STATEMENT OF WORK

Aim and Scope

- 1. This Annex A Statement of Work (SoW) identifies the Authority's overarching requirements for Design, Development and Implementation of the upgrade to the Fire Control Battlefield Information System Application (FC BISA) to be designated FC BISA version 4 (v4) as defined below.
- 2. During the Design and Manufacture of FC BISA v4 additional support requirements may be required in addition to those existing for FC BISA (Basic Contractor Logistic Support Contract ARTYSYS/00236) or any successor of that agreement from August 2019.
- 3. Governance of the contracted changes will also be in accordance with the processes and principles currently in force with ARTYSYS/00236. The Authority recognises that some additional governance may be required for the duration of the FC BISA v4 development cycle.
- 4. Appendix 4 to this Annex defines the Authority's requirement and the work that shall be delivered by the Contractor to take FC BISA v3.4 to v4.0.
- 5. Full Core deliverables can be found at Annex C to Contract ArtySys/00286 Core Deliverables Register, as stated on line one of the Schedule of Requirements.
- 6. Full Elective deliverables can be found at Annex D to Contract ArtySys/00286 Elective and Candidate Change Register, as stated on line two of the Schedule of Requirements.

Definitions

- 7. In this document, the wording FC BISA shall be defined as FC BISA v4 unless explicitly stated otherwise.
- 8. "The Software" in the context of this document also refers FC BISA v4 unless explicitly stated otherwise.
- 9. "Software Support" is defined as the software, facilities, personnel and other resources required in order to perform corrective or preventative changes.
- 10. "Defect Rectification" refers to the process of investigating and fixing defects with the software, hardware or documentation.
- 11. "Incident" may relate to an event during build, trials, operation or maintenance. Although not limited, the incident may be recorded for any of the following reasons; failure of an item(s), maintenance observation, technical publications, human error/ergonomics.
- 12. "Incident Resolution" refers to the process of reaching a jointly agreed position and way forward for maintaining operational capability after an incident has occurred. This can take the form of the clarification of intended system behaviour or the agreement of procedural workarounds and/or mitigations.
- 13. "Failure" of an item is an event causing the loss of ability to perform as specified.
- 14. Data Recording, Analysis and Corrective Action System "DRACAS" provides important information on all occurrences and observations which arise during a reporting period and

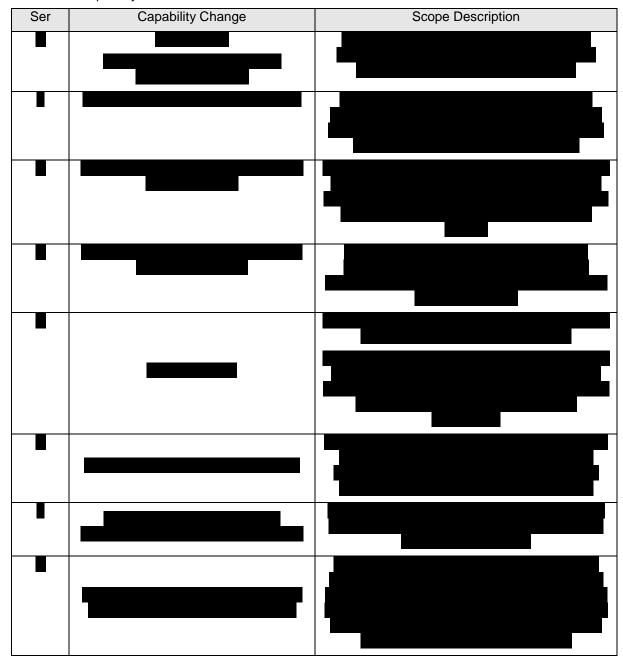
facilitates sentencing, classification, failure and trend analysis. A function of DRACAS, recording incidents and submitting them to an incident sentencing committee.

15. "Usage" shall be defined as the number of hours that the equipment is fully powered on and available for Operational Use. Usage does not include periods of standby or suspend.

Scope of FC BISA v4

16. Overview

a. The Authority directs the Contractor to commission an upgrade to the FC BISA product to include the additional capability summarised in Table 1:Core to be included in FC BISA v4.



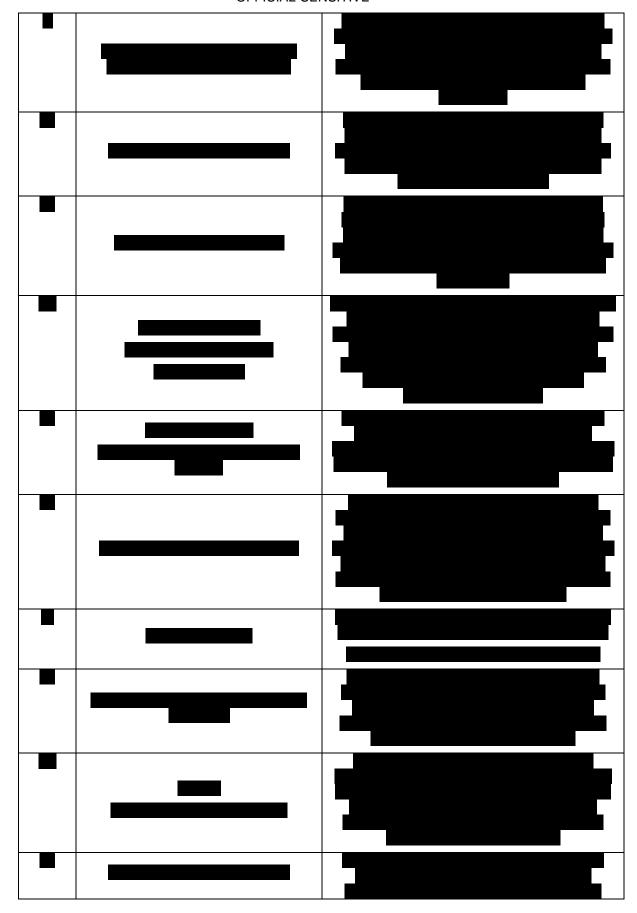




Table 1: Core to be included in FC BISA v4

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b. The overall technical scope and delivery timelines have been ratified by the Authority at External Change Control Board 51 (4th April 2017) and subsequent Military Judgment Panel (13th Apr 2017) as described in Appendix A-2, References A and B.

Technical Requirement

17. FC BISA v4 shall deliver the changes defined in the documentation refenced in Appendix A-1 to this Annex A, except as may be otherwise mutually agreed. In addition, FC BISA v4 may deliver change implemented as part of Software Support activities.



Ser	Elective Change Element	Scope Description
1		
2		
3		
4		
5		
6		
7		
8		

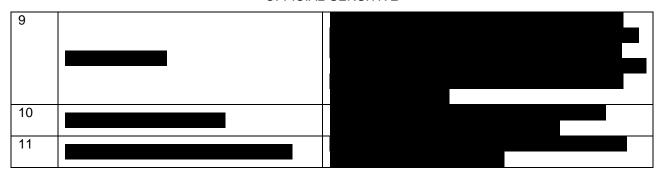


Table 2: Elective Change Elements



Planning, Monitoring and Technical Documentation

Governance

- 18. To the extent applicable to this Scope of Supply, the Contractor shall conform to the governance structures and processes already successfully in place for the FC BISA programme and wherever possible use existing provisions under the Support Contract in force at the time (currently Contract number ARTYSYS/00236) to minimise cost and performance impacts and maximise efficient use of time.
- 19. The following diagram below represents the existing FC BISA programme governance structure.

