purchaser will test the Contractor's workarounds, patches and maintenance releases to achieve authorisation to install and operate the solution.

[SOW 481] The Contractor shall contribute to the Purchaser's internal change management authorisation process by providing supporting documentation and data requested by the Purchaser.

[SOW 482] The Contractor shall provide the Purchaser with any technical documentation or updates to existing technical documentation, resulting from changes in function or performance of software due to maintenance activities performed under this Contract.

The Contractor will be notified of a malfunction of the IKM Tools by receiving a Trouble Ticket issued on the Purchaser Trouble Ticketing system.

[SOW 483] The Contractor SHALL perform the following tasks related to Corrective maintenance:

a. Analyse incidents/Problems and troubleshoot.

b. Provide specialized technical advice for Incident/Problem resolution in the form of provision of subject matter expertise.

c. Propose a technical solution to fix Problems (the technical solution will be subject to the Purchaser's approval, prior being implemented).

d. Modify the configuration of the Application on the SharePoint layer (implement the technical solution).

e. Modify the source code of the Application (implement the technical solution).

f. Configuration Management of the Source code (check-in, check-out, merging, branching, update of the build definition, update of the release definition, etc.).

g. Design “Contractor Test Cases” (Unit tests, Integration tests, System tests and Regression tests).

h. Run “Contractor Test Cases”.

i. Provide technical support during the execution of the Purchaser’s tests (User Acceptance tests, patch tests, AFPL tests, CAB tests, etc.).

j. Update the As-built documentation after every Change.

k. Resolve the Incident and update the Purchaser Trouble Ticketing system.

l. Produce a post-mortem report after every High Priority Incident.

B-2 – Preventive maintenance

The Contractor will be notified of a preventive maintenance task by receiving a Change Request issued on the Purchaser Trouble Ticketing system.

[SOW 484] The Contractor shall perform the following tasks related to Preventive maintenance:

a. Propose a technical solution to prevent issues (the technical solution will be subject to the Purchaser’s approval, prior being implemented).

b. Modify the configuration of the Application on the SharePoint layer (implement the technical solution).

c. Modify the source code of the Application (implement the technical solution).

d. Configuration Management of the Source code (check-in, check-out, merging, branching, update of the build definition, update of the release definition, etc.).

e. Design “Contractor Test Cases” (Unit tests, Integration tests, System tests and Regression tests).

f. Run “Contractor Test Cases”.

g. Provide technical support during the execution of the Purchaser’s tests (User Acceptance tests, patch tests, AFPL tests, CAB tests, etc.).

h. Update the As-built documentation after every Change.

B-3 – Adaptive maintenance

[SOW 485] The Contractor shall continuously monitor and assess the software in scope of this Contract for updates and provide patches or maintenance releases immediately when available.

The Contractor will be notified of an adaptive maintenance request by receiving a Change Request issued on the Purchaser Trouble Ticketing system

[SOW 486] The Contractor shall perform the following tasks related to Adaptive maintenance:

a. Analyse the Change Request and propose a technical solution for Adaptive Maintenance (the technical solution will be subject to the Purchaser's approval, prior being implemented).

b. Modify the configuration of the Application on the SharePoint layer (implement the technical solution).

c. Modify the source code of the Application (implement the technical solution).

d. Configuration Management of the Source code (check-in, check-out, merging, branching, update of the build definition, update of the release definition, etc.).

e. Design "Contractor Test Cases" (Unit tests, Integration tests, System tests and Regression tests).

f. Run "Contractor Test Cases".

g. Provide technical support during the execution of the Purchaser's tests (User Acceptance tests, patch tests, AFPL tests, CAB tests, etc.).

h. Update the As-built documentation after every Change.

B-4 – Minor perfective maintenance

[SOW 487] The Contractor shall design, develop, test and implement an average of 3 (three) "minor enhancements" every month, over the course of a year, at the Purchaser's discretion.

The Contractor will be notified of a Minor Perfective maintenance task by receiving a Change Request issued on the Purchaser Trouble Ticketing system.

[SOW 488] The Contractor SHALL perform the following tasks related to Minor perfective maintenance:

a. Analyse the Change Request and propose a technical solution (the technical solution will be subject to the Purchaser's approval, prior being implemented).

b. Modify the configuration of the Application on the SharePoint layer (implement the technical solution).

c. Modify the source code of the Application (implement the technical solution).

d. Configuration Management of the Source code (check-in, check-out, merging, branching, update of the build definition, update of the release definition, etc.).

e. Design "Contractor Test Cases" (Unit tests, Integration tests, System tests and Regression tests).

f. Run "Contractor Test Cases".

g. Provide technical support during the execution of the Purchaser's tests (User Acceptance tests, patch tests, AFPL tests, CAB tests, etc.).

h. Update the As-built documentation after every Change.

C – IT Operations

[SOW 489] The Contractor SHALL execute the following tasks related to the operation of the IKM Tools:

a. Application monitoring
    i. Monitor Application Performance and Availability.
    ii. Analyse Performance and Availability data and historical metrics to effectively: plan for growth needs; plan upgrades, migrations, optimizations and new implementations; identify and resolve efficiency issues; and improve overall functionality.
    iii. Raise Incidents/Problems to track the resolution of Performance and Availability issues.
    iv. Monitoring of the correct replication of the Application between remote sites.
    v. Raise Incidents to track the resolution of Application replication issues.
    vi. Monitoring and management of events (alerts, warnings, etc.).
b. Log management
    i. Monitor Application specific logs.
    ii. Monitor Application access Logs.
    iii. Periodic archiving of Application logs.
c. Backup & Restore
    i. Establish Backup schedules.
    ii. Execute backups.
    iii. Execute restores.
    iv. Check the correctness of the restores.

D – Request Fulfilment

This service relates to the implementation of small, pre-authorised, low impact and low risk Change Request, normally categorized as Service Requests/Standard Changes (e.g. create a new department, rename a site, create a new term, etc.). Each of these changes will be tracked in the Purchaser Trouble Ticketing system as a “Work Order”.

The Contractor will be notified of a Service Request/Standard Change by receiving a Work Order issued on the Purchaser Trouble Ticketing system.

[SOW 490] The Contractor SHALL execute the following tasks related to each Work Order:

a. Apply the needed configuration changes to the SharePoint layer of the IKM Tools.
b. Verify the correct working of the configuration changes applied.
c. Close the Work Order and update the Purchaser’s Trouble Ticketing system.

E – Disaster Recovery

[SOW 491] The Contractor shall conduct Business Continuity testing and Disaster Recovery testing. This will be conducted regularly to keep up preparedness and at least after every major configuration change to ensure Business Continuity and DR plans work and are sufficient for service restoration in agreement with the Purchaser.

[SOW 492] The tests shall be performed in alignment with Approved Service Interruption (ASI) process.

[SOW 493] In the case a disaster occurs, and in coordination with the Purchaser, the Contractor shall execute the following tasks related to the Application layer of the IKM Tools:

a. Manual activation of the remote site.

b. Perform Application specific testing recovery at the alternate site.

F - HW Maintenance

The Contractor shall be responsible for the Hardware until FSA, followed by warranty activities. (13.5.5Warranty)

G - On-site support

[SOW 494] Contractor's onsite manpower shall be located in MONS for Level 3 operation and maintenance tasks, and shall travel to other NATO locations as required. Additionally, the Contractor SHALL supplement maintenance support with off-site staff as required, as approved by the Purchaser.

[SOW 495] The Contractor shall provide sufficient manpower to meet the operational availability and service level targets (L - CLS Performance reporting and evaluation) with a minimum footprint of manpower on site as follows:

a. During Initial Operational Support (IOS): a minimum 2 FTE.

b. During follow-on support: a minimum of 2 FTE.

[SOW 496] The on-site support shall be delivered by Contractor personnel, fully qualified to perform all support tasks required to restore the equipment and software, in scope of the CLS services, to its intended function and performance.

[SOW 497] Contractor's personnel on-site shall have a valid NATO Security Clearance Certificate throughout the performance period at the level required to access the site and system to be supported.

[SOW 498] When on-site in Mons, the Contractor's on-site personnel shall normally support the Purchaser during the Purchaser's working hours, Monday to Friday, 8h30 to 17h30 (CET), excluding Purchaser's holidays. In exceptional cases, to be agreed by the Contractor, the on-site Contractor personnel shall support special operational and business needs outside Purchaser's working hours without additional cost to the Purchaser.

[SOW 499] In order to support the Purchaser's customers in different time zones from Mons, a reduced number of Contractor's manpower (at least 1 FTE) shall cover the following hours:

a. Monday to Friday, 7h00 to 17h00 (UTC -05:00)

b. Monday to Friday, 8h00 to 16h00 (UTC)

c. Monday to Friday, 7h30 to 16h00 (UTC +01:00)

[SOW 500] In the case of Corrective Maintenance, since the fact that Incidents could be raised by the Purchaser's customers also outside normal working hours, the Contractor shall organize its workforce for "on call" work outside normal working hours. When called-in by the Purchaser's Centralised Service Desk, the Contractor's person being "on-call" shall arrive to the Purchaser's premise in no more than 1 hour (clock hour) in order to analyse the Incident and start the resolution.

[SOW 501] The Contractor shall be responsible for ensuring all documentation, tools and test equipment for IKM tools, required for the Contractor's on-site personnel to carry out the requested support activities, are available on site.

H - Training Support

[SOW 502] At regular intervals, at least once every 6 months, the Contractor SHALL update the student training materials of the IKM Tools in order to reflect the functional updates implemented during the period.

[SOW 503] At regular intervals, at least once every 2 months, the Contractor SHALL provide a training session to the technical team of the Purchaser, regarding all the technical changes implemented to the IKM Tools during the period, including, but not limited to the following:

a. Patches implemented in order to fix malfunctions.

b. Minor enhancements implemented to change/add functionalities.

c. Changes to the SharePoint configuration.

d. Changes to the Application configuration.

[SOW 504] The Contractor shall deliver the training sessions at the Purchaser's facilities.

[SOW 505] The Contractor shall produce for each training session with a Power Point presentation listing and describing all the technical changes implemented during the period and summarizing the updates already made to the As-built documentation. Every change shall link to the originating Incident, Problem, Change Request and/or Work Order that prompted the update.

I - License Management

[SOW 506] The Contractor shall perform license management with the relevant licenses and shall notify the Purchaser on the expiry dates of the licenses needed for proper functioning of items of equipment under maintenance. Loss of functionality due to late renewal of licenses covered by the maintenance contract will not be accepted.

[SOW 507] The Contractor shall notify the Purchaser should any Software procured through this SOW becomes End-of-Sales and/or End of Support during the contracted period of performance.

[SOW 508] The Contractor shall indicate the proposed replacement item, meeting same functionality as well as the proposed support plan covering the contracted period of performance.

[SOW 509] The Contractor shall renew and pay for any license that is not out of the box SharePoint that is used by the system.

J - Technical documentation

[SOW 510] The Contractor shall update the Technical Documentation impacted by the change as part of every release package.

[SOW 511] The Contractor SHALL introduce the updates in the revision history of the manual including chapter/page numbers.

[SOW 512] The Contractor SHALL deliver all the updates of the Technical documentation in an editable format, compatible with Microsoft Office 2013.

[SOW 513] The Contractor shall inform the Purchaser about any technical documentation changes or updates required to existing technical documentation defined in this SoW.

K- Configuration Management and Change Management

The IKM Tools will be controlled under a strict configuration and change management process.

[SOW 514] During both the Initial Operational Support (IOS from PSA to FSA) and follow-on support stages (CLS services), the Contractor shall maintain and update the configuration of the Release packages to incorporate any changes to system software, hardware or configurations for the IKM Tools.

[SOW 515] The Contractor SHALL be subject to the Purchaser's Change Management processes for the authorization of every change to be implemented.

[SOW 516] During the duration of the CLS services, in the context of the software maintenance, the Contractor shall use and update the Software Configuration Management System used and provided by the Purchaser for managing the source code of the IKM Tools (based on the Microsoft Azure DevOps product).

[SOW 517] Within the Software Configuration Management System, the Contractor shall:

a. Update (check-out/check-in) the source code during the development of the bug fixes/minor enhancements developed within the CLS services.

b. Align with the Purchaser's guidelines regarding "merging" and "branching" of the source code.

c. Resolve any conflicts when merging two branches.

d. Update the "Build definitions" needed to compile the source code.

e. Update the "Release definitions" needed to release the release packages to the various environments.

f. Update the Test Cases repository with all the "Contractor Test Cases" designed during software maintenance.

g. Track the execution of the "Contractor Test Cases" executed during software maintenance.

L - CLS Performance reporting and evaluation

[SOW 518] During the CLS-period, the Contractor shall provide the Purchaser with a CLS Performance Report monthly, by the 5th day of the month.

[SOW 519] The monthly CLS Performance Report shall describe in detail all work performed under this contract, in the preceding month, including:

a. A summary of all the Incidents, Problems, Work Orders and Change Requests resolved in the period, categorized by “Service” and “Application”.

b. A listing of all the Incidents, Problems, Work Orders and Change Requests resolved in the period, but that didn’t satisfy the KPIs, with the justification of the failure to meet the target.

c. A listing of all the Incidents, Problems, Work Orders and Change Requests that are “work in progress” at the time of the report.

d. A listing of all the Incidents, Problems, Work Orders and Change Requests that are in “Pending” state at the time of the report, with a written justification of the “Pending” state.

[SOW 520] Each report in the previous requirement shall contain at least the following data for each item (Incident, Problem, Work Order or Change Request):

a. Item Type,

b. Item ID,

c. Description,

d. Customer,

e. Date and time of creation,

f. Date and time of resolution,

g. Time to resolve (Total time for Contractor to resolve item(s), excluding time when assigned to Purchaser activities).

[SOW 521] All the data used for the CLS Performance Report shall be extracted by the Contractor (manually or automatically) from the Purchaser’s Trouble Ticketing system.

[SOW 522] During the CLS period, the Contractor shall organise a monthly CLS performance review at the Customer’s premises. The Contractor CLS manager shall be present at the performance review.

[SOW 523] Each CLS performance review shall evaluate the Contractor CLS performance during the preceding period, identify any failures to meet the KPIs, propose eventual improvements and discuss future activities including up-coming obsolescence of any equipment, software and other topics as may be determined by the Contractor and the Purchaser.

[SOW 524] The Purchaser will chair the CLS performance review. The Contractor shall initiate and organise the review, provide the agenda, and record and produce the minutes of the reviews for approval by the Purchaser.

[SOW 525] The monthly CLS performance report shall also report any obsolescence issues, in advance. Issues to monitor shall be:

a. End of production,

b. End of sale,

c. End of support.

[SOW 526] Reporting on obsolescence issues shall include a mitigation strategy, including alternatives, and an impact assessment on:

a. System function and performance,
b. Support,
c. Cost,
d. Schedule,
e. Timelines.

[1] Definition of Key Performance Indicators, Targets for Support Services /Service Credits

This section lists the KPIs to which the Contractor shall comply.

