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- 3.1.8 be updated in response to identified security gaps, emerging security threats or risk areas, relevant internal or external factors, and reasonable requests by the Buyer; and
- 3.1.9 provide for appropriate protective monitoring and incident response measures such that incidents affecting Government Data are identified in a timely manner, and appropriate plans and processes exist to ensure this is performed in a repeatable manner. These plans shall be included for Buyer review.

4 Principles of Security

- 4.1 The Supplier acknowledges that the Buyer places great emphasis on the confidentiality, integrity and availability of the Government Data and, consequently on the security of:
 - 4.1.1 the Supplier's system(s) used to deliver the service to the Buyer:
 - 4.1.2 the Supplier Solution;
 - 4.1.3 the Deliverables; and
 - 4.1.4 the Supplier's corporate security measures
- 4.2 Notwithstanding the involvement of the Buyer in assessing the arrangements which the Supplier shall implement in order to ensure the security of the Government Data and the Information Management System, the Supplier shall be, and shall remain, responsible for:
 - 4.2.1 the security, confidentiality, integrity and availability of the Government Data whilst that Government Data is under the control of the Supplier or any of its Subcontractors; and
 - 4.2.2 the security of the Information Management System.
- 4.3 The Supplier shall provide the Buyer with access to members of its information security personnel to facilitate the Buyer's assessment of the Supplier's compliance with its obligations set out in this Schedule at reasonable times on reasonable notice.
- 4.4 The Supplier shall ensure, at all times during the Call-Off Contract Period, that the Supplier and each Subcontractor who is responsible for any Government Data have documented processes to ensure the availability of Government Data in the event of the Supplier or Subcontractor ceasing to trade.
- 4.5 Where the Supplier subcontracts any activities supporting the delivery of the Deliverables, the Supplier shall be responsible for documenting relevant Subcontractors' compliance with the measures contained herein to the same standard that the Supplier is required to document. Such evidence of compliance shall be provided to the Buyer at the Buyer's request, and always prior to any release of information that has not been

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previously approved. The Buyer reserves the right to reject the Supplier's use of any Subcontractor where such Subcontractor's compliance with applicable security requirements cannot be appropriately assured.

- 4.6 The Supplier shall implement such additional measures as may be agreed with the Buyer from time to time in order to ensure that Government Data is safeguarded in accordance with applicable Standards.
- 4.7 In rare cases an external factor may require the enhancement of the provisions of this Annex 3, (for example the compromise of a previously trusted encryption algorithm). If and when these cases occur, the Supplier shall:
 - 4.7.1 notify the Buyer of the relevant external factor requiring an enhancement of the provisions of this Annex 2; and
 - 4.7.2 implement appropriate compensating controls to mitigate these new risks, subject to approval by the Buyer.

5 Security Assurance Statement

- 5.1 The Supplier may not use the Information Management System to Process Government Data unless and until:
 - 5.1.1 the Supplier has provided a statement to the Buyer presenting the residual security risks associated with the Information Management System and confirming and detailing the Supplier's compliance with the Security Assurance Requirements (a "Security Assurance Statement"); and
 - 5.1.2 the Buyer has issued the Supplier with an Information Security Approval Statement.
- 5.2 The Buyer shall review the Security Assurance Statement as soon as possible (and in any event within 20 Working Days of receipt) and shall either issue the Supplier with:
 - 5.2.1 an Information Security Approval Statement; or
 - 5.2.2 a rejection notice which shall set out the Buyer's reasons for rejecting the Security Assurance Statement. If the Buyer rejects the Security Assurance Statement, the Supplier shall take the Buyer's reasons into account in the preparation of a revised Security Assurance Statement, which the Supplier shall submit to the Buyer for review within 10 Working Days or such other timescale as agreed with the Buyer.

6 Security Assurance Requirements

6.1 The Supplier shall provide a high-level design of the Supplier's system, which illustrates elements of the Supplier's system provided directly by the Supplier and sub-contracted

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systems used to deliver the Deliverables to the Buyer.