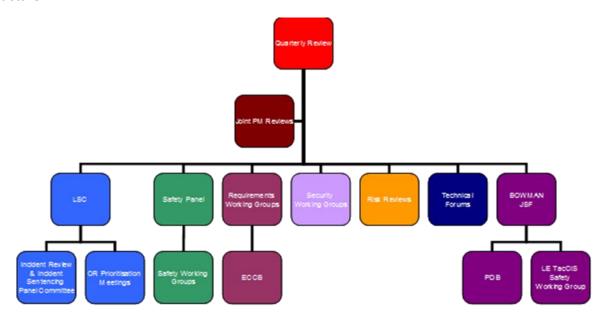


Figure 1: Existing FC BISA Programme Governance Structure

a. Except as otherwise mutually agreed, the following cycle of meetings will provide governance for FC BISA v4.

Ser	Meeting Title	Location	Length & Frequency	Description	Attendance
1	Quarterly Review	Alternate between Abbey Wood and Contractor's premises	0.5 day Quarterly	Senior Programme Review Meeting. Reviews the Programme based on the latest Quarterly Report, including Project Management, Risk, Finance and Commercial.	Chair: ArtySys Secretariat: Contractor Arty Sys (including Commercial & Finance)
2	Risk Review	Contractor's premises	0.5 day 3 per year	Stakeholders to review the Project Risk Register, including the status of risks, new risks, and progress/development of mitigation and fall back plans.	Chair: ArtySys Secretariat: Contractor User Representative Contractor
3	Joint Project Management reviews	Telephone	Weekly	Arty Sys and Contractor Project Managers will review the current priorities, the status of ongoing tasks, progress plans for open issues and mitigation strategies and plans for identified risks.	Secretariat: Contractor ArtySys (Project Manager) PM Contractor PM
4	OR Prioritisation Meetings	Contractor's premises	0.5 Day 3 per year	Prioritisation of OR's that have been sentenced as defects for resolution by the Contractor. Where a consensus cannot be reached by the attendees, the Authority will make the final decision.	Chair: Contractor Secretariat: Contractor ArtySys User Representative
6	External Change Control Board (ECCB) Meetings	Contractor's premises	1 day 3 meetings (in total) per calendar year	ECCB shall review candidate Change Requests (CRs) to FC BISA. This shall include prioritising, grouping, monitoring and sentencing. If a CR is rejected it may be closed with no further action and/or returned to the Incident Report (IR) Review Meeting and Incident Sentencing Panel Committee.	Chair: ArtySys Secretariat: Contractor ArtySys Commercial User Representative Joint Systems Intergration Body (JSIB) Contractor

Ser	Meeting Title	Location	Length & Frequency	Description	Attendance
7	Safety Working Group	Contractor's premises	1 day 3 per year	The Safety Working Group (SWG) meetings provide a forum for FC BISA stakeholders to discuss safety issues.	Chair: Arty Sys Secretariat: ArtySys User Rep JSIB Independent Safety Auditor
					Contractor
9	Security Working Group meetings	Contractor's premises	0.5 days 3 per year	The Security Working Group (SyWG) meetings provide a forum for FC BISA stakeholders to discuss security issues	Chair: Arty Sys Secretariat: Contractor User Rep Security Accreditor
					JSIB
10	Requirements Working Groups	Larkhill	1 day 3 meetings (in total) per calendar year	For stakeholders to review and agree proposed Change Control Notes for formal inclusion in the requirements baseline FC BISA.	Contractor Chair:ArtySys Requirements Manager (RM) Secretariat: Contractor
11	Technical Forums including JSIB Project Dispostion Board (PDBs)	Contractor's premises or tele-con	0.5 day Quarterly	To review and discuss technical matters in relation to issues, risks, and the future programme with stakeholders.	Chair: Contractor Secretariat: Contractor Arty Sys JSIB / NABK team
12	JSIB PRMs	Oakdale	0.5 day Quarterly	To review progress and concerns regarding integration into the BCIP environment.	Chair: JSIB Secretariat: JSIB Arty Sys Contractor

Table 4: FC BISA v4 review and meeting cycle

b. The Contractor shall conform to the Defence Standards listed in Appendix A3 of this Annex A.

Support

- 20. The Contractor shall provide Suitably Qualified and Experienced Personnel (SQEP) to deliver to the Authority on-site technical support for prototype ASCA systems deployed on exercise up to three times per year subject to a maximum of nine supported exercises in total. The exact dates for support to these exercises will be known at least six months in advance. These exercises will be:
 - a. An annual exercise in Europe, e.g. DYNAMIC FRONT (Germany)

- b. An annual exercise in USA, e.g. WARFIGHTER
- c. An annual exercise in UK, e.g. STEEL SABRE
- 21. The Contractor shall provide (SQEP) technical personnel to attend ASCA conferences on three occasions per year up to a maximum of 12 conferences in total. Five of every six conferences will be held in Europe; one will be held in USA.



- (1) Is additional data preparation required in the Change?
- (2) Is there a need for a new/revised Verification and Validation process?
- (3) Will the Change have any impact on communication, transmission, networks and nodes including receipting data message loading? If so how will these be managed to ensure compliance to the SRD?
- (4) Will the Change have any impact on security aspects?
- (5) Will the Change impact on data loading, management and records?
- (6) Does the Change conflict with the System Requirements to the detriment of the software functionality?
- (7) What is the impact of the Change on system resources (for example memory, storage, file management)?
- (8) Does the Change have any impact on support considerations?
- (9) Does the Change require any additional tools, facilities, GFE?
- (10) How will the Change be managed during its transition?
- (11) Will the Change require different versions of Systems in operation and if so how will these be controlled?

Support to Fielding



Schedule

- 22. The Authority invites innovative proposals for the delivery schedule of the capability in FC BISA v4.
- 23. The Contractor's development schedule shall comply with the scheduling template supplied by the Authority and the Contractor shall supply the Authority with a monthly progress update to the schedule.

Impact of Change on Support

- 24. The Authority requires the Contractor to identify the changes in Software Support from FC BISA v3.4 to FC BISA v4 and the impact on performance and Through Life Support. These changes shall be detailed in the Transition Management Plan Para 33 of this Annex refers.
- 25. The Contractor shall work with the Authority to agree the specific requirements, providing feedback and comments to each deliverable included as part of the Contract. Delivery of feedback and comments may include recommendations from the Contractor identifying areas where deliveries can be expedited and made easier.