All the times measured in the KPIs are considered at net of the times relating to the activities pertaining to the Purchaser or to third parties (e.g. approval of the technical solutions by the Purchaser, execution of the deployments into Production carried out by the Purchaser, etc.).

Please note that in the following table some targets are measured in “clock hours”: this mean that in those cases it may be the case that the Contractor will be required to work also outside the normal business hours in order to reach the service level target (for example using the Contractor’s “on-call” personnel).

All the data needed to calculate the KPIs will be extracted exclusively from the Purchaser’s Trouble Ticketing system.

[SOW 527] The Contractor SHALL deliver the CLS services according to the following KPIs and Targets (Terminology in this table is based on ITIL): :

ID	CLS Service	KPI	Description	Calculation method	Target	Service Credit (maximum cumulated service credits: 5% of value of the annual Clin price for the respective service period)
1	Corrective maintenance	Incident resolution time for Critical Priority Incidents	Time needed to resolve or to provide a workaround for an Critical	Time from Incident assignment to Incident resolution	< 2 clock hours 95% of the cases < 4 clock hours 100% of the cases	01% of annual Clin value for every percentage point below the targets

			Priority Incident			
2	Corrective maintenance	Incident resolution time for High Priority Incidents	Time needed to resolve or to provide a workaround for an High Priority Incident	Time from Incident assignment to Incident resolution	< 6 clock hours 95% of the cases < 8 clock hours 100% of the cases	01% of annual Clin value for every percentage point below the targets
3	Corrective maintenance	Incident resolution time for Medium Priority Incidents	Time needed to resolve or to provide a workaround for an Medium Priority Incident	Time from Incident assignment to Incident resolution	< 14 business hours 95% of the cases < 16 business hours 100% of the cases	01% of annual Clin value for every percentage point below the targets
4	Corrective maintenance	Incident resolution time for Low Priority Incidents	Time needed to resolve or to provide a workaround for an Low Priority Incident	Time from Incident assignment to Incident resolution	< 22 business hours 95% of the cases < 24 business hours 100% of the cases	01% of annual Clin value for every percentage point below the targets
5	Preventive maintenance	Preventive maintenance execution	Time needed to implement a preventive maintenance Change Request requested by the Purchaser	Time from Change Request assignment to Change Request resolution	By the timeframe agreed with the Customer	None
6	Adaptive	Adaptive maintenan	Time needed to implement	Time from Change Request	By the timeframe agreed with	None

	maintenance	ce execution	an adaptive maintenance Change Request requested by the Purchaser	assignment to Change Request resolution	the Customer	
7	Minor Perfective maintenance	Development time	Time needed to design, develop and test a “minor enhancement”	Time from Change Request assignment to Change Request resolution	< 15 days 50% of the cases < 20 days 100% of the cases	01% of annual Clin value for every percentage point below the targets
8	IT Operations	Failed Application restores	Number of failed Application restores	Number of failed Application restores executed during the reporting period	0 failures	01% of annual Clin value for every failed Application restore
9	IT Operations	Monitoring effectiveness	Percentage of Incidents related to Application performance raised by the Contractor	N_C/N_T N_C = Number of Incidents related to Application performance raised by the Contractor N_T = Total number of Incidents related to Application performance raised during the reporting period	> 95%	01% of annual Clin value for every percentage point below the target

10	Request Fulfilment	Request Fulfilment execution	Time needed to implement a Work Order requested by the Purchaser	Time from Work Order assignment to Work Order resolution	< 4 work hours 95% of the cases < 8 work hours 100% of the cases	01% of annual Clin value for every percentage point below the targets
11	Disaster Recovery	Recovery Time Objective	Time needed to recover the Application on the alternate site	Time from Incident assignment to Incident resolution	Refer to SRS 4.2.5.4	01% of annual Clin value for every percentage point below the target
13	CLS Performance reporting and evaluation	Reporting timeliness	Timeliness of the delivery of the CLS Performance Report	Numbers of calendar days of delay in the submission of the CLS Performance Report counted from the 5th day of each month	0 calendar days	01% of annual Clin value for every calendar day of delay

Table 11 KPI for CLS Targets

[SOW 528] The Contractor shall measure the KPIs on a monthly basis and shall include their values in the quarterly CLS Performance Report.

[SOW 529] In the case of failing to reach the Targets for the KPIs, the Contractor SHALL incur the Service Credits described in ref Table 11 KPI for CLS Targets.

P – Security Audits

The IKM Tools system will be subject to external periodic security audits (at least annually).

[SOW 530] The Contractor shall provide on-site technical support to the external Auditor and Vulnerability Assessment teams to facilitate the completion of these activities.

[SOW 531] The Contractor shall document the remedial actions required to resolve deficiencies noted within the Security Audits.

[SOW 532] During both the IOS and follow-on support stages of the project, the Contractor shall remediate all system deficiencies documented in Audits, Vulnerability Assessments within the timeline agreed with the Purchaser.

1.1. Audit Processes

[SOW 533] The Contractor shall implement and document processes to record all events relating to the security of the IKM Tools Platform, in a form of audit logs.

[SOW 534] The Contractor shall implement and document an input for NATO Computer Incident Response Capability (NCIRC) in support of online security monitoring and management of NATO's CIS infrastructure, offline analysis of incidents, and incident handling.

[SOW 535] The Contractor shall include the IKM tools input to NCIRC in the event logs related to IKM tools internal operations as well as to the Identity and Access Management processes where IAS capability is utilized.

S- End of contract activities

[SOW 536] Two months before the end of this CLS Contract, the Contractor SHALL provide:

a. An up to date set of technical documentation section delivered through this contract. This shall entail as a minimum (but not limited to) design, configuration management, technical, training and CLS documentation.

b. A document describing all the "Known Errors" of the IKM Tools and the required workarounds.

[SOW 537] Starting not less than two months before the end of this CLS Contract, the Contractor shall execute the transfer of knowledge to the Purchaser's technical team or to a new Contractor chosen by the Purchaser to deliver CLS services. The knowledge transfer will be executed by:

a. Dedicated knowledge transfer training sessions.

b. On the job training.

[SOW 538] Within two weeks after the end of this CLS Contract, but only at the request of the Purchaser, the Contractor shall provide a final CLS report. The Final CLS report shall be a summary of all preceding CLS performance reports and describe in detail all work performed under this contract.

SECTION 15 TESTING, VERIFICATION AND VALIDATION (TVV) REQUIREMENTS

This section defines the generic requirements to be applied by the Contractor to the Test, Verification and Validation (TVV) process, which is required for verification and validation of the requirements set forth under this Contract by the Purchaser-Assigned Test, Verification and Validation Manager is responsible to tailor the document per project.

Each requirement below contains an Independent Verification and Validation (IVV) reference number (in brackets at the end of the statement), which refers to the Purchaser's internal processes. This process will be explained in the Kick-Off meeting.

[SOW 539] The Contractor shall perform, and verify TVV activities and its compliance with the contractual requirements as indicated in Table 12 List of Test Phases.

[SOW 540] The Contractor shall handle all information items used during the verification and validation activities according to their security classification. Guidance is provided in this SOW, under the security section.

[SOW 541] All deliverables supplied by the Contractor under this contract shall be verified and validated to meet the requirements of this contract. The Contractor shall produce all document-based deliverables in a manner compliant with the templates provided by the Purchaser. In particular:

a. The Contractor shall perform the verification activities within each Build Process;

b. The Contractor shall perform verification to confirm that each element properly reflects the specified requirements, design, code, integration and documentation;

c. The Contractor shall support Purchaser led Validation Activities to confirm that the solution is fit for purpose.

[SOW 542] The Contractor shall demonstrate to the Purchaser that there is a testing process in place for the project, with quality assurance oversight.

[SOW 543] The Contractor shall identify and communicate to the Purchaser which best practices and international standards will be applied.

[SOW 544] The Contractor shall strictly follow the TVV process, document templates and guidance provided by the Purchaser unless officially agreed by the Purchaser.

[SOW 545] 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 minimise impact on cost and schedule.

[SOW 546] The Contractor shall conduct a Test Readiness Review Meeting (TRR) describing the Test Environment where the test shall be conducted, successful dry run test results that includes testable and non-testable requirements for all Contractual test Events.

Based on the dry run test reports, the Purchaser will agree if the Contractual Test can be initiated with a Test Readiness Review Meeting (TRR).

Based on the TRR meeting aforementioned test results and documents, the Purchaser shall agree if the Contractual Test can start.

[SOW 547] The Contractor shall propose a TVV process which will 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 approved by the Purchaser.

[SOW 548] With the exception of internal/engineering testing, the Contractor shall use tools for requirements coverage, defect management and test management those are selected and hosted by the Purchaser.

[SOW 549] The Contractor shall deliver to the Purchaser all test, verification and validation material developed and used under this contract.

[SOW 550] The Contractor shall use test management tools compatible with the Purchaser test tools such as JIRA and TestRail.

[SOW 551] The Contractor shall provide an overall project Test Manager, who will work closely with the Purchaser's assigned IVV lead.

[SOW 552] The Contractor shall provide a Test Director for each phase defined in Table 12 List of Test Phases.

The Purchaser will provide subject matter experts (SME) during each event, as well as IVV Test Engineers and, for some events and at the Purchaser's discretion, a NATO Assurance Representative.

[SOW 553] The Contractor shall have the overall responsibility for meeting the P95 Step 2 testing, verification and validation requirements and conducting all related activities defined in Table 12 List of Test Phases.

[SOW 554] The Contractor shall provide status reports to the Purchaser regarding verification and validation activities during the planning/design and development phases, via the use of a dashboard report within the test management tool set and through meetings.

[SOW 555] Progress and result measurement shall be approved by the Purchaser and focused on items identified in Project Master Test Plan (PMTP).

[SOW 556] Test results shall be recorded in the test management tool set. All results of all formal acceptance testing 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 starting of the next business day (0800 AM), but as a minimum no later than 24 hours following the execution of any test.

[SOW 557] The Contractor shall define and make use of KPIs as identified in PMTP, for quality improvement, to provide solutions and update the plans the achievement of defined objectives like coverage of risks, requirements, supported configurations, supported operational scenarios, etc.

[SOW 558] For each event supporting a test phase, the Contractor shall follow TVV process defined in PMTP to perform the following activities:

a. Planning and management of the test event;
b. The design and development of all tests cases and associated documentation required under this Contract;
c. The conducting of all testing;
d. Reporting the results; and,
e. Closure of the of test events (including the final version of all test artefacts created during the test event).

Test Phases	Scope	Product	Location	Responsible
Engineering Tests	Internal tests executed during development phase of the system to ensure the system/software conforms to their design specifications.	**Review**: Test Reports	**Contractor's facility**	**Contractor**

Test Phases	Scope	Product	Location	Responsible
Factory Acceptance Test	To verify that production units comply with the requirements and design as per users specifications to include Migration and failover tests. Minimum of 3 days user executed ad hoc test may be conducted by the Purchaser after FAT.	**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.	**Contractor's facility**	**Contractor**
IV&V Assessment	To determine whether or not a system satisfies user needs, functionality, requirements, Stress/Load, Performance, failover, Disaster Recovery tests and user workflow. processes etc. before it gets into operation. To ensure verification of quality criteria defined for the following tests: - **System Integration Test (SIT**) – Requirements based testing based on operational data and flow, focused on verifying integration of the different components together and with any external interface as defined by the SRS. - **System Acceptance Test (SAT)** – Tests focused on ensuring compliance with the requirements outlined in the SOW. - **Migration Test:** test to ensure that data is not lost or corrupted.	**Review**: Test Plan, Test Cases/Scripts, Test Report, Test Data, Test Environment Baseline, Existing defects. **Participate**: TRR, Test Execution, Test Results Review.	**Purchaser facility** **Lab**	***SIT* - Contractor** ***UAT* - Purchaser** **Security - Contractor and Purchaser** ***SAT* - Contractor**

Test Phases	Scope	Product	Location	Responsible
	- **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.			
Site Acceptance Testing	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 Testing is also to ensure compatibility and integration of the product with the site environment. These covers the following tests; Functional test and Non-Functional, (Stress load and Performance tests), Interoperability (SIT), UAT, Failover, Disaster Recovery and Security tests. Migration related tests are also covered under this tests.	**Review**: Test Plan, Test Cases/Scripts, Test Report, Test Data, Test Environment Baseline, Existing defects. **Participate**: TRR, Test Execution, Test Results Review.	**At the sites (Data Centres Mons and Lago Patria)**	**Contractor**
Failover & Disaster Recovery	Failover test will be focus on validating that the system can support outages (server failure, service failure, excess load, lost connectivity) and continue working complying with the prescribed KPIs in ANNEX A. The Disaster Recovery tests will focus on validating the system can recover normal functioning (as defined in SRS) after a failover. The Recovery times and data loss shall be	**Failover Test cases and Disaster Recovery Test cases**	**At the sites (Data Centres Mons and Lago Patria)**	**Contractor in agreement with the Purchaser**

Test Phases	Scope	Product	Location	Responsible
	compliant with the KPIs in ANNEX A.			
Operational System Acceptance	To ensure that all the Operational 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 SRS as well as all security requirements defined in the Security Accreditation Documentation Package. Ensure end to end delivered system works as expected and can interoperate with other Purchaser equipment.	**Review**: Test Plan, Test Cases/Scripts, Test Report, Test Data, Test Environment Baseline, Existing defects **Participate**: TRR, Test Execution, Test Results Review	**At the sites (Data Centres Mons and Lago Patria)**	**Contractor**

Table 12 List of Test Phases

The Purchaser reserves the right to monitor and inspect the Contractor's TVV activities to verify their compliance with the requirements set forth in this Contract.

[SOW 559] The Contractor shall only proceed to the next formal test activity, after agreement and approval by the Purchaser.

[SOW 560] The Contractor shall convene a Test Readiness Review (TRR) at least one week prior to the events defined in Table 12 List of Test Phases

[SOW 561] The TRR shall ensure that all entry criteria for events have been met. Documentation that requires review by the Purchaser prior to a TRR shall be provided no less than 1 week prior to TRR.

[SOW 562] The Contractor shall conduct a Test Readiness Review Meeting (TRR) describing the Test Environment where the test shall be conducted, successful dry run test results that includes testable and non-testable requirements for all Contractual test Events.

Based on the dry run test reports, the Purchaser will agree if the Contractual Test can be initiated with a Test Readiness Review Meeting (TRR).

Based on the TRR meeting aforementioned test results and documents, the Purchaser will agree if the Contractual Test can start.

[SOW 563] The Contractor shall provide all items under scope as defined in the Event Test Plan one week before the TRR meeting. The Purchaser has the right to cancel the TRR and/or formal test event if the evidence demonstrates that execution of the test event will not be effective.

[SOW 564] The Contractor shall convene a Test Review Meeting (TRM) within 1 business day after test event completion. The TRM shall ensure that the event results and defect categorization is agreed upon.