- 6.2 The Supplier shall, and shall ensure that each Subcontractor which Processes Government Data:
 - is certified with ISO/IEC 27001:2013 or latest edition, by a United Kingdom Accreditation Service (UKAS) approved certification body or is included within the scope of an existing certification of compliance with ISO/IEC 27001:2013, with a scope sufficient to cover the Deliverables and the Information Management System throughout the Call-Off Contract Period, which includes the sub processors and Subcontractors of the Deliverables, and provides the Buyer with a copy of each such certificate (the "Certification Requirement(s)"). The Statement of Applicability for the relevant ISO/IEC 27001 implementation shall be made available for the Buyer to review prior to acceptance of the Supplier's ISO 27001 certification;
 - 6.2.2 completes a self-assessment and maintains registration with the DSP Toolkit (https://www.dsptoolkit.nhs.uk/);
 - 6.2.3 provides a statement of compliance, and maintains such compliance, of the Supplier's system, and that of its Subcontractors of being compliant with the Data Protection Legislation;
 - 6.2.4 provides and updates a list of all of the Subcontractors used to deliver the Deliverables to the Buyer; and
 - 6.2.5 completes the Information Security Management Document Set in Annex 4 and documents in the Information Security Management Document Set how the Supplier and its Subcontractors shall comply with the requirements set out in this Schedule and the Contract in order to ensure the security of the Government Data and the Information Management System:

and the requirements of Paragraphs 6.2.1 to 6.2.5 together constitute the "Security Assurance Requirements".

- 6.3 The Supplier shall notify the Buyer as soon as reasonably practicable and, in any event within 2 Working Days, if the Supplier or any Subcontractor ceases to be compliant with the Security Assurance Requirements and, as directed by the Buyer, shall or shall procure that the relevant Subcontractor shall:
 - 6.3.1 immediately cease using the Government Data; and
 - 6.3.2 promptly return, destroy and/or erase the Government Data in accordance with the requirements set out in Paragraph 6 of Annex 2 to this Schedule.
- 6.4 Where such a lack of compliance would constitute a high risk of sensitive information disclosure, the Supplier shall institute the Incident Management Process.

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7 End User Devices

- 7.1 The Supplier shall ensure that any Government Data which resides on a mobile, removable or physically uncontrolled device is stored and encrypted, in line with NCSC guidance on End User Devices (EUD), by using a product or system component which has been formally assured through a recognised certification process agreed with the Buyer except where the Buyer has given its prior written consent to an alternative arrangement.
- 7.2 The Supplier shall ensure that any device which is used to Process Government Data meets all of the security requirements set out in the NCSC End User Devices Platform Security Guidance, a copy of which can be found at: https://www.ncsc.gov.uk/guidance/end-user-device-security.

8 Protecting Data in Transit

8.1 The Supplier shall ensure that any Government Data which it causes to be transmitted over any public or private network (including the internet, mobile networks or unprotected enterprise network) or to a mobile device shall be encrypted when transmitted, to a minimum standard TLS1.2 configured to NCSC standards as set out in the NCSC guidance on Using TLS to Protect Data, a copy of which can be found at: https://www.ncsc.gov.uk/guidance/tls-external-facing-services.

9 Identity, Authentication and Access Control

- 9.1 The Supplier shall operate an access control regime to ensure:
 - 9.1.1 all users and administrators of the Supplier's system are uniquely identified and authenticated, to a minimum standard of AAL2 or AAL3, when accessing or administering the Deliverables. Unless otherwise specified, the default standard shall be AAL2; and
 - 9.1.2 all persons who access the sites are identified and authenticated to a level commensurate with Good Industry Practice bearing in mind the activity that occurs, and the Government Data stored or systems hosted at the relevant sites.
- 9.2 The Supplier shall apply the 'principle of least privilege' when allowing Supplier Staff access to the Supplier managed systems and sites so that such persons are allowed access only to those parts of the sites and systems they require for the fulfilment of their responsibilities in relation to the provision of the Deliverables.
- 9.3 The Supplier shall retain records of access to the sites and to the Supplier's system and shall make such records available to the Buyer on request. The Supplier shall proactively monitor access records for suspicious access events and investigate any suspicious activity.

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10 Audit and Protective Monitoring

- 10.1 The Supplier shall collect audit records which relate to security events in a Security Information and Event Management System (SIEM) or an equivalent set of tools and processes. This information must be maintained to a standard that will provide for the review and investigation of incidents, events, and false positives, as well as suspected cases of the previous, after the fact. In order to facilitate effective monitoring and forensic readiness such Supplier audit records should (as a minimum) include regular reports and alerts setting out details of access by users of the Information Management System, to enable the identification of (without limitation) changing access trends, any unusual patterns of usage or accounts accessing higher than average amounts of Government Data, unusual movements of data, as well as all privileged access events and high risk system configuration changes (such as enabling connectivity, changing system software, enabling or disabling of system services or logs).
- 10.2 The Supplier and the Buyer shall work together to establish any additional audit and monitoring requirements for the core Information Management System.
- 10.3 The retention periods for audit records and event logs must be agreed with the Buyer and documented in the Information Security Management Document Set.