Integrated Logistic Support

- 26. Integrated Support Plan. The Contractor shall provide their proposed Integrated Logistic Support programme of activities associated with the upgrade of FC BISA v3.4 to FC BISA v4. This work shall be detailed in the updated Integrated Support Plan for FC BISA according to the Data Item Descriptions listed in Table 8 and described in detail in Annex F to this Contract.
- 27. Transition Management Plan (TMP). The Contractor shall provide a document describing the perceived impact of the transition of FC BISA v3.4 to v4 and how the capability is to be maintained. This shall also cover the configuration and obsolescence issues of the software. The success of transition from v3.4 to v4 will be evaluated using the Acceptance Criteria and processes in Annex B to this Contract.
- 28. Software Support Analysis (SSA). As part of the transition between versions of FC BISA, the Contractor shall undertake SSA activities to provide confidence to the Authority, that any additional service, support or tools required for support are properly identified and the time, cost and performance implications are understood. Additionally, this shall include the Contractor's proposed method for sentencing incidents and observations
- 29. Safety and Environmental Management Plan (SEMP). The SEMP shall be produced per standard company practices and product specific information. The safety requirements shall include Safety Integrity Level (SIL) if required. The SEMP shall adhere to and comply with the core principles of systems engineering and safety management and be updated per the Data Item Descriptions listed in Table 8 and described in detail in Annex T to this Contract.
- 30. Government Furnished Assets Management Plan (GFAMP). The Contractor will also update GFAMP as necessary as part of the transition from FC BISA v3.4 to v4 per the Data Item Descriptions listed in Table 8 and described in detail in Annex T to this Contract.

- 31. Training Gap Analysis (TGA). The Contractor shall identify the expected scope of impact of each functional change to FC BISA on user training. This will support Royal Artillery Training Development Team (RATDT) analysis of the training needs.
- 32. Technical Documents Management Plan (TDMP). No change is anticipated to the existing TDMP but the Contractor is invited to identify any efficiencies and changes and if contracted shall update to the documents as agreed.
- 33. Training Pack. With reference Contract Data Requirements (CDRL 014) listed in Annex F and in accordance with DEFCON 16, the Contractor shall provide an updated training pack.
- 34. Responsibility matrices for the plans and documents listed above are given in Table 6: Plans & Reports Responsibility Matrix and Table 7.

	Responsibility Matrix – P – Production Owner, A = Acceptance Owner and I = Information						
Plan	Plans &Reports	Contractor	Authority	Reviews up to In-	DIDs	Remarks	
No	Description		(MOD)	Service			
01	Integrated Support Plan (ISP)	P	A	Contract Acceptance (CA), Logistic Support Demonstration (LSD) and ad-hoc reviews to reflect evolving design	001	Contractor's Response to Authority's (Intergrated Logistic Support) ILS Plan and to demonstrate that the Contractor has the skills and resources to support the software upgrade	
02	Transition Management Plan (TMP), including:	Р	A	CA, LSD	004 010 016 029 011	Demonstrating that the Contractor has the planning, skills and resources in place to satisfy the transition of the software upgrade from v3.4 to v4.	
03	Technical Documentation Management Plan	Р	A	CA, LSD	018	May be integrated within the (Information Support Plan) ISP.	
04	Training Gap Analysis (TGA) Report	Р	А	LSD	008	Separate report identifying additional training requirements generated by functional change.	
05	Software Support Plan	Р	А	CA, LSD	015	How the supplier will support the v4 in the transition from v3.4 and through life upkeep.	

Table 6: Plans & Reports Responsibility Matrix

	Responsibility Matrix – P = Production Owner and A = Acceptance Owner					
CDRL No.	CDRL Description	Contractor	Authority (MoD)	Reviews up to In-Service	DIDs	Remarks
001	Technical Publications	Р	А	System Acceptance Test,	022	Data Item Descriptions in Annex T. Extant Contract

				User Acceptance Test (UAT), Logistic Support Demonstration, Ready for Training Date		Data Requirements for reference under Contract ARTYSYS/00236.
002	Training Pack	Р	A	System Acceptance Test (SAT), User Acceptance Test, Logistic Support Demonstration, Ready for Training Date	N/A	Extant Contract Data Requirements for reference under Contract ARTYSYS/00236.

Table 7: Contract Data Requirement List Responsibility Matrix

Acceptance Phase

- 35. The Contractor shall review its Quality processes as part of the scope of work of Transition and Through Life Support (TLS) and according to Quality Standards in accordance with Condition 3 to the Contract. The Contractor shall detail any changes to Quality processes by producing a revised Quality Plan.
- 36. The Contractor shall review its Software Support processes as part of the scope of work involved in transition and TLS. The Contractor shall detail any changes to Software Support, including the impact of any Corrective, Adaptive or Enhancement Change and detail these in an updated Software Support Plan.

Ser	Performance & Review	DID Reference Number	Scope of DID
1	Integrated Support Plan (ILS)	DID 001	Review and update. Enables the Authority to monitor and evaluate the effectiveness of the Contractor's ILS Programme
2	Transition Management Plan (TMP)	DID 004	To enable the Authority to monitor and evaluate the effectiveness of the Contractor's Obsolescence Management of the Product.
3	Training Gap Analysis	DID 008	To enable the Authority to monitor and evaluate the Contractor's recommended Training Needs Analysis to ascertain the Training deliverables and resources that are required for the Product
5	Safety & Environmental Management Plan (SEMP)	DID 011	The SEMP shall be produced by drawing on standard company practices, e.g. a Safety Management Systems, and on the project-specific information defined in the Contract Statement of Work. The SEMP shall address the core principles of systems engineering and safety management.
6	Software Support Plan	DID 015	How the supplier will support the v4.0 in the transition from v3.4 and through life upkeep
8	Technical Documentation Management Plan	DID 018	Review and update. Document will enable the Authority to monitor and evaluate the effectiveness of the Contractor's Technical Documentation Management controls in the governing, planning, selection, preparation, and delivery and upkeep of technical for the Product. May be incorporated within the ISP rather than delivered as a separate document.

9	Technical Documents	DID 022	Review and update any envisaged changes. Enables the Authority to monitor and evaluate the Contractor's selection and verification of each
			technical document for the Product
11	Earned Value Management Plan (Earned Value Management Plan)	DID PC 001	The EVMP documents the Contractor's plans, methodologies and processes for ensuring compliance with the EVM requirements of the Contract. The EVMP shall include a description of the system structure and data flows, Project Controls System Description (PCSD), plans for implementation and subsequent review and maintenance of the Contractor's EVMS. If the Authority agrees that a standalone plan is not required, the EVM elements may be embedded in the Project Management Plan (PMP).
12	Contract Work Breakdown Structure (CWBS) and Dictionary	DID PC 002 A&B	The Contract Work Breakdown Structure (CWBS) is the Contractor's extension of the Authority Work Breakdown Structure (WBS) and forms the framework for Contract planning, management and status reporting and for estimating costs, schedule and technical achievements at completion.
13	Contractor Master Schedule (CMS)	DID PC 003	The CMS describes the contracted activities, milestones and decision points to enable the objectives and deliverables of the Contract to be satisfied. The CMS will define the project schedule status through a comparison of the current schedule status and appropriate accepted baseline schedule.
14	Contract Performance Report (CPR)	DID PC 004	The CPRs are prepared by the Contractor to provide the Authority with earned value performance data designed to report multiple aspects of Contract performance and future planning activity.
15	Risk Management	DID PC 005	The Contractor shall maintain a Risk and Opportunity Management Plan (ROMP) that enables a formal risk process to be managed in conjunction with the Authority. The Contractor shall make it possible for the Authority to engage with the regular risk update process via regular risk reviews and formal risk reporting.
16	Baseline Change Control	DID PC 006	The change control process describes how the baseline will be maintained under configuration control, including defining how revisions will be analysed, communicated and approved (in conjunction with the Authority when appropriate).
17	Cost Collection Reports	DID PC 007	The majority of cost information will be provided via the EVMS as part of the normal reporting against the system (see DID-PC-001 and DID-PC-004). The intent of the cost collection reports is to supplement this information where there is an additional business need for the Authority.