[SOW 565] The Contractor shall use the Purchasers' categorisation nomenclature for all defects and non-compliances.

[SOW 566] The Contractor shall describe in the event test plan what training will be provided prior to formal TVV events.

[SOW 567] The start and/or ending of any test session shall be subject to the Purchaser approval. In the event that critical issues are encountered which impact the process of the testing or if the other functions depends on the failed test cases, the Purchaser has the right to stop the testing for Contractor's investigation. The tests can only re-start if Purchaser agrees to continue testing from the point of failure or re-start testing from the beginning.

During formal TVV phases, a daily progress debrief shall be scheduled. Participation to the daily progress debrief will be agreed between Purchaser and Contractor. The aim of the debrief is to get a common understanding on what tests were run, which passed, which failed, and whatever defects were reported during the day.

[SOW 568] For each test event, the Contractor shall provide log of the event, including but not limited to individual test results, test execution durations, deviations during execution.

[SOW 569] 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 test, verification and validation activities.

[SOW 570] 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 that the verification and validation methods can successfully verify requirements and that those requirements are tracked. The Purchaser will review and approve the proposed RTM.

[SOW 571] The Contractor shall produce and maintain the Verification Cross Reference Matrix (VCRM) which defines how the requirement will be verified at each of the TVV activities:

a. The verification method: Inspection, Analysis, Test or Demonstration.

b. Correspondent test phase(s) for each requirement.

c. Coverage Status.

[SOW 572] The Contractor shall provide the Purchaser with updates (via the automated tools) to the RTM and VCRM daily during the execution of an event, and following the conclusion of each event defined in the Table 12 List of Test Phases

[SOW 573] . A workflow for updating the RTM and VCRM shall be proposed by the Contractor and approved by the Purchaser.

[SOW 574] The Contractor shall provide 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 Project Master Test Plan (PMTP)	*4 weeks after contract award*

Work Product Name	Sent to Review/Approve
Test Plans for individual test events including test design specifications	*2 months before test event*
The Security Test & Verification Plans (STVP)	*2 months before test event*
Security Implementation Verification Procedures (SIVP)	*4 weeks before test event*
Any submitted test Waivers together with supporting material	*4 weeks before test event*
The Test Cases/Scripts/Steps	*4 weeks before test event*
Status Reports	*Periodically (to be set in PMTP)*
The Test Reports	*1 week after test event*
The Requirements Traceability Matrix (RTM) updated with test-related information	*First with PMTP and update per test event*
Verification Cross Reference Matrix (VCRM)	*First with PMTP and update per test event*

Table 13 Test Documentation

[SOW 575] 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 will be provided by the Purchaser as PFE.

[SOW 576] The Contractor shall produce a Project Master Test Plan (PMTP) to address the plans for each V&V activities listed in this document.

[SOW 577] The Contractor shall describe how the Quality Based Testing is addressed and implemented in the PMTP.

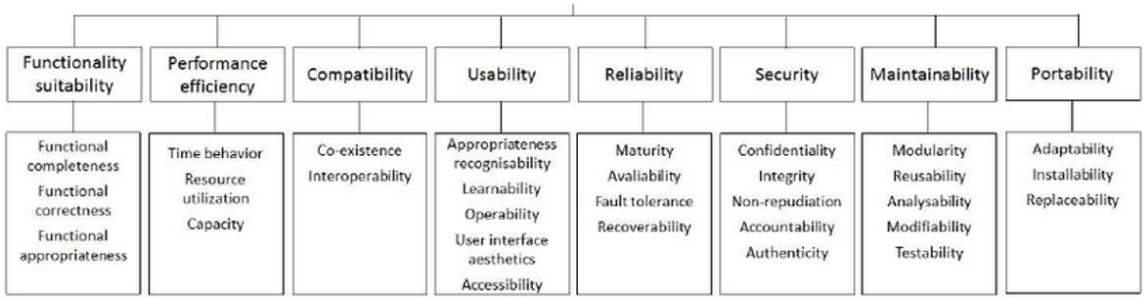

Figure 1 Product Quality Criteria

[SOW 578] The Contractor shall describe all formal test, verification and validation activities in the PMTP with a testing methodology and strategy that fit the development methodology chosen by the project.

[SOW 579] The Contractor proposed testing methodology shall describe the method of achieving all the test phases, successfully.

[SOW 580] The Contractor shall describe in the PMTP how the following objectives will be met:

a. Compliance with the requirements of the Contract,

b. Verification that the design produces the capability required,

c. Compatibility among internal system components,

d. Compliance with the SRS requirements,

e. Compliance with external system interfaces and/or systems,

f. Confidence that system defects are detected early and tracked through to correction, including re-test and regression approach,

g. Compliance with Purchaser policy and guidance (i.e. security regulations, etc.),

h. Operational readiness and suitability,

i. Product Quality Criteria,

j. Identify which platform(s) to be used for the test events and the responsibilities for operation and maintenance of the environment.

[SOW 581] The Contractor shall describe the Contractor's test organization and its relationship with the Contractor's Project Management Office and Quality Assurance (QA) functions in the PMTP.

[SOW 582] The Contractor shall describe in the PMTP "Entry", "Suspension", "Resumption" and "Exit" criteria for each of the formal test events.

[SOW 583] The Contractor shall provide the schedule in the PMTP for the provision of the test related deliverables and detail the conduct of testing.

In the PMTP, the Contractor shall describe the defect/non-conformances reporting and management process during the performed testsTable 12 List of Test Phases

[SOW 584] .

[SOW 585] In the PMTP, the Contractor shall include the Contractor's approach to Test Reviews including Test Readiness Reviews and Test Results Reviews for each test event.

[SOW 586] The Contractor shall provide their provisions and strategy for building/maintaining of Reference Environment in PMTP.

[SOW 587] The Contractor shall plan in STVP to ensure that the Security testing, including verification of compliance with NATO CIS security regulations (refer to Annex C of the SOW) is applied as an integral part of the testing process.

[SOW 588] The Contractor shall obtain the approval of the Purchaser regarding the environments the formal 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 Contractor shall ensure the Reference Environment Configuration is formally controlled using configuration management tools, and that each baseline that will enter into a contractual event is delivered to the Purchaser for approval prior to TRR.

[SOW 589] 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.

[1] Test Defect Categorization

[SOW 590] Should a failure occur during testing, a failure report shall be raised by the Contractor and a preliminary investigation shall be immediately carried out in order to classify the failure according to its severity and its priority following the definitions below.

Category	Definition
Severity	■ The severity of a failure is the degree of impact that the failure has on the development or operation of a component or system or user function. ■ The severity of the failure shall initially be proposed by the tester but shall officially be set in agreement with all the stakeholders. When agreement cannot be reached the Purchaser's PM will set the severity.
Priority	■ The priority of a defect defines the order in which defects shall be resolved. ■ The priority of the defect shall initially be proposed by the tester but shall officially be set in agreement with all the stakeholders. When agreement cannot be reached the Purchase's PM will set the priority.

Table 14 Definitions for Defect Categorization

15.1.1. Classification of Defects

[SOW 591] According to their severity, failures shall be classified as one of the following.

Classification	Definition
■ Critical	■ Functional failure that inhibits users from accomplishing a primary task (Functional). ■ Failure of a user requirement. ■ Inability to install system software in accordance with provided documentation (Portability/Documentation). ■ Occurrence of a transient error and/or infinite loops/system hanging (Reliability). ■ System/application crashes on major functions or unsuccessful recovery (Functional or Reliability). ■ Loss of data, inconsistent results (database/data integrity problems) or corruption of database (Reliability).

	■ Inaccurate result or calculation of essential function (Usability). ■ Poor reliability or performance which may degrade the overall operation/functioning of the system (Performance Efficiency). ■ Failure of a Security function or cause of security violation (Security). ■ Failure of exchange of information/data with its affiliates or with its shared environment (Compatibility).
■ Major	■ Failure of a function or defect that impacts the normal system operation but a user acceptable workaround exists (Functional). ■ Absence of or incorrect validity checks in accordance with user specification or as expected by the software (Reliability). ■ Display of a misleading information resulting in confusing or incorrect processing (Usability). ■ Slow response time of common user functions (Performance Efficiency). ■ Editing the same field/record/data concurrently causing database integrity problems (Reliability).
■ Minor	■ Failure of a non-essential function that does not impact the normal operational use of the application (Functional). ■ Defects that does not impact the overall quality of the software.
■ Cosmetic	■ The failure is related to the enhancement of the system where the changes are related to the look and feel of the application, and not part of the usability requirements of the system. (Usability).

Table 15 Classification of defects based on severity

15.1.2. Priority classes for Defect Classifications

[SOW 592] According to their priority, failures shall be classified as one of the following:

Priority Class	Description
Urgent	■ The defect shall be resolved as soon as possible.
Medium	■ The defect shall be resolved in the normal course of development activities. It can wait until a new build or version is created.
Low	■ The defect is an irritant which should be repaired, but repair can be deferred until after more serious defects have been fixed.

Table 16 Priority Classes for Defect Classification

SECTION 16 : QUALITY ASSURANCE (QA) AND QUALITY CONTROL (QC)

16.1. Quality Control System

- The Purchaser may delegate the Quality Assurance to the appropriate Government Quality Assurance Authority (GQAA) in accordance with STANAG 4107.
- The GQAA, when accepting the STANAG 4107 Request for GQAA Services, appoints his QA Representative(s) (QAR).
- 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.
- The term "National QAR" (NQAR) will apply to any of the Purchaser-appointed QARs, whether nominated by the GQAA or by Purchaser QA.
- During the entire Contract implementation, the NQAR(s) within their own rights, defined in the Contract applicable AQAPs, will assure the Contractors and Sub-Contractor's compliance with all contractual requirements.

[SOW 593] The Contractor shall establish, document and maintain an effective QC System in accordance with the applicable documentation throughout the lifecycle of the Contract.

[SOW 594] The Contractor shall establish, execute, and maintain an effective Quality Management process throughout the Contract lifetime. It SHALL be based on [AQAP-2110, 2016], which incorporates by reference ISO 9001 directive.

[SOW 595] The Contractor shall create a Quality Register containing details of all planned activities and have them available on the Project Website.

16.2. Quality Assurance (QA) Programme

The programme is subject to review and/or rejection by the Purchaser, or its delegated representative(s), whenever it does not meet the QA requirements. It will be subject to review for adequacy, compliance and effectiveness.

[SOW 596] The QA programme shall apply to all hardware, software and documentation being developed, designed, acquired, integrated, maintained, or used under the Contract. This includes non-deliverable test and support hardware and software.

[SOW 597] The QA Programme shall ensure that procedures are developed, implemented and maintained to adequately control the development, design, production, testing and configuration of all deliverables.

[SOW 598] The Contractor shall be responsible for the control of quality of all deliverables and associated contractual products throughout the life-cycle of the Contract.

[SOW 599] The Contractor shall designate at least one person to perform the QA function for this project.

[SOW 600] Contractor personnel within the QA organization shall have sufficient responsibility, authority, organizational freedom and independence to review and evaluate activities, identify problems and initiate or recommend appropriate corrective action.

[SOW 601] The Contractor QA person shall be the main QA point of contract to the Purchaser’s on quality assurance matters.

[SOW 602] Personnel performing QA functions shall not be the same personnel responsible for performing other tasks that are reviewed by QA.

[SOW 603] Contractor QA personnel shall participate in the early planning and development stages to ensure that attributes of good quality for life-cycle procurement are specified in programme plans, standards, specifications and documentation. After establishment of attributes, controls and procedures, Contractor QA personnel shall ensure that all elements of the QA Programme are properly executed, including inspections, tests, analysis, reviews and audits.

16.3. Quality Assurance Plan (QAP)

[SOW 604] The QAP shall identify the quality assurance & quality control techniques that the Contractor will apply along with those identified by the Contract; identify and describe activities associated with determining and reviewing requirements related to products; suitable assessment methods & resources needed QA evaluation criteria; suitable metrics & measures to provide early warning applied to both, process and products (including the system characteristics); approach to generate and maintain verifiable objective evidences.

[SOW 605] The Contractor shall provide a QAP to the Purchaser in accordance with the requirements of the above mentioned AQAPs and quality related international standards. The QAP shall be structured as a living document subject to revision / update, as and when required.

[SOW 606] The Contractor shall ensure a Software Project Quality Plan (SPQP) is included in the QAP, in accordance with the above mentioned AQAP-2210 and quality related international standards.

[SOW 607] The Contractor shall ensure the QAP includes a description of a process that will ensure adherence to all software design standards described in this contract.

[SOW 608] The QAP shall reference, and/or document, and explain the Contractor's QA procedures for analysis, software support, development, design, production, installation, configuration management, control of Purchaser furnished property, documentation, records, programming standards and coding conventions, library controls, reviews and audits, testing, corrective action and certification as specifically related to this project.

[SOW 609] The QAP shall be compatible and consistent with all other plans, specifications, standards, documents and schedules that are used under this Contract. All Contractor procedures referenced in the QAP shall either be submitted with the plan, or described in the plan and made available for review by the Purchaser upon demand.

[SOW 610] The Contractor's corrective action system shall ensure prompt detection, documentation and correction of problems and deficiencies. The corrective action system shall track all reported and recorded problems and deficiencies until their closure and clearance.

16.4. The Purchaser reserves the right to perform reviews and audits at any of the Contractor or Sub-Contractor(s) facilities. Such reviews and audits shall not be used by the Contractor as evidence of effective control of Sub-Contractor's quality. The Contractor shall conduct periodic audits of the Sub-Contractors.

[SOW 611] The Contractor shall fully support Host Inspections and audits and in particular:

a. Make himself available for answering questions and furnishing information related to the project,

b. Allow the Purchaser's representatives to inspect and monitor testing activities,

c. Allow the Purchaser's representatives to inspect and monitor the Contractor's processes, documented information and records applicable to this project,

d. Allow the Purchaser's representatives to inspect project quality records.

[SOW 612] The Contractor shall provide a signed "Statement of Conformity" within CoC Part I (see AQAP-2070) when satisfied that the products and/or services provided by the Contractor are in conformance with the terms of this Contract.

[SOW 613] CoC(s) shall be required for all quantities contained in each Contract line item. The Contractor shall submit copies of the CoC(s) to the Purchaser in quantities specified in SSS on delivery of the equipment.

SECTION 17 : CONFIGURATION MANAGEMENT

17.1. Configuration Management Programme

- The configuration of a product is the structure and interconnection of the hardware and software of a system for its intended application.
- The Configuration Management (CM) is a process of identifying and documenting the characteristics of the structures, systems and components (including computer systems and software), and of ensuring that changes to these characteristics are properly developed, assessed, approved, issued, implemented, verified, recorded and incorporated into the documentation.
- CM applies procedures and tools to establish and maintain consistency between products and product requirements. CM establishes a structure for products and product configuration information and selects, defines, documents and baselines product attributes in sufficient detail to support the product lifecycle.
- Whenever system/equipment is mentioned the definitions will also include its supporting systems provided by the Contractor (if applicable e.g.: antenna masts, test equipment, special tools, facilities, warning lights, lightning protection and grounding).