11 Compliance Reviews

- 11.1 The Supplier shall regularly review and update the Information Security Management Document Set, and provide such to the Buyer, at least once each year, and upon any material change to the Information Management System and as required by this Paragraph 11. Alongside any updated Information Security Management Document Set, the Supplier shall provide a summary of the changes made.
- 11.2 The Supplier shall notify the Buyer of all planned significant changes to the components or architecture of the Deliverables, and within 2 Working Days after becoming aware of any unplanned significant change to the components or architecture of the Deliverables, and shall not proceed or reverse such change unless the Buyer gives its written consent to such change within 10 Working Days of notification.
- 11.3 The Supplier shall notify the Buyer within the appropriate timescales (see below) after becoming aware of:
 - 11.3.1 a new risk to the components or architecture of the Deliverables;
 - 11.3.2 a vulnerability to the components or architecture of the Services which is classified 'Medium', 'High', 'Critical' or 'Important' in accordance with the classification methodology set out in Paragraph 14.2 of this Annex 3 to this Schedule;
 - 11.3.3 a change in the threat profile;

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- 11.3.4 a significant change to any risk component;
- 11.3.5 a significant change in the quantity of Personal Data held within the Information Management System;
- 11.3.6 a proposal to change any of the Sites from which any part of the Deliverables are provided;
- 11.3.7 a change in any Subcontractor involved in the provision of the Deliverables; or
- 11.3.8 an ISO 27001 audit report produced in connection with the Certification Requirements indicating significant concerns.
- 11.4 Any identified risks, vulnerabilities, or other security concerns that are rated as Critical shall be notified as soon as possible, and within one hour. Notification to include email, telephone and other measures, and the supplier must secure acknowledgement before considering this SLA to be met. For High, this period may be extended to 1 working day, and for all other topics the period is 2 Working Days.
- 11.5 Within 10 Working Days of such notification to the Buyer or such other timescale as may be agreed with the Buyer, the Supplier shall make the necessary changes to the Required Changes Register and submit the updated Required Changes Register to the Buyer for review and approval. Depending on the impact of the risks being mitigated, this timescale may be considerably shorter and the buyer reserves the right to require priority and / or emergency changes for remediation of Critical and High severity risks.
- 11.6 Where the Supplier is required to implement a change, including any change to the Information Management System, in order to remedy any non-compliance with this Contract, the Supplier shall effect such change at its own cost and expense and within the timescales set out in the Required Changes Register.
- 11.7 The Buyer may require, and the Supplier shall provide the Buyer and its authorised representatives with:
 - 11.7.1 access to the Supplier Staff;
 - 11.7.2 access to the Information Management System to audit the Supplier and its Subcontractors' compliance with this Contract; and
 - 11.7.3 such other information and/or documentation that the Buyer or its authorised representatives may reasonably require;
 - 11.7.4 to assist the Buyer to establish whether the arrangements which the Supplier and its Subcontractors have implemented in order to ensure the security of the Government Data and the Information Management System are consistent with the representations in the Information Security Management Document Set. The Supplier shall provide the access required by the Buyer in accordance with

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this Paragraph within 10 Working Days of receipt of such request, except in the case of a Breach of Security in which case the Supplier shall provide the Buyer with the access that it requires within 24 hours of receipt of such request.

12 Security Testing

- 12.1 The Supplier shall, at its own cost and expense procure and conduct Security Testing of the Supplier's system, including any subcontracted systems used to provide the Deliverables to the Buyer. If specified by the Buyer this must be undertaken by a CHECK Service Provider, otherwise this may be undertaken by a service provider under the CREST, TIGER or Cyber scheme:
 - 12.1.1 Crest https://www.crest-approved.org/
 - 12.1.2 Tiger https://www.tigerscheme.org/.
- 12.2 All Security Testing must be scoped so as to provide a realistic assessment of the efficacy of the Supplier's ISMS and risk mitigations. Service providers carrying out Security Testing should be provided with the security designs that they are validating and reports should include an assessment as to whether the existing control set is in line with the expected mitigations.
- 12.3 The Supplier shall complete all of the Security Testing before the Supplier submits the Security Assurance Statement to the Buyer for review in accordance with Paragraph 5 of this Annex, and repeat the Security Testing not less than once every 12 months and upon any significant change to the Supplier's system during the Call-Off Contract Period and submit the results of each such test to the Buyer for review in accordance with this Paragraph.
- 12.4 Reports and results of the Security Testing shall be made available for Buyer review such that the Buyer can have confidence and assurance over the residual risk of the Supplier's system.
- 12.5 If Security Testing is required to be carried out by a CHECK Service Provider pursuant to Paragraph 12.1 the Supplier shall:
 - 12.5.1 agree with the Buyer the aim and scope of the relevant Security Testing; and
 - 12.5.2 promptly, following receipt of each Security Testing report, provide the Buyer with a copy of the report.
- 12.6 in the event that the Security Testing report identifies any vulnerabilities, the Supplier shall prepare a remedial plan for approval by the Buyer (each a "Vulnerability Correction Plan") which sets out in respect of each vulnerability identified in the Security Testing report:
 - 12.6.1 how the vulnerability will be remedied;