Table 8: Data Item Definition Index

37. The Contractor shall review the current Technical documents as part of the scope of work involved in the Transition and TLS, as proposed in the TDMP. The Contractor shall provide updated FC BISA technical documents for acceptance according to the criteria in Annex B to this Contract.

Configuration Management

38. A Configuration Management Plan shall be required for this Contract and shall be in line with Defence Standard 05-57 issue 6 requirements. This shall be agreed by all parties and signed off not more than 30 working days after contract award. The CMP is a live document and will be reviewed in accordance with the Contractor's review frequency and agreed by the Authority. Extraordinary reviews/amendments to the CMP must be agreed by all parties

Appendix 1 to ANNEX A

Additional Documents defining the Requirements for FC BISA v4 Development

1.	recillical specifi	cation of core change	es to be delivered	IOI I C DIOA VT.		
		•				
2.	Technical specific	cation of pre-defined o	changes that may	be agreed with th	ne Authority to b	е
dolive		hange for FC BISA v4		Ü	,	
delive	red as Liective C	nange for 1 C block v4				
						Ø.

3. Original requirements for FC BISA are found in the System Requrement Document (SRD) for FC BISA v3.4.

Additional Scope Reference Documents

Appendix 3 to ANNEX A

Defence Standards

The following table of Defence Standards shall apply insofar as they are relevant to performance of the Contract or to any modifications to the FC BISA systems.

Standa	ard No.	Defence Standard Reference	Issue/Amendme nt	Dated
1		Def Stan 00-40: "Reliability and Maintainability (R&M)"		
	a.	Part No: 1: Management Responsibilities and Requirements for Programmes and Plans	7 /1	2012-04-20 2013-04-30
2		Def Stan 00-42: "Reliability and Maintainability Assurance Activity"		
	a.	Part No: 3: R&M Case	5	2016-03-03
	b.	Part No: 4: Testability	3	2014-02-20
	C.	Part No: 5: In - Service Reliability Demonstrations	3	2016-11-18
	d.	Part No: 6: Maintainability Demonstrations	3	2014-08-08
3		Def Stan 00-44: "Reliability and Maintainability Data Collection and Classification	2 /1	2012-12-14 2013-03-07

r				
4		Def Stan 00-45: "Using Reliability Centred Maintenance to Manage Engineering Failures		
	а	Part No: 1: Requirements for the application of Reliability Centred Maintenance	4	2016-10-18
	С	Part No: 2: Development an RCM Project Plan	4	2016-10-18
	d	Part No: 3: Guidance of the Application of Reliability Centred Maintenance	3	2016-10-18
5		Def Stan 00-49: "MOD Guide to R&M Terminology Used in Requirements	4	2016-11-17
6		Def Stan 00-055 - "Requirements for Safety of Programmable Elements (PE) in Defence Systems"	4	2016-04-29
7		Def Stan 00-56: "Safety Management Requirements for Defence Systems"		
	a.	Part No: 1: Requirements	7	2017-02-28

8		Def Stan 00-251 - "Human Factors Integration for Defence Systems"		
	а	Part No: 0 - "Contracting for Human Factors Integration in Defence Systems"	1	2016-02-05
	b	Part No: 1 - "Early Lifecycle Human Factors Integration Process Requirements "	1	2016-02-05
	С	Part No: 2 - "Human Factors Integration Process Requirements for the Solution Provider"	1	2016-02-05
	d	Part No: 3 - "Human Factors System Requirements"	1	2016-02-05
9		Def Stan 00-600: "Integrated Logistic Support. Requirements for MOD Projects"	4	2016-11-28
11		Def Stan 05-57: "Configuration Management of Defence Materiel"	6	2014-037
12		Def Stan 05-61: "Quality Assurance Procedural Requirement"		
	a.	Part No: 1: Concessions	6	2016-03-31

	b.	Part No: 4: Contractor Working Parties	3/1	2002-10-25 2011-01-28
13		Def Stan 05-138 - "Cyber Security for Defence Suppliers"	1	2015-08-21

ADDENDUM TO FC BISA V3.4 SRD

The contents of this Appendix 4 are the requirements the Contractor shall provide for the Core capability in line with release 1, 2 and 3. Appendix 1 of this Annex A describes the agreed technical solution to these requirements.