[SOW 614] The Contractor shall be responsible for the project HW and SW Configuration Management before FSA.

[SOW 615] The Contractor shall be responsible for establishing and maintaining an effective CM organization to implement the CM programme in accordance with STANAG 4427 Edition 3 and managing the CM functions:

a. Configuration identification and documentation,

b. Configuration control,

c. Configuration status accounting,

d. Configuration audits.

[SOW 616] The Contractor shall be responsible for the application of all necessary CM procedures, in accordance with the requirement and guidance stated below, throughout the life of Contract.

17.2. Configuration Management Plan (CMP)

[SOW 617] The Contractor shall provide and maintain a CMP in accordance with ACMP-2009 NATO Guidance on Configuration Management, tailored to the requirements of the proposed technical solution.

[SOW 618] In producing the CMP, the Contractor shall define the organization and procedures used to configuration-manage the functional and physical characteristics of Configuration Items (CI), including interfaces and configuration identification documents. The Contractor shall ensure that all required elements of CM are applied in such a manner as to provide a comprehensive CM programme.

[SOW 619] The Contractor shall ensure the CMP addresses all disciplines within this SOW section and that it, at a minimum, includes:

a. Introduction,

b. Organization,

c. Configuration Identification and Documentation (CID),

d. Configuration Control (CC),

e. Configuration Status Accounting (CSA),

f. Configuration Audits,

g. Management tools/Interface management,

h. Change, deviation and waiver process.

[SOW 620] The Contractor shall provide detailed proposals for the documents that comprise the baselines to be included in the CMP for approval by the Purchaser.

[SOW 621] The Contractor shall propose a deliverable version control system as part of the CMP, which allows for the unique identification of all changes to the deliverables, no matter how minor the change. The version control system shall also identify a difference between major and minor changes. Any doubt as to whether a revision constitutes a major or minor change shall be referred to the Purchaser for decision.

17.3. Configuration Identification and Documentation (CID)

- The CID is also known as PBS.

[SOW 622] The Contractor shall establish a configuration identification system, which identifies all documents necessary to provide a full technical description of the characteristics of the Hardware and Software CID(s) that require control, at the time each baseline is established.

[SOW 623] The Contractor shall propose appropriate CID(s) in the CMP including an explanation of the rationale and criteria used in the selection process that shall be based on the criteria for selection of CID(s). The CID structure shall be in the form of a CI tree structure (an explicit part of the CMP) with the System being the top level CID and shall show the relationships between the lower level CID.

17.4. Configuration Control (CC)

- The Purchaser must approve all changes prior to becoming effective.

[SOW 624] The Contractor shall describe his Configuration Control (CC) procedures in the CMP.

[SOW 625] The Contractor shall be responsible for issuing in a timely manner all approved changes and revisions to the functional, development and product baseline documents included in the Contract. This includes changes originated both by the Contractor and the Purchaser. Where a change affects more than one document, or affects documents previously approved and delivered, the Contractor shall ensure that the change is properly reflected in all baseline documents affected by that change.

17.5. Configuration Status Accounting (CSA)

[SOW 626] The Contractor shall be fully responsible for the Configuration Status Accounting (CSA) for all CID(s) in accordance with ACMP-2009 NATO Guidance on Configuration Management. This system shall consist of reports that shall be prepared and delivered in a manner, format and schedule that shall be proposed by the Contractor in his CMP and approved by the Purchaser.

[SOW 627] The Contractor shall develop and maintain a CSA Database using the appropriate database management and other related software tools for the entire period of the Contract.

17.6. Configuration Audits

[SOW 628] The Contractor shall include in the CMP detailed proposals for the audits.

[SOW 629] Configuration audits shall be established by the Contractor to verify compliance with the specifications and other Contract requirements in accordance with ACMP-2009 NATO Guidance on Configuration Management.

[SOW 630] The audits shall be carried out jointly by the Contractor and the Purchaser in accordance with the Contractor's approved CMP and shall consist of a Functional Configuration Audit (FCA) and Physical Configuration Audit (PCA), see below:

Functional Configuration Audit (FCA) is the formal examination of functional characteristics of a configuration item, or system to verify that the item has achieved the requirements specified in its functional and/or allocated configuration documentation.

[SOW 631] In this Contract, the FCA shall primarily consist of reviews of all the component-based requirements of the Contract, Contract documentation, tests or test results where necessary, to demonstrate the full compliance with the functional requirements of allocated components delivered to the Purchaser.

Physical Configuration Audit (PCA) is the formal examination of the 'as-built' configuration of a configuration item and system against the technical documentation to verify the product baseline.

[SOW 632] In this Contract the PCA shall consist of a review and verification of design documentation against the delivered system and individual system components. The PCA shall also include a review of system-wise functional and performance requirements that were not reviewed at FCA.

[SOW 633] The FCA and the PCA shall be conducted at a relevant time during project execution to be agreed between the Contractor and the Purchaser.

[SOW 634] The Contractor shall conduct a Functional Configuration Audit with a system verification activity to provide confidence on the product readiness before starting formal acceptance testing at Purchaser's premises.

17.6.1. Engineering Change Proposals (ECP)

- Changes to baselined CID(s) will be processed as either Class I or Class II Engineering Change Proposals (ECPs).

[SOW 635] The Contractor shall propose in the CMP an ECP format.

[SOW 636] The Contractor shall use the CC procedures specified in the CMP for the preparation, submission for approval implementation and handling of ECP(s) to baselined CID(s). When submitting ECP(s), the Contractor shall assign a priority rating of Emergency, Urgent or Routine. Extensions to the target times for processing Class I ECP(s) shall be mutually agreed upon by the Contractor and Purchaser. No Class I ECP shall be implemented until it has been approved by the Purchaser.

[SOW 637] Prior to implementation, all Class II ECP(s) shall be submitted by the Contractor to the Purchaser for review and classification concurrence. If the Purchaser's representative does not concur with the classification, Class I ECP procedures shall be

applied and the ECP shall be formally submitted to the Purchaser for approval or disapproval.

[SOW 638] All design changes shall be appropriately reflected in the technical documentation by the issue of appropriate changes or revisions. The Contractor shall provide all such changes/revisions to the Purchaser.

17.6.2. Requests for Deviation and Waiver

[SOW 639] The Contractor shall (if required) prepare, handle, and submit for approval, Requests for Deviation (RFD) (s) and Requests for Waiver (RFW).

[SOW 640] The Contractor shall be aware that permanent departures from a baseline shall be accomplished by ECP action, rather than by RFD.

17.6.3. Baselines

[SOW 641] The Contractor shall ensure that there is full traceability through all baselines back to the functional baseline.

[SOW 642] The Contractor shall deliver baselines as required, and at FSA.

17.6.4. Functional Baseline (FBL)

The Contractor's developed Functional Baseline is a set of documents that specifies the functional and non-functional requirements of a service or product and that is used as the approved basis for comparison.

[SOW 643] The Contractor's developed FBL shall be derived from the IKM Tools SRS and shall be established at the successful completion of the SRR with the approved updated SRS. Development (Allocated) Baseline.

17.6.5. Development (Allocated) Baseline (ABL)

The ABL is a set of documents that specifies the design of a service or product and is used as the approved basis for comparison.

[SOW 644] The Contractor's design in the ABL shall meet the functional and non-functional requirements allocated in the FBL.

[SOW 645] The Contractor's ABL set of documents and Artefacts shall contain (but is not limited to) the following documents:

a. Functional and system design documentation, development specifications, performance specifications, and interface characteristics and documentation,

b. The allocation of functional characteristics to CID(s),

c. Design constraints,

d. The verification and testing deliverables required to demonstrate achievement of the functional baseline.

17.6.6. Product Baseline (PBL)

The PBL is a set of products and/or services, including supporting documents, which is used as the approved basis for comparison.

[SOW 646] The Contractor's PBL shall meet the functional and non-functional requirements allocated in the FBL and the design of the ABL.

[SOW 647] The Contractor's developed PBL for IKM Tools shall be established after successful completion of the RC and DA Review(s). It reflects the “as-built” configuration of the system.

[SOW 648] The Contractor's PBL products shall be distinguished in documentation, software, hardware/equipment and services.

[SOW 649] The Contractor's software products of the PBL shall contain the following: (off-the-shelf) software media, (off-the-self) software license(s).

[SOW 650] The Contractor's (supporting) documentation products of the PBL shall contain:

a. PBL (as-built) drawings,

b. off-the-shelf OEM manuals,

c. FBL (as-required) documentation,

d. ABL (as-designed) documentation,

e. Operations and Maintenance support documentation,

f. Inventory documentation,

g. Training documentation,

h. Quality assurance documentation,

i. Security documentation,

j. Configuration Management documentation,

k. Warranty documentation and Traceability Matrix.

[SOW 651] The Contractor shall include the System Design Specifications (SDS including the Requirements Traceability Matrix), the Test Plan, and any other documentation deemed appropriate by the Contractor, in accordance with provisions of IEEE 12207, to ensure that requirements are reflected in the system during development and integration can be demonstrated through a comprehensive set of tests and can be delivered in the form of the PBL.

17.6.7. Operational Baseline (OBL)

[SOW 652] The Contractor's developed OBL shall be initially established after successful completion of the PSA and then finally established after successful completion of FSA. It reflects the “as-deployed” (“as-delivered”) configuration of the system.

[SOW 653] The Contractor's OBL shall contain:

a. All delivered Software Configuration Item (SWCI), including COTS;

b. All delivered Hardware Configuration Item (HWCI), if any;

c. Computer Software Configuration Item (CSCI);

d. All the Documentation that comprise the system and any subsequent releases and shall reflects the “as-deployed” configuration of the system.

[SOW 654] IKM Tools baselines shall be given by a Contractor a major release number and a minor release number comprising an X.X notation.

SECTION 18 : DELIVERABLES OUTLINES

18.1. General

This section describes the outline content of a subset of all deliverables (management products and specialist products) to be provided by the Contractor under this Contract.

18.2. Project Status Report (PSR)

[SOW 655] The Contractor shall ensure that the PSR summarises activities, including (but not limited to):

a. s in key Contractor personnel;

b. Summary of Contract activities during the preceding month, including the status of current and pending activities;

c. Progress of work and schedule status, highlighting any changes since the preceding report;

d. CSA report addressing all products in the Project Breakdown Structure;

e. Change Requests status;

f. Off-Specifications status;

g. Test(s) conducted and results;

h. Summary of any site surveys conducted;

i. Plans for activities during the following reporting period;

j. Provisional financial status and predicted expenditures;

k. Corrective actions identified by the Quality Activity taken during the period and to be completed during the next period;

18.3. System Design Specification (SDS)

[SOW 656] The Contractor shall include, at a minimum, the following information in the SDS document:

a. System Architecture (Development, Test, IV&V and Production Environments):

   i. Architectural and implementation rationale.

   ii. Diagrams: logical architecture, physical architecture, hardware design, hardware configuration design, external interfaces, network, software architecture, and data architecture.

   iii. The Contractor shall provide the Diagrams following the NATO Architecture Framework (NAF, [NAC AC/322-D92007) 0048, 2017]).

   iv. The Contractor shall provide at least the following diagrams:

      1. NATO Operational View (NOV-1) High-Level Operational Concept Diagram;

      2. NATO Information Model (NOV-7);

3. NATO System View (NSV-1) Systems Interface Description (Composition);
4. NSV-1 System Interface Description (Intra System);
5. NSV-1 System Interface Description (Inter System);
6. NSV-2, Systems Communications Description – this includes: NSV-2a: System Port Specification;
7. NSV-4 System Functionality.

v. List of software components (COTS and custom Solutions);

vi. Topology for the system;

vii. Capacity Planning calculations;

viii. Backup/Restore design;

ix. Monitoring design;

x. Event management design;

xi. Logging design;

xii. Batch management design;

xiii. Routing, Transport, and connectivity to external systems.

b. Administration model design (Administrative groups and permissions, administrative roles).

c. System Functionalities.

d. Functional breakdown of the system.

e. System internal interfaces: physical interfaces between components, data flows, interfaces between software components.

f. Performance specifications.

g. Equipment.

i. Physical breakdown of the IAS services, into hardware/software CIs (including the number of licenses for each software CI).

ii. Identification of all COTS included in the system.

iii. CSA reports addressing all system CIS.

iv. All configuration information (parameters, settings, etc.) for all components.

[SOW 657] Description of how the system complies with SRS requirements.

a. Description of how the system complies with all security requirements and with the Security Mechanisms at ANNEX A. The matrix provided at ANNEX A shall be updated with appropriate design and traceability information.

b. Description of how the system will remain compatible with the hardware configurations used by the ITM project based on the specifications in ANNEX C.

18.4. Requirements Traceability Matrix (RTM)

[SOW 658] The Contractor shall ensure that the RTM includes the following information (but is not limited to):

a. List of all functional and non-functional requirements.

b. List of all numbered requirements in the SRA and the SSRS.

c. For each requirement, two-way traceability between the requirement and the design feature that implements the requirement.

d. For each requirement, identification of any Off-specifications associated with the requirement.

e. For each requirement the Contractor must propose test methods and test cases linked to the requirements.

f. For each requirement already successfully tested: identification of the test(s) or test waiver(s) on the basis of which the requirement was demonstrated.

g. For each requirement not yet successfully tested: identification of the test(s) or test waiver(s) that are intended to demonstrate the requirement; identification of the associated problem report.

18.5. Test Report

[SOW 659] The Contractor shall provide at least the following information with the test report:

a. Test procedure.

b. Date when the test was run.

c. Test result (Pass, Fail, Not run). If “fail”, identification of the associated problem report.

d. Any annotations by the Purchaser’s representative.

e. Comments.

f. Contractor representative signature.

g. Purchaser representative signature.

h. Identification of the PBL under test.

i. Identification of the data set used to conduct the test session.

18.6. Project Management Plan (PMP)

[SOW 660] The Contractor shall ensure that the PMP comprises of the following sections unless otherwise agreed to by the purchaser:

a. An ‘Organisation’ section describing the Contractor’s organisation for this project according to the requirements. This section shall include an organisational chart showing the members of the Contractor’s Project Team (including the members of the Contractor PMO) and showing their respective responsibilities and authority. This section should also include proposed Project Communication Plan.

b. A ‘Project Planning’ section describing the Contractor’s processes supporting the development and maintenance of the PBS, and PMS according to the requirements.

c. A ‘Risk management’ section describing the Contractor’s processes supporting Risk Management by the Contractor.

d. A ‘System Engineering’ section describing the Contractor approach to these activities according to the requirements in section 11.2.

e. A ‘System Implementation’ section describing the Contractor approach to these activities according to the requirements in section 3.7.

f. An ‘Operation and Maintenance’ section describing the Contractor approach to these activities according to the requirements in **Error! Reference source not found.**.

g. A ‘Testing’ section describing the Contractor approach to these activities according to the requirements in **Error! Reference source not found.**.