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- 12.6.2 the date by which the vulnerability will be remedied; and
- 12.6.3 the tests which the Supplier shall perform or procure to be performed (which may, at the discretion of the Buyer, include further Security Testing) to confirm that the vulnerability has been remedied.
- 12.7 The Supplier shall comply with the Vulnerability Correction Plan and conduct such further tests on the Supplier's system as are required by the Vulnerability Correction Plan to confirm that the Vulnerability Correction Plan has been complied with.
- 12.8 The Supplier shall ensure that any Security Testing which could adversely affect the Supplier's system shall be designed and implemented by the Supplier so as to minimise the impact, on the delivery of the Deliverables, for example by using a representative test environment, and the date, timing, content and conduct of such tests shall be agreed in advance with the Buyer.
- 12.9 If any testing conducted by or on behalf of the Supplier identifies a new risk new threat, vulnerability or exploitation technique that has the potential to affect the security of the Information Management System, the Supplier shall within 2 days of becoming aware of such risk, threat, vulnerability or exploitation technique provide the Buyer with a copy of the unredacted test report and:
 - 12.9.1 propose interim mitigation measures to vulnerabilities in the Information Management System known to be exploitable where a security patch is not immediately available; and
 - 12.9.2 where and to the extent applicable, remove or disable any extraneous interfaces, services or capabilities that are not needed for the provision of the Deliverables (in order to reduce the attack surface of the Supplier's system) within the timescales set out in the test report or such other timescales as may be agreed with the Buyer.
- 12.10 The Supplier shall conduct such further tests of the Supplier's system as may be required by the Buyer from time to time to demonstrate compliance with its obligations set out this Schedule and the Contract.
- 12.11 The Supplier shall notify the Buyer immediately if it fails to, or believes that it will not, mitigate the vulnerability within the timescales set out in this Annex.

13 Security Monitoring and Reporting

- 13.1 The Supplier shall:
 - 13.1.1 monitor the delivery of assurance activities;
 - 13.1.2 maintain and update the Security Assurance Statement in accordance with Paragraph 5 of this Annex;

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- 13.1.3 monitor security risks impacting upon the operation of the Deliverables;
- 13.1.4 monitor the Information Management System for attempted Breaches of Security, including but not limited to, failed authentication, attempted brute force, indications of attempted denial of service attacks, attempted or actual data exfiltration, suspicious system alterations, and privileged access;
- 13.1.5 report actual or attempted Breaches of Security in accordance with the approved Incident Management Process; and
- 13.1.6 agree with the Buyer the frequency and nature of the security reports to be prepared and submitted by the Supplier to the Buyer within 30 days of the Start Date of this Call-Off Contract.

14 Vulnerabilities and Corrective Action

- 14.1 The Buyer and the Supplier acknowledge that from time to time vulnerabilities in the Information Management System will be discovered which unless mitigated will present an unacceptable risk to the Government Data.
- 14.2 The severity of vulnerabilities for Supplier COTS Software and Third Party COTS Software shall be categorised by the supplier as 'critical', 'important' and 'other' by aligning these categories to the vulnerability scoring according to the agreed method in the Information Security Management Document Set and using the appropriate vulnerability scoring systems including:
 - 14.2.1 the 'National Vulnerability Database' 'Vulnerability Severity Ratings': 'High', 'Medium' and 'Low' respectively (these in turn are aligned to CVSS scores as set out by NIST at http://nvd.nist.gov/cvss.cfm); and
 - 14.2.2 Microsoft's 'Security Bulletin Severity Rating System' ratings 'Critical', 'Important', and the two remaining levels ('Moderate' and 'Low') respectively.
- 14.3 Subject to Paragraphs 14.4 and 14.5 and of this Annex, the Supplier shall procure the application of security patches to vulnerabilities in the core Information Management System within:
 - 14.3.1 2 days after the public release of patches for those vulnerabilities categorised as 'critical';
 - 14.3.2 30 days after the public release of patches for those vulnerabilities categorised as 'important'; and
 - 14.3.3 60 days after the public release of patches for those vulnerabilities categorised as 'other'.
- 14.4 Where a vulnerability is discovered or reasonably suspected to be under active