1. Table 1: Requirement for Release 1

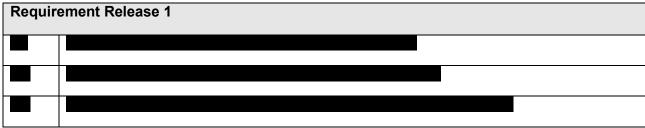


Table 1: Requirement for Release 1

2. Table 2: Requirement Release 2

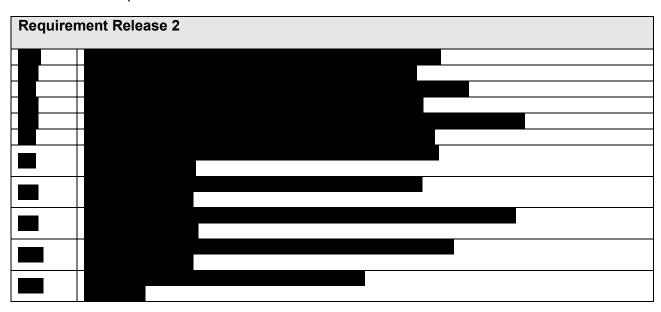


Table 2: Requirement Release 2

3. Table 3: Requirement Release 3

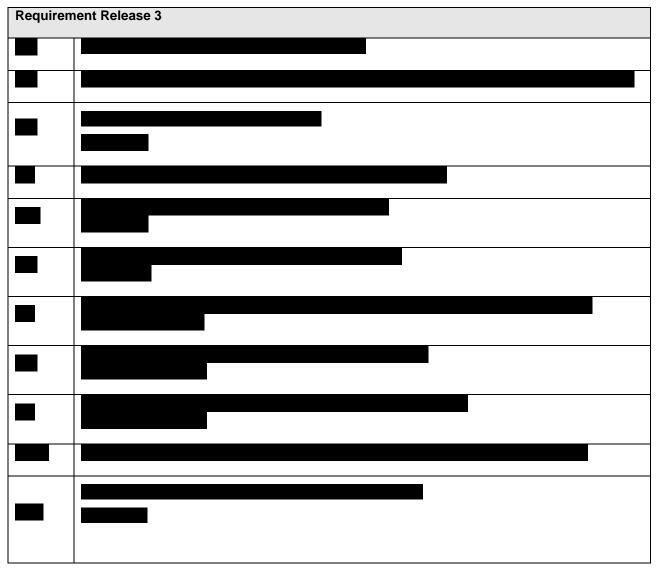


Table 3: Requirement Release 3

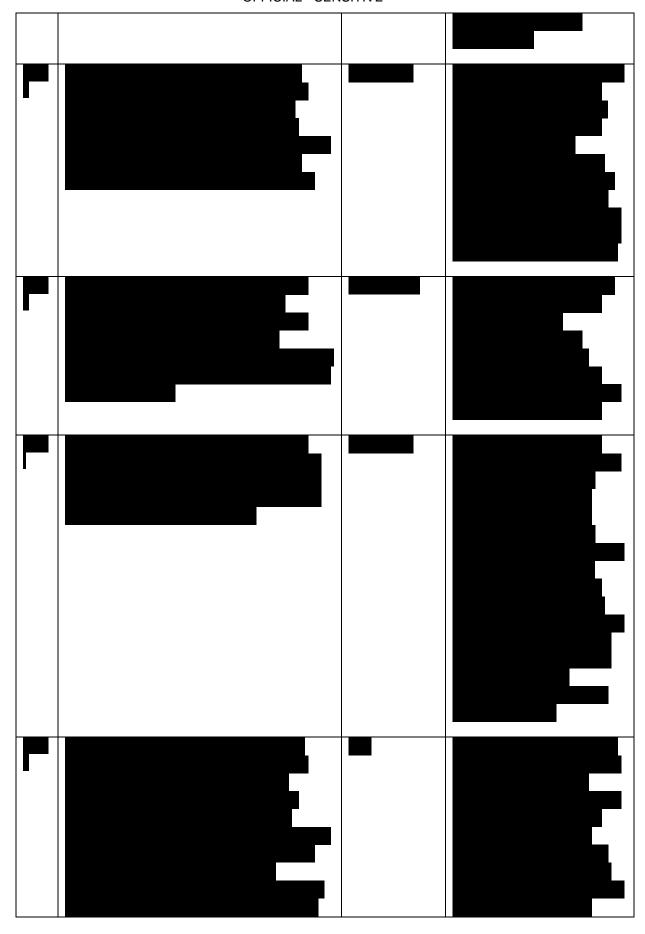
ASSUMPTIONS and EXCLUSIONS

The Authority and Contractor have agreed the following Assumptions, and Exclusions as predicates underlying the Contract scope and price. Should these not be met, any cost or schedule impact on the delivery of the Contract will be addressed as change in accordance with DEFCON 503.