ANNEX A System Requirements Specification (SRS)

A.1. The SRS is a separate document that will be attached as Annex A.

ANNEX B CIS Security Reference Baseline

The following table explains the security mechanisms that shall be addressed as part of the development of the IAS solution.

SM ID	Security Mechanism (SM)	Security Mechanism Generic Description	Traceability and Specification
SM01a	Malware Protection for Server (AV for servers)	Protection against malicious software should include anti-virus (AV), anti-spyware, anti-adware, anti-spam, anti-phishing, etc. It should be noted that best practices recommend a product differentiation between the malware protection running in the DMZ (i.e. gateways) and the one running in the internal network.	
SM01b	Malware Protection for Application Server (e.g. SharePoint, etc.)	Protection against malicious software should include anti-virus (AV), anti-spyware, anti-adware, anti-spam, anti-phishing, etc. with a particular attention given to the application-related weakness. It should be noted that best practices recommend a product differentiation between the malware protection running in the DMZ (i.e. gateways) and the one running in the internal network.	
SM01c	Malware Protection for Multifunction Printing (MFP) device	Protection against malicious software should include anti-virus (AV), anti-spyware, anti-adware, anti-spam, anti-phishing, etc. with a particular attention given to the MFP capability and weakness. It should be noted that best practices recommend a product differentiation between the malware protection running in the DMZ (i.e. gateways) and the one running in the internal network.	
SM01d	Malware Protection for Server Database	Protection against malicious software should include anti-virus (AV), anti-spyware, anti-adware, anti-spam, anti-phishing, etc. with a particular attention given to the database capability and weakness. It should be noted that best practices recommend a product differentiation between the malware protection running in the DMZ (i.e. gateways) and the one running in the internal network.	
SM02	Malware Protection for Client (AV for clients)	Protection against malicious software should include anti-virus (AV), anti-spyware, anti-adware, anti-spam, anti-phishing, etc. It should be noted that best practices recommend a product differentiation between the malware protection running in the DMZ (i.e. gateways) and the one running in the internal network.	

SM ID	Security Mechanism (SM)	Security Mechanism Generic Description	Traceability and Specification
SM02b	Second but different Malware Protection for Client (e.g. AV for clients)	Protection against malicious software should include anti-virus (AV), anti-spyware, anti-adware, anti-spam, anti-phishing, etc. It should be noted that best practices recommend a product differentiation between the malware protection running in the DMZ (i.e. gateways) and the one running in the internal network.	
SM03	Malware Protection for handheld devices (e.g. smartphones)	Protection against malicious software should include anti-virus (AV), anti-spyware, anti-adware, anti-spam, anti-phishing, etc. It should be noted that best practices recommend a product differentiation between the malware protection running in the DMZ (i.e. gateways) and the one running in the internal network.	
SM04	Malware Protection for Email server (e.g. AV for e-mail services)	Protection against malicious software should include anti-virus (AV), anti-spyware, anti-adware, anti-phishing, etc. In addition, there is a need to implement whitelists, heuristic and Bayesian statistical analysis to compute the probability of message spam, and antivirus filtering to rid of unsolicited email. It should be noted that best practices recommend a product differentiation between the malware protection running in the DMZ (i.e. gateways) and the one running in the internal network.	
SM05	Malware Protection for Web server (e.g. AV for Web Services)	Protection against malicious software should include anti-virus (AV), anti-spyware, anti-adware, anti-spam, anti-phishing, etc. It should be noted that best practices recommend a product differentiation between the malware protection running in the DMZ (i.e. gateways) and the one running in the internal network.	
SM06	Messaging Content Filtering (MCF)	Messaging Content Filtering (MCF) is required with enforcing policies to block or allow content based on analysis. The solution is needed to monitor, encrypt, filter, and block content contained in email, instant messaging, peer-to-peer file transfer, web postings, and other types of traffic. This includes the SMTP AV Proxy.	
SM07a	Web Content Filtering (WCF) – Categorization	Web Content Filtering (WCF) is required with enforcing policies to block or allow content based on analysis. The solution is needed to monitor, intercept SSL, filter, and block content contained in web-mail, instant messaging, peer-to-peer file transfer, web postings, and other types of web traffic.	
SM07b	Web Content Filtering (WCF) - Content Inspection		

SM ID	Security Mechanism (SM)	Security Mechanism Generic Description	Traceability and Specification
SM07c	Web Content Filtering (WCF) - SSL Intercept		
SM08	HTTP AV Proxy	There is a need to scanning all incoming traffic (dynamic content, password protected pages, etc.) and data while downloading before this is processed by the applying system.	
SM09	FTP AV Proxy	There is a need for controlling and examining bulk transfer of files thus to detect malware before transferring infection into or from system.	
SM10	Integrity Checker	Files are to be checked for change and to ensure that applications have not been tampered (i.e. automated checksum). This also refers to ensure that required Logs have been archived and protected against modification (i.e. signed). Furthermore, data at rest including electronic information published on publicly available systems requires data integrity protection. Equally data in transit also needs data integrity protection especially that, if altered, would put at risk the CIS and its management, or cause serious damage to business on-line transactions.	
SM11	SSL (TLS) and SSH	This is needed for managing the secure communication, data and message transmission within and with other NATO bodies, Remote Offices and Mobile Users (i.e. using a security protocol found in all standard Web browsers). Furthermore also Secure Shell (SSH) i.e. used for the management of the ICT environment (e.g. routers, switches, Linux servers, etc.) is covered by this SM. This security mechanism it employs also an approved (or authorised) public-and-private key for encryption and authentication system.	

SM ID	Security Mechanism (SM)	Security Mechanism Generic Description	Traceability and Specification
SM12	Strong Authentication (User Token)	Strong Authentication: The Strong authentication mechanism provides a layered authentication approach relying on two or more authenticators to establish the identity of an originator or receiver of information. In addition, you may have what a user is (biometrics) such as a fingerprint, a retina pattern, a voice pattern, or a behaviour pattern such as that exhibited in using a keyboard (Characteristic). Source: AC/322-D(2005)0044 Any request for accessing to network resources needs to go through and satisfy the Authentication, Authorization, Accounting (AAA) and Auditing requirement. In addition, it needs to provide identity and traceability of users and systems. This includes the Remote Authentication Dial-In User Service (RADIUS), which is the current standard by which devices or application communicate with an AAA system. In fact, all requests for accessing the network have to be audited. This security mechanism may also be used to protect passwords in storage as well as in transit, in accordance with security policies and best practices, and in combination with other security mechanisms (e.g. SM13) when required. Following are the two well-known strong authentication mechanisms: One-Time Password (OTP), sometimes also called Medium Authentication: Traditionally static passwords can more easily be accessed by an unauthorised intruder given enough attempts and time. By constantly altering the password, as is done with a one-time password, this risk can be greatly reduced. Two-Factor Authentication (T-FA): What a user possesses such as a token. Examples of tokens might include swipe cards, smart cards, mechanical and electronic keys (Possession). An example of T-FA is a USB Token, a Debt-Card, etc.	
SM13	Enterprise Single Sign-On (ESSO)	This is to be used to manage user credentials, authentication and auditing in conjunction with medium or strong authentication devices (e.g. combined with strong authentication methods like smart cards) and identity provisioning systems to achieve provisioning and easier identity mapping	

SM ID	Security Mechanism (SM)	Security Mechanism Generic Description	Traceability and Specification
SM14	Firewall (FW) for Outer Perimeter/ Border Protection	Firewall may be hardware and/or software and is needed to enforce security policies, secure the network, shielding it from unauthorised users. In addition to preventing unrestricted access into the network, firewall needs to also restrict data from flowing out of the network.	
SM15	Firewall (FW) for Inner Perimeter	Firewall may be hardware and/or software and is needed to enforce security policies, secure the network, shielding it from unauthorised users. In addition to preventing unrestricted access into the network, firewall needs to also restrict data from flowing out of the network. The so-called "personal firewall" most of the time deployed on clients (e.g. on REACH laptop) is also part of the Inner Perimeter.	
SM16N	Intrusion Detection and Prevention System (IDS/IPS) - Network (N) Based	It may be software and/or hardware designed to detect/prevent unwanted attempts at accessing, manipulating, and/or disabling computer systems and network devices. It needs to detect/prevent attacks against vulnerable services, data driven attacks and applications, denial of service (DoS).	
SM16H	Intrusion Detection and Prevention System (IDS/IPS) - Host (H) Based	It is software designed to detect/prevent unwanted attempts at accessing, manipulating, and/or disabling computer systems and server and clients. It needs to detect/prevent attacks against vulnerable services, data driven attacks and applications, denial of service (DoS), host based attacks such as privilege escalation, unauthorised logins and access to sensitive files.	

SM ID	Security Mechanism (SM)	Security Mechanism Generic Description	Traceability and Specification
SM17	Network Access Control (NAC) / Network Access Protection (NAP) and Network Access Quarantine (NAQ)	This is needed to bolstering the security of the network by restricting the accessibility and availability of network resources to endpoint devices, whether on the campus or outside it, that comply with a defined security policy. Users and/or endpoint devices must authenticate themselves before getting access to the network, even if they are roaming. The authentication methods may vary depending on the device and connectivity types (i.e. hard-coded address, challenge-response, cryptographic methods and others. The network can then make further policy decisions based upon user and device identity characteristics. Before gaining network access, endpoint devices must be checked for vulnerabilities, security software configuration parameters (e.g. whether antivirus signatures are current), and malicious code signatures. Further network decisions are based upon the results of this examination. For instance, a device that is not compliant with a defined security policy has to be isolated/quarantined and undergo through a remediation and sanitization process. Only when successful, the device may be granted access to the network and in accordance with its identity characteristics. In fact, the solution has to be centrally managed and configured to limit a device to specific network assets or tasks in accordance with policies and business requirements. For example, an IP phone may be restricted to a particular network VLAN and IP telephony gateway.	
SM18	IP Filtering & Management	IP filtering is needed to filter traffic based and deep packet inspection pattern matching. This mechanism is needed to decide which type of IP datagram will be processed normally and which will be discarded. By discarded is intended that datagram is deleted and completely ignored, as it had never been received.	
SM19	Network/Port Address Translation (NAT/PAT)	It needs to be used NAT/PAT to connect multiple devices to Internet by only using one public IP address. NAT/PAT traversal should be considered because of Voice over IP (VoIP) protocol enabled devices.	

SM ID	Security Mechanism (SM)	Security Mechanism Generic Description	Traceability and Specification
SM20	(Web) Application Firewall and other proxy/reverse proxy	(Web) Application firewall is required to further secure applications during the delivery process. It needs to limit the access which software applications have to the operating system services, and consequently to the internal hardware resources found in a computer. In addition, a dedicated Web Application Firewall (WAF) is needed to apply a set of rules to an HTTP conversation. This is often used to also provide additional proxy and reverse proxy for the other services (e.g. DNS), SSL Termination, Web Reverse Proxy, etc.	
SM21	System and Security Logging & Auditing - Infrastructure and Servers	Logging and auditing requirements are to be satisfied on each network component and event messages and alerts transmitted over the network, and centrally managed and stored. The standardization of the event log format and the correlation of logs is recommended as to enable an “automated smart analysis” of the logging also when combining logs coming from multiple systems. A full control over the administrative channels is required as to enforce global regulations, irrespectively of the User Types (or Categories/Roles), as to monitor, log and audit the whole network infrastructure in a transparent and integral way. This will allow collecting reliable information concerning the security monitoring, logging and auditing of any activity concerning ICT services, systems and their components.	
SM21b	System and Security Logging & Auditing - Applications	Logging and auditing requirements are to be satisfied application and event messages, to be centrally managed and stored. The standardization of the event log format and the correlation of logs is recommended as to enable an “automated smart analysis” of the logging also when combining logs coming from multiple systems.	

SM ID	Security Mechanism (SM)	Security Mechanism Generic Description	Traceability and Specification
SM22	Hardening of Network Devices	Network devices (i.e. routers, switches) can be considered the very first line of defence and also the first line of attack. It provides packet routing and can also be configured to block or filter the forwarding of packet types that are known to be vulnerable or used maliciously. Switches are used to link physical segments of a network together but to also separate networks segments with Virtual LAN (VLAN), thereby reducing the spread of broadcast traffic and applying access control based on security rules. Using access controls between VLANs restrict the flow traffic between different segments of the network and provides a level of protection by blocking internal intrusion. In addition to firewall filtering, this raises the layer of security. Though more expensive, Switch Layer 3 is strongly recommended for several reasons: increased scalability, avoid slow convergence problem with Spanning Tree Protocol, enable load-balancing across multiple paths, enhance redundancy/resiliency, enhance security functions, etc.	
SM23	Voice over Internet Protocol (VoIP) protection	VoIP attacks are becoming malicious as much as what we are now witnessing with other IP-based communications. Internal communication: VoIP network that runs in a converged environment needs to be separated at an abstract level (e.g. using VPN or VLAN); External communication: Ensure level of authentication and encryption to maintain integrity of communications (e.g. using VPN). Make sure the network and security devices such as IPS/IDS, firewall, etc. use technology that is “VoIP aware”. Have an IPS deployed between VoIP gateways and near the call manager. Should the IP signalling (e.g. VoIP) be widely used, this was deemed to be augmented by a BPD like a Session Border Controller (SBC), thus to exert great influence over the data flows of sessions. Additional reference: NIATC, NCIRC-TC security recommendation on IP Telephony systems architecture, deployment and configuration, dated 27 September 2010.	

SM ID	Security Mechanism (SM)	Security Mechanism Generic Description	Traceability and Specification
SM24	Wireless Network Protection (and Jamming)	The use of Wireless needs to also take additional security precautions. First of all, IEEE 802.1X, 802.11i and 802.11w standards is to be applied. Secure communications, which entails both encryption and data authentication, has to be mutually established between client and network. Finally, pertaining Security Policy and Supporting Directives are to be followed in accordance with the security classification level agreed with the business. Depending on the type of traffic supported over the wireless infrastructure (i.e. NATO business), wireless Intrusion Detection/Prevention and Air Monitor should be considered, inn addition of Jammers to inhibit or halt the transmission of signals, when appropriate and in line with the business requirements. Additional reference: INFOSEC Technical and Implementation Guidance on Wireless LAN Security, AC/322-D(2005)0049	
SM25	Storage Compartmented Security Mode (SCSM)	The purpose of SCSM is to split the information up into separate virtual compartments or security levels. Storage will use secure compartmented data access as information of different classification level is to be stored using compartmentalized access and access control over trusted and untrusted network. To create secure compartments, storage area will use trusted virtualization, application-level firewalls and other security devices that may be used for this purpose.	
SM26	Data Backup, Replication and Recovery (DBRR)	Proven, cost-effective and robust backup, replication and recovery solution is needed. The solution has to consider the centralised management of DBRR of the entire network and remote office(s) securely, easily and in timely manner, according to predefined business requirement and criticality. On-site and off-site backup/replication storage needs to be properly implemented and handled, including data encryption and dedicated/redundant bandwidth. As far as the Business Continuity Planning (BCP) and Contingency Planning are concerned, they need to be distinguished between "Local" (i.e. within the site) and "Non local" (i.e. across sites).	

SM ID	Security Mechanism (SM)	Security Mechanism Generic Description	Traceability and Specification
SM27	Network Management System (NMS) / Systems Management System (SMS)	A Network Management System, as a combination of hardware and software, is needed to provide activity monitoring, network utilization, controlling, auditing, assessing performance of devices, managing, configuring and administering portions or the entire ICT infrastructure. It needs to provide discovery capabilities, inventory, configuration and mapping dependency –mainly up to an including layer 3 of the OSI Reference Model. A Systems Management System (SMS) is required to provide systems integration as to orchestrate all systems providing services to the business, to coordinate the execution of multiple technical services and systems as to make them appearing as a “single” entity to service request. It needs to provide application monitoring, capacity monitoring, storage management, security management, auditing, assessing performance of systems and applications, managing, configuring and administering portions or all systems. Additionally, it shall provide discovery capabilities, inventory, configuration and mapping dependency –mainly from layer 4 and up to an including layer 7 of the OSI Reference Model. The SMS needs to integrate and/or interoperate with the NMS.	
SM28	IT Forensic	The IT Forensic is pertaining to legal evidence found in computers and digital artefact. Digital artefact includes computer system, storage media, electronic document, sequence of computer packets, etc. This also helps with achieving regulatory compliance and response capabilities to IT incidents. The IT Forensic security mechanism is needed to assure that the evidence are accurately collected and that there is a clear chain of custody from the scene of the crime to the investigator, and ultimately to the concerning Authority. This SM includes the Incident Handling and Response.	

SM ID	Security Mechanism (SM)	Security Mechanism Generic Description	Traceability and Specification
SM29	Encryption-Decryption /Cryptography	This is needed to cipher-text data-info that cannot be understood by unauthorised people, and so protect data confidentiality and integrity. This will be used to encrypt data at rest (e.g. for mobile user), in combination with SSL/TSL and VPN tunnelling. Depending of the classification level a different type of encryption/decryption mechanisms may be required (reference AC/322-D/0047 "INFOSEC Technical and Implementation Directive on Cryptographic Security and Cryptographic Mechanisms"). For this security mechanism, only products selected through the directive on the “Selection and Procurement of NATO Cryptographic Systems, Products and Mechanisms” (reference AC/322-D(2006)0041) and “NATO Off-Line Cryptographic Equipment (NOLANWI_CE)” (reference AC/322(SC/4)N(2008)0006) may be used, unless differently stated in other documents or because of specific weaver received from the competent authorities. The maintenance of crypto equipment is part of this SM. This security mechanism may also be used to protect passwords in storage as well as in transit, in accordance with security policies and best practices, and in combination with other security mechanisms (e.g. SM13) when required.	
SM30a	Public Key Infrastructure (PKI) - User certificate	There is a need to enable users, i.e. unsecured public network such as the Internet; to securely and privately exchange data (either in transit or at rest) through the use of a public and private cryptographic key pair issued by a NATO accredited Certification Authority (CA). Depending on the business requirements, this SM may also need to provide the "Non-repudiation” as proof for: - Origin of data, - Genuine authentication with high assurance. Public Key Infrastructure (PKI). NPKI Users, in conjunction with SM12.	

SM ID	Security Mechanism (SM)	Security Mechanism Generic Description	Traceability and Specification
SM30b	NPKI - Device certificate	There is a need to enable devices i.e. unsecured public network such as the Internet; to securely and privately exchange data (either in transit or at rest) through the use of a public and private cryptographic key pair issued by a NATO accredited Certification Authority (CA). Depending on the business requirements, this SM may also needs to provide the "Non-repudiation" as proof for: - Origin of data, - Genuine authentication with high assurance. Public Key Infrastructure (PKI). NPKI Devices, in conjunction with SM17.	
SM31	Logical Security Zones	The segregation in Security Zones (e.g. Public Security Zone, NATO UNCLASSIFIED Security Zone, NATO RESTRICTED Security Zone etc.) enhances security as whole. This can be achieved at one or more network layers (mainly at Layer 2 and 3 according to the OSI Reference Model), and using one or a combination of different types of technology as follows, but not limited to: • Virtual Local Area Network (VLAN) • Private Virtual Local Area Network (PVLAN) • Access Control List (ACL) • VLAN Access Control List (VACL) • Multiprotocol Label Switching (MPLS) • Virtual Private Network (VPN) • Virtual Private LAN Service (VPLS) • Virtual Device Context (VDC) • Firewall and IDS/IPS capabilities distinct at each layer • Distinct Firewall leg and port • Distinct Virtual Switch (vSwitch) The implementation of the "Security Zones" is called "Security Zoning" and may also include an air gap between CIS.	
SM32	Policies, directives and procedures (PDP)	Policies, directives, guidance and procedures are to be developed where not existing, or regularly updated and published where existing: - Training - Certified products - Hardening guides - Security settings. This includes the NIATC hardening guides, excluding security-related setting for OS and routers/switches since they are covered respectively with SM37 and SM22.	

SM ID	Security Mechanism (SM)	Security Mechanism Generic Description	Traceability and Specification
SM33	Load Balancing / Failover	A backup operation that automatically switches to a standby database, server, device or network if the primary system fails or it is temporarily unavailable (e.g. for servicing) is needed for all the core and/or critical components of the IT infrastructure. Depending on the type of service, this should include a distributing processing and communications activity evenly across a computer network so that no single device is overwhelmed.	
SM34	Information Protection Control – a.k.a. Classification Level / Data Labelling	This SM tightly linked to so-called Information Protection Control (IPC). This security mechanism is needed to electronically label all IT resources thus to indicate the security classification level that the IT resource is permitted to handle. In addition, all data has to be marked with the classification level in accordance with the need-to-know policy. This SM needs to generate/share classification metadata –via a single or bulk processing- that can be reused by other applications as well as by other security mechanisms, and that can be based on user attributes and roles. Depending on the business requirements, this SM may also need to convert the genuineness of data or "Data authenticity".	

SM ID	Security Mechanism (SM)	Security Mechanism Generic Description	Traceability and Specification
SM35	Data Loss/Leak Prevention (DLP)	The Information Protection and Control (IPC) solutions, of which Data Loss/Leak Prevention (DLP) is a key component, is needed as solutions that monitor, encrypt, filter, and block content contained in email, instant messaging, peer-to-peer file transfer, web postings, and other types of traffic and to help preventing unauthorised access to sensitive information – anytime, anywhere. This SM make use also of metadata from other solution/security mechanisms as required (e.g. from classification metadata also generated by other SMs (i.e. SM34), thus to exhaustively preventing data loss/leakage including internal document slipping out. In fact, for effective DLP is intended a tight integration or interoperability of different DLP elements as to work together in order to provide a solid data defence. These elements can be categorized as follows: • Data discovery, classification and fingerprinting • Encryption • Gateway detection and blocking • E-mail integration (e.g. SM34) • Device and media management.	
SM36	Vulnerability Scanning & Compliancy Check	A systematic examination of the AIS components and products is needed to determine the adequacy of the security measures, identify security deficiencies, provide data from which to predict the effectiveness of proposed security measures, and confirm the adequacy of such measures after implementation.	
SM37	OS security settings	A collection of settings that define what a system will look like and how it will behave for a defined group of users. This should be centrally managed and auditable. Policies should allow registry-based changes, access control permissions, security options, software installation and maintenance, script options and folder redirection options. This SM includes the Group Policy Object (GPO) for Windows and non-Windows environments. Source: nww.ncirc.nato.int (over the NS WAN).	

SM ID	Security Mechanism (SM)	Security Mechanism Generic Description	Traceability and Specification
SM38	Quality of Service (QoS)	This is mainly an expectation or requirements of service regarding a system. More precisely QoS needs to provide the ability of implementing, monitoring and managing QoS of different priorities to different applications, users or data flows in a network. Most of the time, this SM makes use of the categories defined as follows: • Voice • Video • Important_Data • Routine_Data • Best_Effort_Data Services need to be assigned to the category/rule in accordance to requirements.	
SM39	Development/Test/Pre-production Environments	This environment is needed to ensure that any application, system, etc. doesn't go into production prior to having been thoroughly tested, passed the Quality Assurance and successfully evaluated into pre-production. In other words, the pre-production environment is used for the functional final testing before the actual deployment into production, irrespective of whether hardware or software modifications. Complex enterprise application may require specific tests performed within a test environment, either physically or logically separated, from the production environment. However, while the Pre-production Environment is a requirement, the implementation of a Test Environment may be implemented only if the subsequent operation, support & management allow so.	
SM40	Configuration Management Database (CMDB)	Configuration Management, which also includes CMDB(s) as well as the Change Management, it contains all relevant information about the components of the information system in use is needed and needs to be automatically populated in accordance with NATO policies and processes. This SM also includes the Configuration Management (CM) process required to implement changes under control, and to build and maintain the asset inventory.	

SM ID	Security Mechanism (SM)	Security Mechanism Generic Description	Traceability and Specification
SM41	CAPTCHA	This challenge-response test is needed to ensure that response is not generated by a computer. This process usually requires a user to complete a simple test which the computer is able to generate and grade. This ensures that any user entering a correct solution is presumed to be human. This process is sometimes also described as reverse tuning test. In line with the evolution of such SM and in line with the business impact analysis, its alternatives can also be used: - Check box - Math question - Interactive games - Others	
SM42	Identity & Access Management (IAM)	This security mechanism is an administrative process coupled with a technological solution. This is needed to identify, validate and provide unambiguous, assured identity credentials for all enterprise human and non-human entities e.g. services, processes, and devices –through authentication and/or strong authentication mechanisms- and guarantee to different type of users of devices the appropriate authorization to access different security zones. To this extent, this SM is very much linked and need to interoperate with SM12 (Strong Authentication) regardless of using one or multiple identity services as follows: • Password Authentication; • One-Time Password (OTP); • Two-Factor Authentication (T-FA); • Chip Authentication; • Biometric Authentication; • Single Sign-On/Off (SSO); • Enterprise Single Sign-On/Off (ESSO). This service has many interdependencies with other services/security mechanisms. Major components of the IAM are as follows: User Provisioning, Access Management, Delegated Administration, Self-registration and Self-service, Workflow, Auditing and Logging and Reporting, Authentication, Integration.	

SM ID	Security Mechanism (SM)	Security Mechanism Generic Description	Traceability and Specification
SM43	Management of the Security Mechanisms	The implementation of one solution that would centrally manage all Security Mechanisms is rather unlikely, due to various and heterogeneous requirements of technology landscapes and processes; while an overall orchestration of the Security Mechanisms is to be envisaged by adopting a holistic approach. For instance, Security Information and Event Management (SIEM) solution is recommended as to centrally manage the logging, reporting, searching and alerting of most –if not all- network devices, systems and applications, which should also include the integration with other solutions such as configuration management, problem management, incident management, forensic, etc. Depending on the Business Impact Analysis and the Risk Assessment, unified solutions such as Unified Communications, Unified Access Management, Unified Threat management and Extensible Threat Management, Unified Data Management, Unified Applications, etc. are to be privileged throughout the acquisition process. Last but not least, adequate resources are to be planned for a successful and effective management of the Security Mechanisms, which consequently has a positive reverberation on the business's mission and goals.	
SM44	Network Time Protocol (NTP)	This is needed for synchronizing the clocks of computer systems over packet-switched, variable-latency data networks. NTP uses a hierarchical, layered system of levels of clock sources. NTP timestamp is important for several reasons: maintenance, troubleshooting, forensic analysis, resolving technical or commercial disputes for time-sensitive transaction, etc. but time is inherently important to the function of routers and networks as it provides the only frame of reference between all devices of the ICT infrastructure.	

SM ID	Security Mechanism (SM)	Security Mechanism Generic Description	Traceability and Specification
SM45	Storage Areas security	This SM includes any storage areas such as Logical Unit Number (LUN) Management for Storage Area Network (SAN) security, and others. Software management tool for LUN is essential to enabled efficient LUN creation, management, reporting and auditing. Some of the tools may be vendor-specific or generic, the most important is that the selected tool supports the whole storage provisioning process, including the mapping to specific array-ports, masking specific host bus adapters (HBAs), reporting, logging and auditing functions and reclamation of storage that is no longer being used. Despite the term SAN is often used, this is not limited to that but rather pervasive to any storage service that require similar attention and precaution.	
SM46	Data Scramble	Data Activity Monitoring (DAM) using the Data Scramble mechanism. This security mechanism uses an application intuitive scrambling technology that masks critical data sets and so ensuring that the protection and referential integrity of sensitive data in production, non-production and end-point environments remains usable and intact whether protecting structured or unstructured data. The security mechanism needs to maintain data integrity without going directly against the database when updating and concealing the sensitive information. This security mechanism is also known as Data Masking, Data Scrubbing and Data Obfuscation.	
SM47	Data Activity Monitoring (DAM) and File Server Activity Monitoring (FSAM) using the Data Safeguarding mechanism	Data Activity Monitoring (DAM) and File Server Activity Monitoring (FSAM) using the Data Safeguarding mechanism. This security mechanism needs to look after critical data infrastructure to ensure that: • Discover & Classify • Assess & Harden • Monitor & Enforce • Audit & Report On corporate data, whether hosted in a database or available through a network share, is efficiently and securely managed. In addition, it should also provide a change control solution, vulnerability assessment data leak prevention (the latter in can be implemented throughout or in conjunction with SM35 (DLP) regardless the user type accessing data (database administrator, system administrator, application administrator, or user).	

SM ID	Security Mechanism (SM)	Security Mechanism Generic Description	Traceability and Specification
SM48	Password Management	This security mechanism is required to create and/or enforce password policy, thus to ensure that users are choosing strong (difficult to crack) passwords. It needs to check every new password for compliance with the policy. Passwords that are not compliant are to be rejected together with a password policy message that helps users to choose compliant passwords. This SM is also supporting the SM37.	
SM49	Identity & Authentication, Access Control (IAAC)	This is considered as the technical concept that gathers together all the technical mechanisms supporting the Security Mechanism 42 (SM42), Identity & Access Management (IAM). Although identities, or part of them, are sometimes managed within solutions due to technical constraints or other reasons, they still need to be consistent throughout the security domain and beyond that, when required. In addition, convergence of the management of identities span across physical and logical environments, whereas this is possible and in line with risk assessment.	
SM50	Protection against Distributed Denial-of-Service (DDoS)	The Protection against (Distributed) Denial-of-Service (DDoS) addresses the attempt to make a machine, or a network resource or an entire service unavailable to its intended users and/or services.	
SM51	Physical security	As a minimum, this SM covers the physical security measures implemented at GSE and LSE level in accordance with [AC-35-D/2001].	
SM52	Personnel security	As a minimum, this SM includes personnel security clearances, security awareness and the other measures listed in [AC/35-D/2000].	
SM53	Environmental security	As a minimum, this SM includes fire protection, water protection, power protection, air conditioning, humidity control etc. in accordance with Supporting document on the Availability Aspects of Security (Ref. AC/322-D(2007)0043, section VII). To this respect and where NATO documentation is lacking, the TIA-942 "Telecommunications Infrastructure Standards for Data Centres" should be used.	