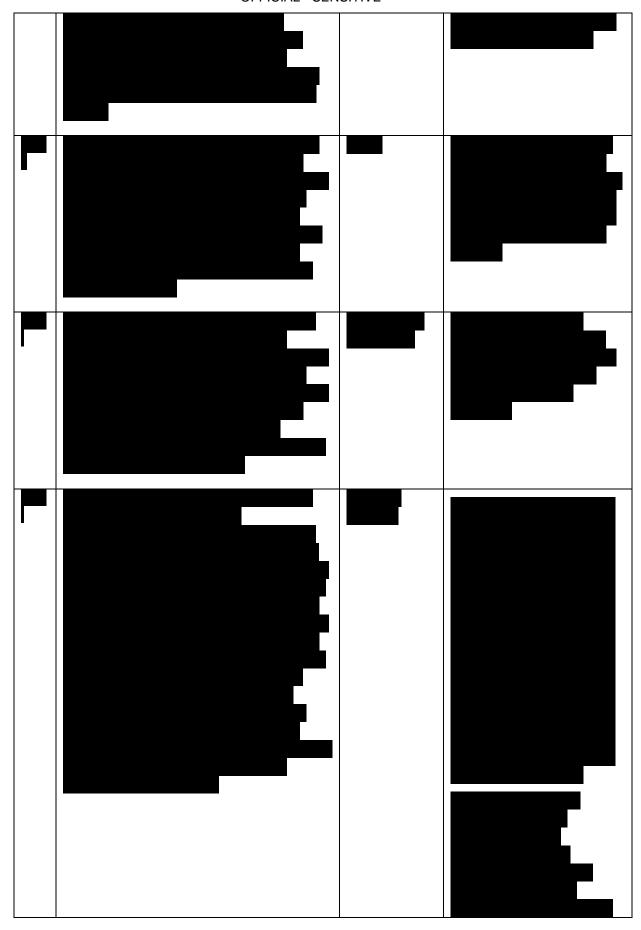
1. Assumptions







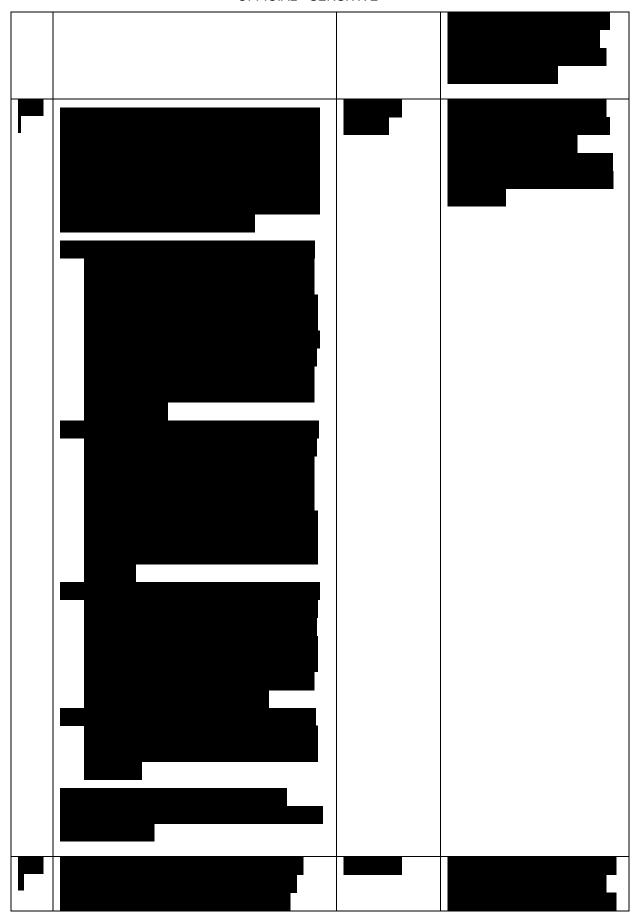
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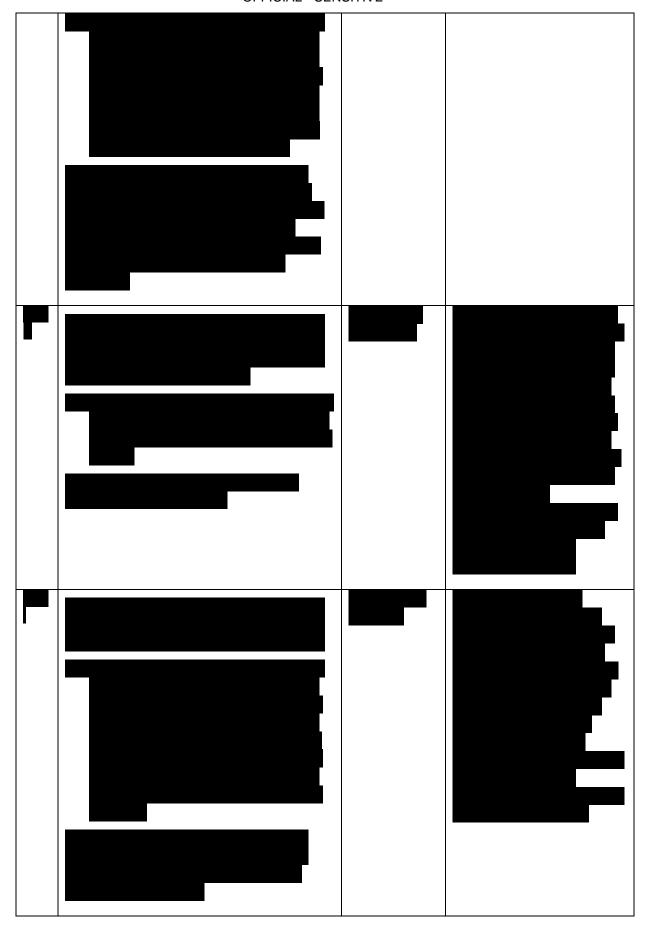
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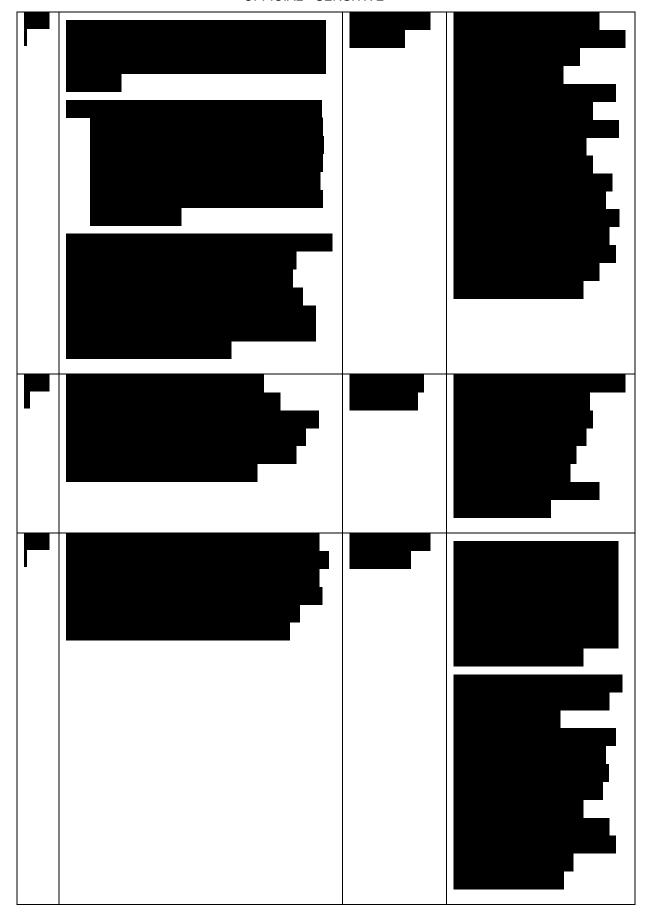
OFFICIAL - SENSITIVE A5-6



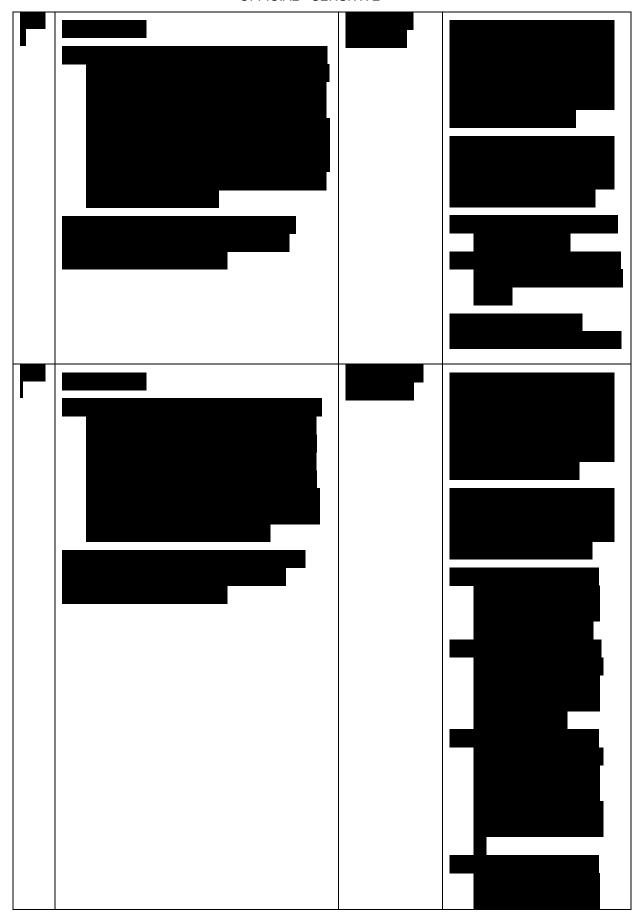
OFFICIAL - SENSITIVE A5-7



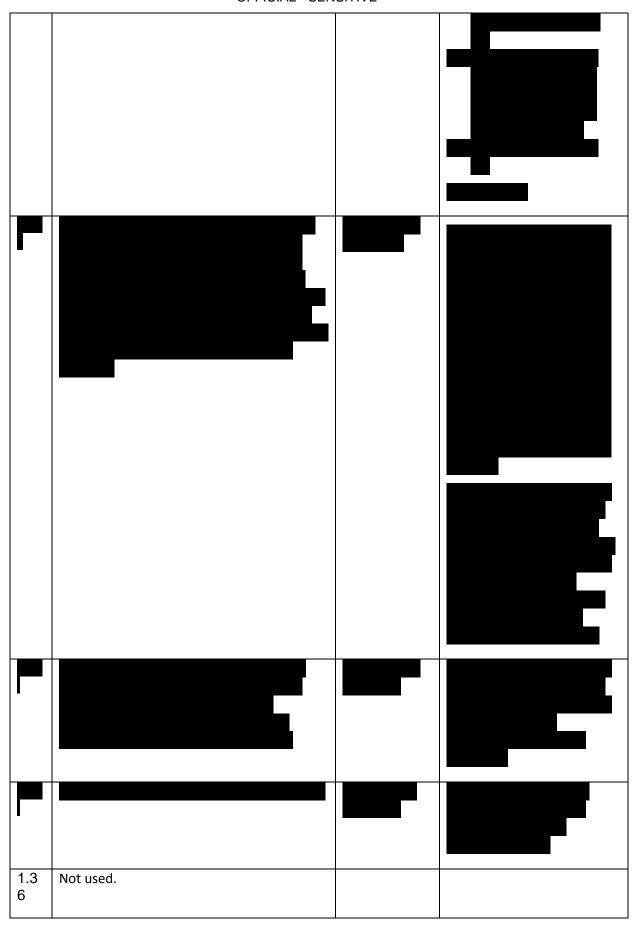
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OFFICIAL - SENSITIVE A5-9