SM ID	Security Mechanism (SM)	Security Mechanism Generic Description	Traceability and Specification
SM54	Emission security	As a minimum, this SM includes TEMPEST Zoning and the other security measures listed in: - AC/322-D(2007)0036. - SDIP-27 "NATO Tempest Requirements and Evaluation Procedures". - SDIP-28 "NATO Zoning Procedures". - SDIP-29 "Facility Design Criteria and Installation of Equipment for the Processing of Classified Information".	
SM55	Data processing	The security of data processing (aka data manipulation) is required when data entry and processing, as performed by the applications, requires an active and automated control that such a data (or code) is handled/processed in accordance with the rule sets as established by the business, and therefore consistent with the business objectives.	
SM56	Data diode	This refers to Boundary Protection Component (or BPC) that ensures information flow only one-way across the interconnection. Typically this is required for data transfer from low to high security domain (when there is a difference in sensitivity or classification between the two networks (e.g., from NATO RESTRICTED to NATO SECRET)), and/or when there is a greater threat from the other CIS (e.g. from public network to NATO SECRET). Implementation needs to adhere to the Data-diode security accreditation package, which also contains the configuration guidance, as endorsed by the NSAB.	
SM57	Rogue Communications	Rogue Communications refers to identification and prevention of side-channel exfiltration methods. Methods to prevent the addition of rogue communications capabilities into IT equipment include supply chain integrity methods and secure shipping. Secure storage reduces the opportunity to modify a device.	

Table 17 CIS Security Reference Baseline

ANNEX C Hardware specifications ITM

C.1. The Hardware specification compliant with ITM is depicted in the following table:

1	Server Equipment
1.1	**Hardware & Software**
1.1.1	Rack Mount Server – HP DL180 G9
1.1.1.1	Option for HPE DL server: HP SN1000Q 16Gb
1.1.1.2	Option for HPE DL server: 2TB 6G SAS 7.2K 2.5in HDD
1.1.2	Rack Mount Server - HPE DL380 G9
1.1.3	Rack Mount Virtualization Server – HPE DL380 G9, 8TB HDD
1.1.4	Rack Mount Virtualization Server - HPE DL380 G9, 16TB HDD
1.1.5	Server Blade Enclosure - HPE BLc7000 (converged networking)
1.1.5.1	Server Blade Enclosure - HPE BLc7000 (10GE and 16GFC)
1.1.5.2	Server Blade Enclosure - HPE BLc7000 (Cisco 10GE and 16GFC w/o OV)
1.1.5.3	Option for BLc7000: HPE 2650W Platinum Hot Plug Power Supply Kit
1.1.5.4	Option for BLc7000: HPE BLc7000 Enclosure HP Single Active Cool Fan Option Kit
1.1.5.5	Option for BLc7000: HPE Virtual Connect FlexFabric-20/40 F8 Module for c-Class BladeSystem
1.1.6	Standard Blade Server - HPE BL460c Gen9
1.1.6.1	HPE LPe1605 16Gb FC HBA P/N 718203-B21
1.1.6.2	HPE Insight Control Encl Bdl 8 Track Lic P/N C6N34A
1.1.6.3	Standard Blade Server HPE Insight Control 8x C6N28ABF E-LTU *
1.1.6.4	HCC Blade Server - HPE BL460c G9, 2x14c CPU, 512GB RAM, 2x200GB SSD, 16GFC
1.1.6.5	HCC Blade Server - HPE BL460c G9, 2x14c CPU, 512GB RAM, 16GFC, incl. 2x400GB SSD - P/N 779168-B21 ***
1.1.7	Virtualization Blade Server - HPE BL460c Gen9 256GB RAM
1.1.7.1	Virtualization Blade Server - HPE BL460c Gen9 512GB RAM
1.1.7.1.1	Virtualization Blade Server - HPE BL460c Gen9 512GB RAM CPU v4 edition
1.1.7.2	DB Host Blade Server - HPE BL 460c
1.1.7.3	DB Host Blade Server - HPE BL 460c; incl. HPE 400GB SAS - P/N 779168-B21 ****
1.1.7.4	Virtualization Blade Server - HPE BL460c Gen9 512GB RAM – non-converged/ non-M.2 disks
1.1.8	Rack Mount Server for ICC - HPE DL380 G9
1.1.9	Online Backup Server - HPE DL380 G9 (24TB + StorOnce)
1.1.9.1	Online Backup Server - HPE DL380 G9 (64TB)
1.1.9.2	Online Backup Server - HPE DL380 G9 (64TB); incl. HPE 400GB SAS - P/N 779168-B21 *****

1.1.10	Rack Mount Server for MCCIS - HPE Integrity rx2800 i4 Server
1.1.11	Software License - Veeam Backup & Replication Enterprise Plus
1.1.12	Rack Mount Virtualization Server (HP) - HPE DL380 G9, InfiniBand, 256GB RAM
1.1.13	Rack Mount Virtualization Server (HP) - HPE DL380 G9, InfiniBand, 64GB RAM
1.1.14	Rack Mount Virtualization Server (HP) - HPE DL380 G9, InfiniBand, 32GB RAM
1.1.15	Rack Mount Virtualization Server (HP) - HPE DL380 G9, 1GE, 32GB RAM
1.1.16	Server Upgrade – HPE BLc7000 Server Chassis W. Workstation Blades GPU**
1.1.17	HPE PROLIANT DL360 GEN9 8SFF DC
1.1.18	HPE PROLIANT DL380 GEN9 8SFF DPM
1.1.19	HPE PROLIANT DL380 GEN9 8SFF Hyper-V
1.1.20	HPE PROLIANT DL380 GEN9 8SFF SOFS
1.1.21	Powerstrip 19" Rackmount IEC 60320 C13/C14 to CEE 7/3
1.1.22	UPS APC Smart-UPS C 1500
1.1.23	Rack 8U Portable ruggedized 19" server rack, racksolutions.co.uk, RACK TRANSPORT 30-8
1.1.24	SIEM Server
1.1.25	ReadyRails Sliding Rails Without Cable Management Arm (Kit) (770-BBKW)
1.1.26	Veeam Agent for Microsoft Windows Server edition
1.1.27	HP DL360 Gen9 2P LP PCIe Slot CPU2 Kit
1.1.28	Patch Cord Cat6 5m ******
1.1.29	OM3 MM LC-LC patch 5m*******
1.1.30	Dell PowerEdge R740 Server O3 Design*******
1.1.31	Dell 330 Management Machine*******
1.1.32	LC - LC Duplex OM3 50/125 Patch Cord - 3 m
1.1.33	HPE Synergy Solution
1.1.34	SFP-10G-SR
1.1.35	HPE ProLiant BL460c Gen10 10Gb/20Gb FlexibleLOM Configure-to-order Blade Server
1.1.36	HPE ProLiant DL380 Gen10 24SFF Configure-to-order Server
1.1.37	HPE DL360 Gen10 8SFF CTO Server
1.1.38	JWC - NS - 3xFrame v3
1.1.39	JWC - M166- 2xFrame v2
1.1.40	HPE ProLiant DL380 Gen10 8SFF
1.1.41	HPE PDL360 Intel Xeon-Gold 6136 (3/0GHz/12-core/150W) Processor Kit

Table 18 ITM Hardware Specifications

ANNEX D Site Locations

Ser	Location	Organisation	Network	Comments
1	Mons, BE	SHAPE	ON, PBN2 x Mission Preparation Nwks	Scope agreed with D/27404-ADD1 less Internet collaboration template
2	Mons, BE	ACT SEE	ON, PBN	Scope agreed with D/27404-ADD1 less Internet collaboration template
3	Mons, BE	NCISG HQ	ON, PBN	Scope agreed with D/27404-ADD1 less Internet collaboration template
4	Mons, BE	NCIA Reference Facility	ON	Scope agreed to be implemented at The Hague with D/27404- ADD1. With D/27404-ADD2 the IC agreed to change ON to PBN.
5	Mons, BE	NCIA IV&V	ON, PBN	Scope agreed with D/27404-ADD1
6	Brunssum, NE	JFCB	ON, PBN	Scope agreed with D/27404-ADD1 less Internet collaboration template
7	Naples, IT	JFCN	ON, PBN, 2 x Mission Preparation Networks	Scope agreed with D/27404-ADD1 less Internet collaboration template

8	Ramstein, GE	HQ AIRCOM	ON, PBN	Scope agreed with D/27404-ADD1 less Internet collaboration template
9	Izmir, TU	HQ LANDCOM	ON, PBN	Scope agreed with D/27404-ADD1 less Internet collaboration template
10	Northwood, UK	HQ MARCOM	ON, PBN	Scope agreed with D/27404-ADD1 less Internet collaboration template
11	Monsanto, PO	JALLC	ON, PBN	Scope agreed with D/27404-ADD1 less
				Internet collaboration template
12	Torrejon, SP	CAOC T	ON, PBN	Scope agreed with D/27404-ADD1 less Internet collaboration template
13	Uedem, GE	CAOC U	ON, PBN	Scope agreed with D/27404-ADD1 less Internet collaboration template
14	Poggio Renatico, IT	DACCC	ON, PBN	Scope agreed with D/27404-ADD1 less Internet collaboration template
15	Wesel, GE	HQ 1 NSB	ON, PBN,	Scope agreed with D/27404-ADD1 less Internet collaboration template
16	Grazzanise, IT	HQ 2 NSB	ON, PBN,	Scope agreed with D/27404-ADD1 less

				Internet collaboration template
17	Bydgoszcz, PL	HQ 3 NSB	ON, PBN,	Scope agreed with D/27404-ADD1 less Internet collaboration template
18	Bydgoszcz, PL	JFTC	ON, PBN, 2 x Training Networks	Scope agreed with D/27404-ADD1 less Internet collaboration template and clarified with ADD2
19	Stavanger, NO	JWC	ON, PBN, 2 x Training Networks	Scope agreed with D/27404-ADD1 less Internet collaboration template and clarified with ADD2
20	Sigonella, IT	AGS	ON, PBN,	Scope agreed with D/27404-ADD1 for ON only.
21	Yeovilton, UK	JEWCS	ON, PBN,	Scope agreed with D/27404-ADD1 for ON only
22	La Spezia, IT	CMRE	ON, PBN,	Scope agreed with D/27404-ADD1 for PBN only
23	Oeiras, PO	NCI Academy	ON, PBN,	Scope agreed with D/27404-ADD1 for PBN to be
				implemented at NCISS Latina
24	Oberammergau, GE	NATO School	ON, PBN,	Scope agreed with D/27404-ADD1 for ON only

25	Rome, IT	NDC	ON, PBN,	Scope agreed with D/27404-ADD1 for ON only
26	Norfolk, US	HQ SACT	ON, PBN,	Scope agreed with D/27404-ADD1 less Internet collaboration template but not included as part of present request
27	Mons, BE	SHAPE	Training Platform	Scope agreed with D/27404-ADD2 but not included as part of present request

Table 19 Site Locations

ANNEX E Purchaser Furnished Equipment (PFE) and services

E.1. The Purchaser will provide the Contractor with the following:

E.1.1. Controlled space (with physical and electronic security and identification and access control measures) at implementation sites to temporarily store Purchaser equipment.

E.1.2. Access to implementation sites, including technical spaces, during working hours (and out of working hours including week-ends if required).

E.1.3. Workspaces at implementation locations.

E.1.4. Access to a NATO RESTRICTED network to share information with the Contractor on a NATO RESTRICTED level.

[SOW 661] The Contractor shall check that PFEs are fit for purpose for executing the project. To that end, the Contractor shall define a process and achieve agreement between the Contractor and NATO, in compliance with project timelines.

E.2. Software Licenses

E.2.1. The Purchaser will provide the following licenses:

- SQL Server 2016
- ITM SharePoint Server on AFPL
- Layer 2 Knowledge Management Suite
- Power BI Premium (Analytics/Reporting)
- ITM baseline: Antivirus, Metalogix and Operating Systems (OS)
- MS Visual Studio

E.2.2. Assumptions Limitations and Exclusions

The Purchaser will give the Contractor the current IKM Tools source code as a reference. It will be the Contractor's choice to re-use or develop the new IKM Tools from the ground up.

- In the case the Contractor re-uses the current IKM Tool source code, the Contractor takes full responsibility of the source code and the Purchaser will not incur any liability for issues/faults found therein.

ANNEX F RFC SMC Requirements

		MAJOR / MINOR RELEASES	PATCH RELEASES
COMMON REQUIREMENTS	A&T Portfolio	X	
	Funding availability	X	X
	System Media	X	X
	Release information (Release Notes / Product Guide / Version Description document)	X	X
	Installation Instructions	X	X
	User Manual	X	X
	Administration Manual	X	
	Security Settings	X	
	Support Plan	X	
	Deployment Plan	X	X
	Design Description	X	
ADDITIONAL REQUIREMENTS FOR NOTS	Requirement Traceability Matrix	X	
	Functional Test Report	X	
	User Acceptance Test Report	X	
ADDITIONAL REQUIREMENTS FOR NEW SOFTWARE	CONOPS	X	

Table 20 RFC for SMC Requirements

ANNEX G ITM Joining Instructions

ANNEX H Glossary

Term	Meaning
Accountability	Degree to which actions of an *Entity* can be traced uniquely to the *Entity*.
Adaptability	Degree to which a product or system can effectively and efficiently be adapted for different or evolving hardware, software or other operational or usage environments.
Alert	A warning that a threshold has been reached, something has changed, or a *Failure* has occurred. The two types of *Alerts* are: • “Warning” (indicating that it is necessary to take action in order to prevent an exception occurring) • “Exception” (indicating that the *Service* is currently operating below the normal predefined parameters/indicators).
Analysability	Degree of effectiveness and efficiency with which it is possible to assess the impact on a product or system of an intended change to one or more of its parts, or to diagnose a product for deficiencies or causes of *Failures*, or to identify parts to be modified.
Assertion (alternative terms: claim, identity assertion)	A package of information that contains *Identity* and security information about a subject. An *Assertion* can be classed as either a *Simple Token* or a *Security Token.*
Attribute	Characteristic or property of an *Entity* that can be used to describe its state, appearance, or other aspects.
Attribute-Based Access Control	An access control paradigm whereby access rights are granted to *Entities* through the use of policies which evaluate *Attributes* (possibly combining *Attributes* together) to grant or deny access.
Attribute-Based Access Control	Represents a point in the space of logical access control that includes access control lists, role-based access control, and the ABAC method for providing access based on the evaluation of attributes.
Audit Log	An audit log is a security-relevant chronological record, set of records, and/or destination and source of records that provide documentary evidence of the sequence of activities that have affected at any time a specific operation, procedure, or event.
Authentication	A *Process* to achieve a certain level of assurance in the binding between an *Entity* and an *Identity*.
Authenticity	Degree to which the *Identity* of a subject or resource can be proved to be the one claimed.
Authoritative Data Source	The repository or system that contains the data and attributes about an individual that are considered to be the primary source for this information. If two systems with an individual's data have mismatched information, the authoritative data source is used as the most correct.