OFFICIAL - SENSITIVE A5-10





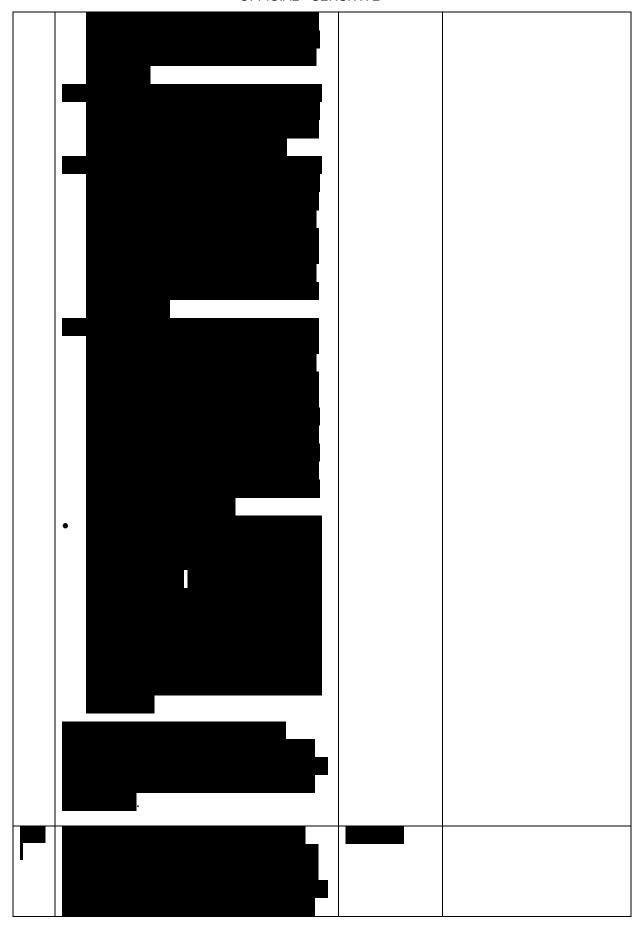
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2. Exclusions

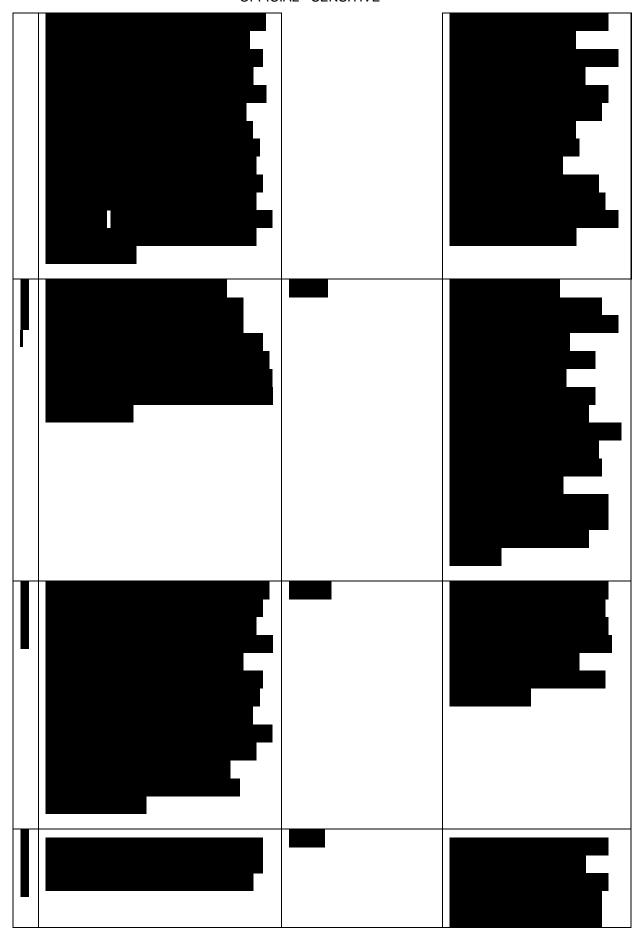


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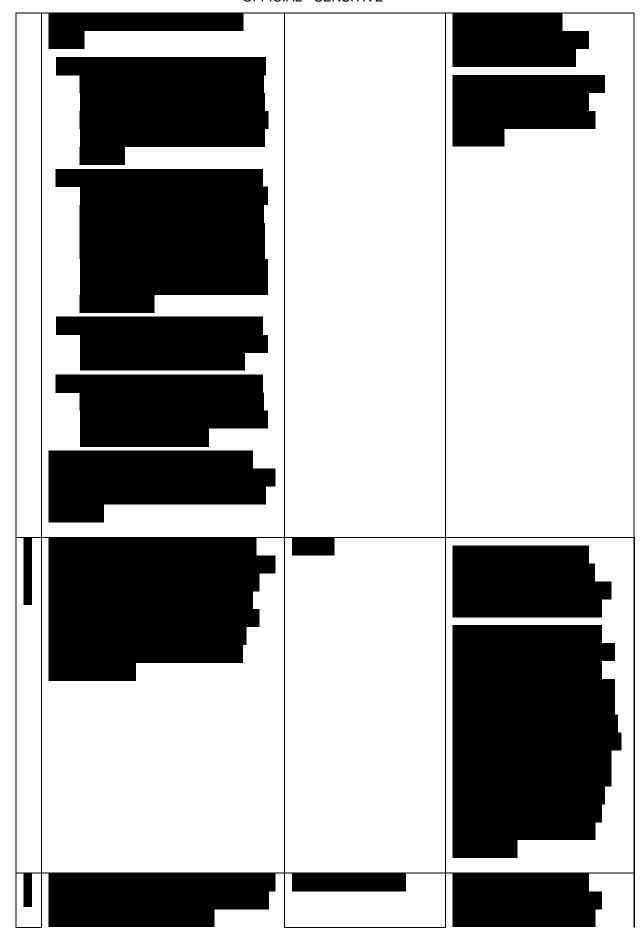




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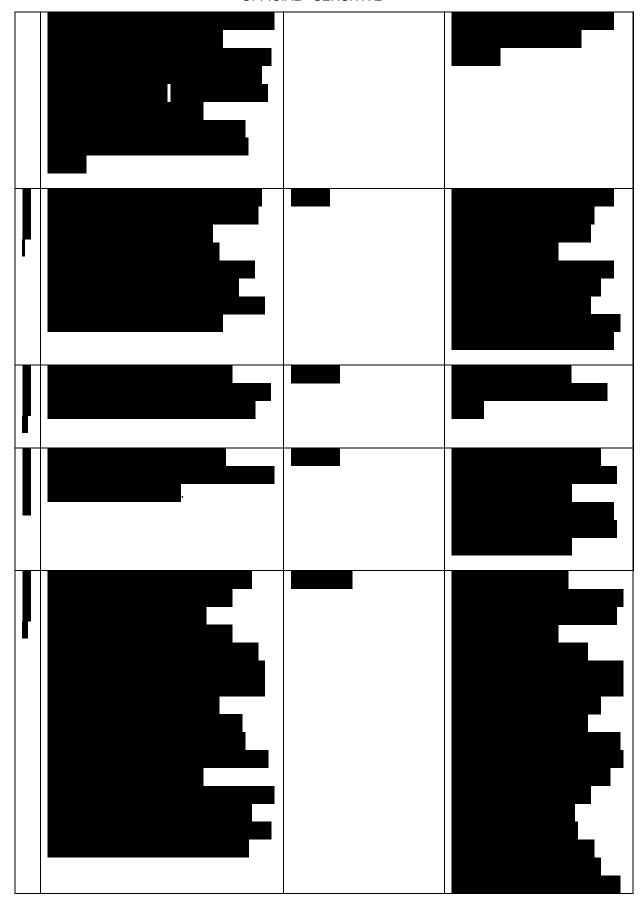
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Appendix 6 to ANNEX A

RISKS

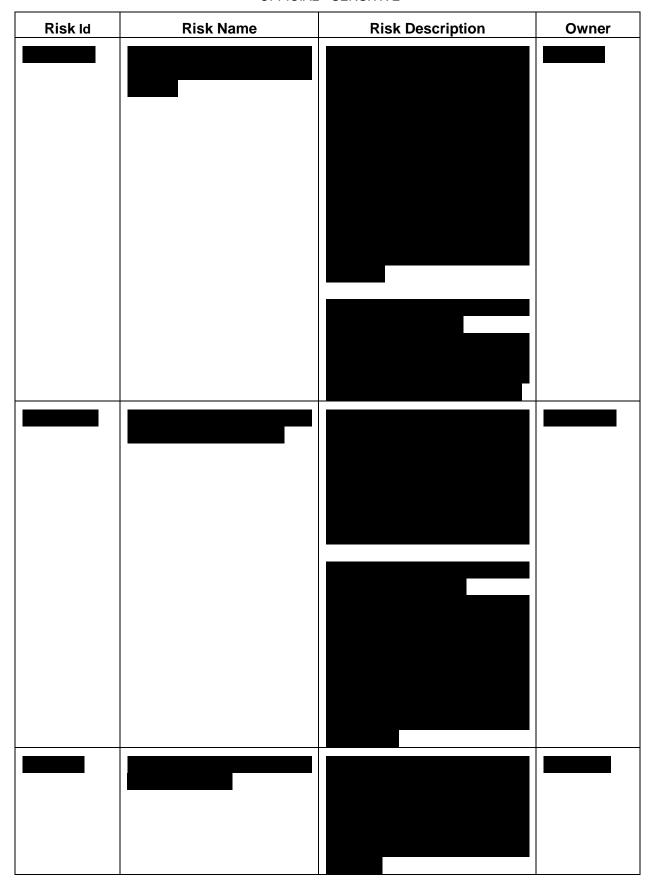
The Authority and Contractor acknowledge and accept ownership of the risks as stated in the table below as at the Effective Date of the Contract.

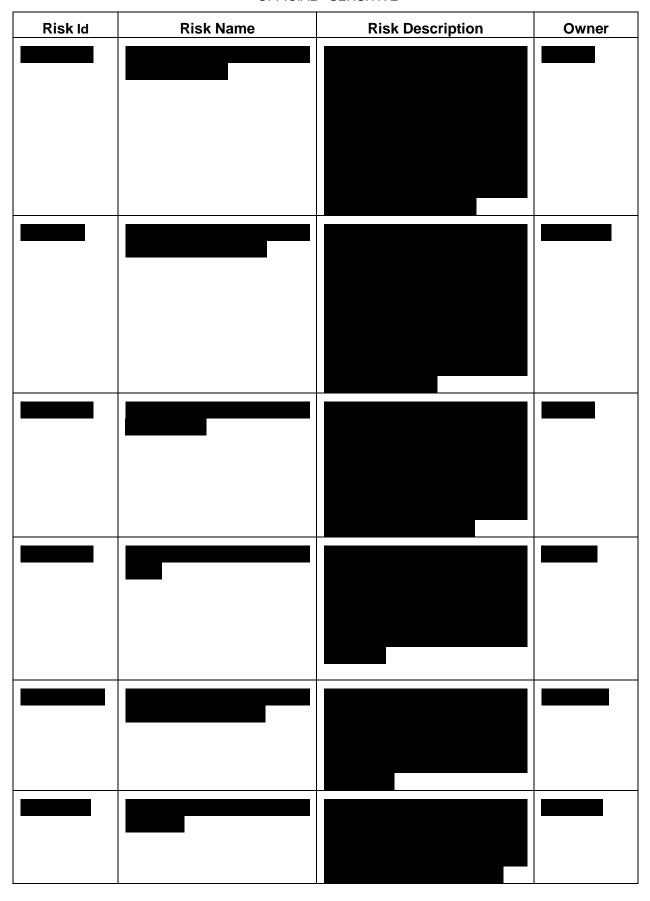
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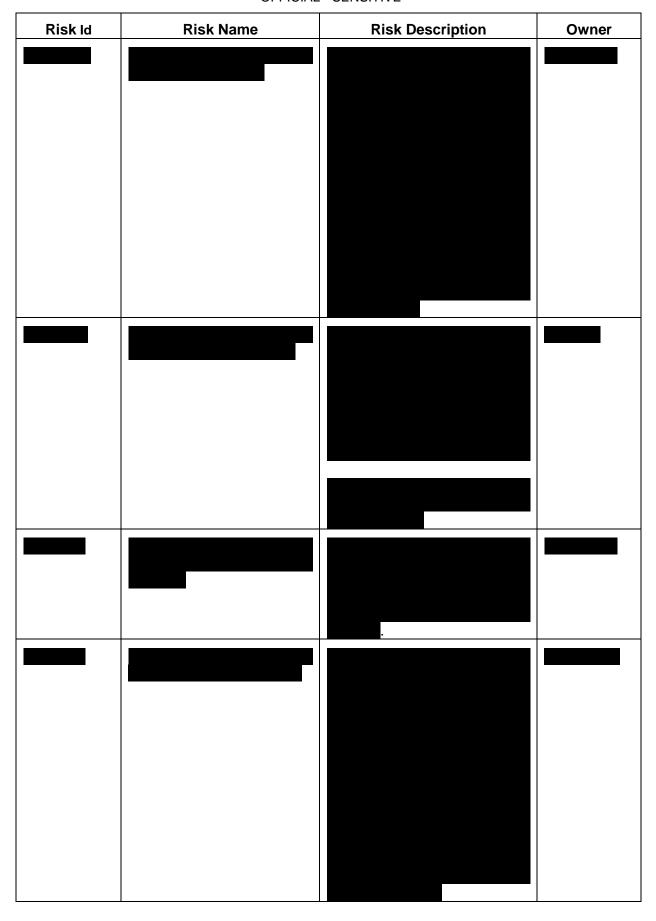
Risk Id	Risk Name	Risk Description	Owner





Risk Id	Risk Name	Risk Description	Owner

Risk Id	Risk Name	Risk Description	Owner



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OFFICIAL - SENSITIVE

Risk Id	Risk Name	Risk Description	Owner

Risk Id	Risk Name	Risk Description	Owner

Risk Id	Risk Name	Risk Description	Owner