Authorisation	The *Process* of establishing whether an *Entity* is permitted to perform a particular operation on a resource.
Authorisation Server	OAuth 2.0 terminology describing an entity that authenticates and authorizes a Client and issues an access token to that Client to be used in a request for a protected resource.
Authorised User	An Entity that has access rights for a piece of Platform functionality at “run time”. This functionality may include viewing, creating, collaborating and updating/maintaining information.
Availability	Degree to which a system, product or *Component* is operational and accessible when required for use. Inherent *Availability* (intrinsic) assumes ideal support (i.e. unlimited spares, no delays, etc.); only design related *Failures* are considered.
Business Rules	Statements describing a business/enterprise policy or procedure (e.g. discount calculation) and can be represented using formal language.
Capability	*Services* that are used by an end-*User* in support of their operational business.
Capacity	Degree to which the maximum limits of a product or system parameter meet requirements.
Choreography	Describes the sequence and conditions in which the data exchanged between two or more participants in order to meet some useful purpose. The logic of the *Message*-based interactions among the participants are specified from a global perspective.
Civil Military Cooperation	Means by which a military commander connects with civilian agencies active in a theatre of operations.
Claims	The Attributes of an entity that are asserted by an entity contained within a Security Token.
Commercial-Off-The-Shelf	The purchase of packaged solutions which are then adapted to satisfy the needs of the purchasing organisation, rather than the commissioning of custom made, or bespoke, solutions.
Community of Interest	A group of people interested on a particular *Topic* or area, i.e. intel community, security community.
Component	An IT system can be divided into *Components*, each of which provides a particular function or group of related functions.
Composition	The *Process* of combining a set of *Services*, and arranging them in a specific, well-defined way.
Confidentiality	The property that information is not made available or disclosed to unauthorised individuals or Entities.
Configuration Item	*Components* of an infrastructure that currently is, or soon will be under *Configuration Management*. *Configuration Items* may be a single module such as a monitor or tape drive, or more complex items, such as a complete system.
Configuration Management	The *Process* responsible for maintaining information about the *Configuration Items* required to deliver a *Service*, including their relationships with one another.

Consumer (related to publish-subscribe)	An end-point, represented by a WS-Addressing end-point reference, designated to receive notifications produced by a notification producer as a result of a subscription.
Context (related to IAM; alternative terms: domain, domain of applicability)	Environment where an *Entity* can use a set of *Attributes* for *Identification* and other purposes.
Contractor	Future successful bidder who awarded the contract with the Purchaser for delivery of the scope describe by the document.
Credential	Set of data presented as evidence of a claimed or asserted *Identity* and/or entitlements.
Data Centre	A repository that houses computing facilities like servers, routers, switches and firewalls, as well as supporting *Components* like backup equipment, fire suppression facilities and air conditioning. It may be a key centralised IaaS location where the bulk of computing will take place.
Data Element	A single unit of information (e.g. a speed, altitude) that has a useful meaning in some context.
Data Provider	A *Service* that produces data for other *Services*.
Decision Point	A Decision Point is a logic step that evaluates one or more conditions to determine the direction of a workflow (e.g. approve a document).
Deployable CIS	Provides a *Capability* for deployed forces in-theatre and extends *Services* from the fixed infrastructure to deployed *Users*.
Disaster	A business or service continuity event which cannot be managed by the incident management capabilities, requiring invocation of the IT Service Continuity Plans employing the contingency Service Assets. The disaster scenarios are identified as a part of the Business Impact Assessment and risk assessment. For the purpose of initial ITM project planning a disaster can be defined as an event leading to any of the following effects: - losing WAN communication from any of the Datacentres, nodes or client-only sites; - destruction of any site; - disabling more than 30% of back-end IaaS components. - disabling more than 30% of client components. - unavailability of any service (hosted on IaaS) of Business Criticality 1 for more than 24h.
Enhanced Node	An IaaS location with enhanced computing capabilities in order to support applications that cannot be centralised for technical or other reasons, to provide a level of graceful degradation should communications be interrupted, or to provide a higher level of *User* experience.
Entity	Item inside or outside an information and communication technology system, such as a person, an organization, a device, a subsystem or a group of such items that has recognizably distinct existence.

Error	A design flaw or malfunction that causes a *Failure* of one or more *Configuration Items*. A mistake made by a person or a faulty *Process* that affects a *Configuration Item* is also an *Error* (human *Error*).
Event	Any detectable or discernible occurrence that has significance for the management of the infrastructure or the delivery of a *Service.*
Event Management	*Process* that monitors all *Events* that occur throughout the Platform. It allows for normal operation, but also detects and escalates exception conditions.
Failure	Loss of ability to operate to specification, or to deliver the required output. The term *Failure* may be used when referring to *Services*, *Processes*, activities, *Configuration Items*, etc.
Fault	see Error.
Fault Detection	The capability of a system to determine that a Fault exists in a circuit, using an automatic process.
Fault Isolation	The capability of a system to identify, using an automatic process, which is the component or parameter of the system that is responsible for Fault.
Fault Tolerance	Degree to which a system, product or *Component* operates as intended despite the presence of hardware or software *Faults*.
Federated Identity	*Identity* for use in multiple *Contexts*, which together form an *Identity Federation*.
Federation	Association of users, service providers and identity providers.
Functional Service	Represents a group of functionalities within a specific *Community of Interest*, to which applications and *Services* are assigned.
Functional Baseline	A set of documents that specifies the functional and non-functional requirements of a service or product and that is used as the approved basis for comparison.
Graceful Degradation	The ability of a computer, machine, electronic system or network to maintain limited functionality even when a portion of it has been destroyed or rendered inoperative (either by a fault or deliberately).
Identification (related to IAM)	The *Process* of recognizing an *Entity* in a particular *Context* as distinct from other *Entities*.
Identity	Set of *Attributes* related to an *Entity*.
Identity and Access Management	The people, *Processes* and products necessary to manage *Identities* throughout their life-cycle and the access to resources.
Identity Federation	Agreement between two or more *Contexts* specifying how *Identity Information* will be exchanged and managed for cross-*Context Identification* purposes.
Identity Information	Set of values of *Attributes* optionally with any associated *Metadata* in an *Identity*.
Identity Management	The *Processes* and policies involved in managing the lifecycle and value, type and optional *Metadata* of *Attributes* in *Identities* known in a particular *Context*.
Identity registration	Process of recording an entity's identity information in an identity register.
Identity Repository (alternative terms: identity store)	Repository of *Identities* for different *Entities.*

Identity Service Provider	Entity that verifies, maintains, manages, and may create and assign identity information of other entities.
ILS Plan	A standalone Product Lifecycle documents that will survive the project post-FSA. As such, these documents are not to be submitted as part of the PIP, but will be part of the Technical Proposal.
Incident	An unplanned interruption to an IT *Service* or reduction in the quality of an IT *Service*. *Failure* of a *Configuration Item* that has not yet affected *Service* is also an *Incident* — for example, *Failure* of one disk from a mirror set.
Independent Verification and Validation	NCI Agency Service Line organizational unit responsible for ensuring that all NCI Agency services have gone through the required procedures to ensure that they are fit for purpose and use and that they are assured for interoperability purposes.
Information Catalogue	An information catalogue is a list of information products that an organization provides to its users or to IT-infrastructure resources, such as applications or other services. Each information product within the catalogue typically includes: a description of the information product, timeframes, who is entitled to request the information product, costs (if any), and how to obtain the information product. The catalogue information is metadata associated with the information product. Information products should be identifiable across the organization by using a unique identifier.
Infrastructure as a Service	A concept of provisioning IT platforms to *Users* or other *Services* in the form of a utility covered by the agreed level of warranty.
Integrity	The property that information (including data, such as cipher text) has not been altered or destroyed in an unauthorised manner.
Interoperability	Degree to which two or more systems, products or *Components* can exchange information and use the information that has been exchanged.
IT Modernisation	A project aiming at modernising, consolidating, and centralising NATO's enterprise infrastructure and service management, and by pooling and abstracting resources.
Key Performance Indicator	A measure (quantitative or qualitative) that enables the overall delivery of a *Service* to be assessed by both business and IT representatives.
Logging	Act of keeping a log, which is a file that records either *Events* that occur in software or *Messages* between different *Users.*
Maintainability	Degree of effectiveness and efficiency with which a product or system can be modified by the intended maintainers.
Message Exchange Pattern	A template that establishes a pattern for the exchange of *Messages* between two communicating parties.
Metadata	Structured information that describes, explains, locates, or otherwise makes it easier to retrieve, use, or manage a data asset; often called data about data or information about information.
Metering	The act of controlling software use by the number of specific nodes (workstations where a single *User* is logged on and terminal server sessions) that are simultaneously using a specific application.

Modularity	Degree to which a system or computer program is composed of discrete *Components* such that a change to one component has minimal impact on other *Components.*
Monitoring	The supervising of overall *Processes* that are performed on a computing system, and providing reporting *Services* to the system or system administrator.
Multi-tenancy	A software architecture in which a single instance of software runs on a server and serves multiple tenants. A tenant is a group of *Users* who share a common access with specific *Privileges* to the software instance.
NATO Network Enabled Capability	The Alliance's cognitive and technical ability to federate the various *Components* of the operational environment from the strategic level (including NATO HQ) down to the tactical level, through a networking and information infrastructure.
NATO Public Key Infrastructure	The PKI environment for NATO that fully complies with the NATO Certificate Policy.
Non-repudiation	The measure of assurance to the recipient that shows that information was sent by a particular person or organisation and to the sender that shows that information has been received by the intended recipients.
Notification	A one-way *Message* sent to indicate that an *Event* has occurred.
Notification Cache	A *Service* capable of consuming *Notifications*, to store them in a repository, and to retrieve and resend them – on request – to *Notification Consumers* or to *Notification Requestors*.
Off-Specification Report	Report describing items that should be provided by the project, but currently are not (or are forecasted not to be) provided. This might be a missing product or a product not meeting its specification.
Operational Network	Provides IT *Services* at NATO SECRET level in direct support of war fighting *Processes*, *Processes* requiring higher levels of assurance and *Processes* of military and political communications.
Performance	A measure of what is achieved or delivered by a system, person, team, *Process* or IT *Service.*
Performance Efficiency	*Performance* relative to the amount of resources used under stated conditions.
Policy-Based Access Control	Defines an access control paradigm whereby access rights are granted to users through the use of policies which combine attributes together. The policies can use any type of attributes (user attributes, resource attributes, object, environment attributes etc.).
Portability	Degree of effectiveness and efficiency with which a system, product or *Component* can be transferred from one hardware, software or other operational or usage environment to another.
Privilege	A right that, when granted to an *Entity*, permits the *Entity* to perform an action.
Privilege Management	*Process* of establishing and maintaining *Entity Privileges* to protected resources: accounts, entitlements and *Roles* that comprise an *Entity*'s access profile.
Problem	A cause of one or more *Incidents*. The cause is not usually known at the time the *Incident* happens.

Project Master Schedule	Summary of all the individual project schedules for the Bond Program and is intended to indicate the position of a project to the other projects on a global basis.
Protected Business Network	Provides IT *Services* at the NATO UNCLASSIFIED and NATO RESTRICTED classification level in support of administrative business processes, appropriate operational *Processes* and those *Processes* requiring interaction over the Internet. Within the PBN infrastructure there are also security domains that are providing NATO UNCLASSIFED information *Services* like extranet applications or VOIP/VTC *Services* and PUBLIC information *Services* like internet access via Wi-Fi.
Purchaser	NCI Agency acting as a Host Nation for this procurement on behalf of NATO organizations.
Purchaser Furnished Equipment	Equipment provided to the Contractor doing the project by the purchaser of the project.
Recoverability	Degree to which, in the *Event* of an interruption or a *Failure*, a product or system can recover the data directly affected and re-establish the desired state of the system.
Recovery Point Objective (RPO)	This is the threshold of how much data can be afforded to be lost since the last backup. RPO is measured in hours of data loss.
Reliability	Degree to which a system, product or *Component* performs specified functions under specified conditions for a specified period of time.
Relying Party	This is the service that is protected by the PEP. It relies on the Authentication information presented in the Security Token. It is thus usually the Data Provider.
Request-Response	One of the basic methods computers use to communicate with each other, in which the first computer sends a request for some data and the second computer responds to the request.
Resource Server	OAuth 2.0 terminology describing an *Entity* that: hosts the protected resource; is capable of accepting and responding to protected resource requests; and, validates access tokens ensuring the protected resource request conforms to the access control policy.
Resource Utilisation	Degree to which the amounts and types of resources used by a product or system, when performing its functions, meet requirements.
Role (regarding IAM)	Set of properties or *Attributes* that describe the capabilities or the functions performed by an *Entity*.
Scalability	Ability of a system to increase (or decrease) total throughput under an increased load when resources (typically hardware) are added (or subtracted), so the *Scalability* quality figures are defined accordingly.
Security Token	A structure for distributing assertions between *Entities*.
Security Token Service (STS)	A Service that issues Security Tokens.
Service	A piece of functionality that is characterized by a syntactic interface specification as well as a semantic interface specification, i.e. its behaviour and *User*-observable functionality.

Service Interface Profile	A detailed technical specification of an *Interoperability* interface.
Service Oriented Architecture	An architectural style in which *Services* are provided to the other *Components* by application *Components*, through a communication protocol over a network.
Standard Node	Location with limited amount of computing in support of local *User Services* access.
Sub-service	A service that is part of a composed service. The sub-service can be either an independent, atomic service or itself a composed service.
Time Behaviour	Degree to which the response and processing times and throughput rates of a product or system, when performing its functions, meet requirements.
Topic	Area of interest describing the context of information. In IKM this is a defined term managed as metadata. (e.g. Improvised explosive device (IED))
Trust	Belief in the *Reliability* and truth of information; or in the competence of an *Entity* to act appropriately, within a specified *Context*.
Trust framework	Set of requirements and enforcement mechanisms for parties exchanging identity information.
User	*Entity* that makes use of a resource, e.g., system, equipment, terminal, *Process*, application, or corporate network. Each *User* of the Platform is assigned access rights based on its *Role*, the permissions within that *Role*, and optionally the organisation of the *User*.
Verification	Process to determine that presented identity information associated with a particular entity is applicable for the entity to be recognised in a particular context at some point in time.

Table 21 Glossary