

## Digital Outcomes and Specialists 4 Framework Agreement Call-Off Contract

This Call-Off Contract for the Digital Outcomes and Specialists 4 Framework Agreement (RM1043.6) includes

### Part A - Order Form

### Part B – Terms and conditions

1. Contract start date, length and methodology
2. Supplier Staff
3. Swap-out
4. Staff vetting procedures
5. Due diligence
6. Warranties, representations and acceptance criteria
7. Business continuity and disaster recovery
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20. Security
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33. Entire agreement
34. Liability
35. Waiver and cumulative remedies
36. Fraud
37. Prevention of bribery and corruption
38. Legislative change
39. Publicity, branding, media and official enquiries
40. Non Discrimination
41. Premises
42. Equipment
43. Law and jurisdiction
44. Defined Terms

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## Part C - The Schedules

Schedule 1 - Requirements

Schedule 2 - Supplier's response

Schedule 3 - Statement of Work (SOW), including pricing arrangements and Key Staff

Schedule 4 - Contract Change Notice (CCN)

Schedule 5 - Balanced Scorecard

Schedule 6 - Optional Buyer terms and conditions

Schedule 7 - How Services are bought (Further Competition process)

Schedule 8 - Deed of guarantee

Schedule 9 - Processing, Personal Data and Data Subjects

Schedule 10 – Alternative Clauses

The Order Form (Part A), the Terms and Conditions (Part B), and the Schedules (Part C) will become the binding contract after the Further Competition Process has been concluded. Specific details will be added after the award of the Framework Agreement. The Order Form may include:

- Buyer and Supplier details
- contract term

- Deliverables
- location
- warranties
- staffing needs
- staff vetting procedure
- notice period for termination
- standards required (including security requirements)
- charges, invoicing method, payment methods and payment terms
- additional Buyer terms and conditions
- insurances
- business continuity and disaster recovery
- security
- governance
- methodology
- Buyer and Supplier responsibilities

A mockup Order Form (Part A) and Schedules (Part C) are set out below.

During the lifetime of the Framework Agreement, the Call-Off Contract Order Form template will be regularly updated to ensure that it continues to meet user needs.

## Part A - Order Form

<b>Buyer</b>	Food Standards Agency				
<b>Supplier</b>	Cognizant Worldwide Limited				
<b>Call-Off Contract Ref.</b>	FSA715				
<b>Call-Off Contract title</b>	Strategic Surveillance Delivery				
<b>Call-Off Contract description</b>	<p>Ensure we build on the success in delivering on the pipeline of use cases, to continue innovating and improve further our situational awareness for food and feed risk the Food Standards Agency requires a supplier to augment our internal team with highly skilled multi-disciplinary individuals/teams.</p> <p>This is a non-exclusive Call off contract to help the FSA optimise the use of data to identify emerging food and feed risks before they become a public health concern.</p> <p>Each individual requirement under this call-off contract will be carried out under separate Statement of Works.</p>				
<b><u>Call-Off Contract period</u></b>	2 years				
<b>Start date</b>	11 <sup>th</sup> May 2020 and is valid for 24 months.				
<b>End date</b>	10 <sup>th</sup> May 2022				
<b>(Optional) Maximum Call-Off Contract Extension Period</b>	Up to 6 months				
<b>Latest Extension Period End Date</b>	10 <sup>th</sup> November 2022				
<b>Notice period (prior to the initial Call-Off Contract period) to trigger Call-Off Contract Extension</b>	Three months				
<b><u>Call-Off Contract value</u></b>	Up to £3,000,000				
<b>Charging method</b>	<table border="1"> <tr> <td>Capped time and materials (CTM)</td><td></td></tr> <tr> <td>Price per story</td><td></td></tr> </table>	Capped time and materials (CTM)		Price per story	
Capped time and materials (CTM)					
Price per story					

	Time and materials (T&M)	
	Fixed price	
	Other pricing method or a combination of pricing methods agreed by the Parties	✓
<b>Notice period for termination for convenience</b>	30 days written notice	
<b>Initial SOW package</b>	To be confirmed	

This Order Form is issued in accordance with the Digital Outcomes and Specialists Framework Agreement (RM1043.6).

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED]	[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]	[REDACTED]
	[REDACTED]	[REDACTED]
	[REDACTED]	[REDACTED]
[REDACTED] [REDACTED]	[REDACTED]	[REDACTED]
	Title:	Client Partner
	Email:	[REDACTED]

[REDACTED]  
[REDACTED]

	Phone:	
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### Data Protection Officers

For the Buyer:	Name:	Information Management Team
	Title:	NA
	Email:	
	Phone:	NA
For the supplier:	Name:	

Buyer contractual requirements	
<b>Digital outcomes and specialists services required:</b>	To optimise use of data, mainly open data, to identify emerging food and feed risks before they become a public health concern.
<b>Warranty period</b>	90 days from the date of Buyer acceptance of release.
<b>Location:</b>	Clive House 70 Petty France London SW1H 9EX
<b>Staff vetting procedures:</b>	The level of clearance for this requirement is: Baseline Personnel Security Standard
<b>Standards:</b>	N/A
<b>Limit on supplier's liability:</b>	N/A
<b>Insurance:</b>	N/A
Supplier's information	
<b>Commercially sensitive information:</b>	Cognizant regard our Rate Card and any personal details, including terms and conditions of employment, about our employees as commercially sensitive information.

<b>Subcontractors / Partners:</b>	N/A
<b>Call-Off Contract Charges and payment</b>	
<b>The method of payment for the Call-Off Contract Charges (GPC or BACS)</b>	BACS
<b>Invoice (including Electronic Invoice) details</b>	All invoices should include a breakdown of the day rates of the roles used and the number of days worked in the period the invoice relates to.
<b>Who and where to send invoices to:</b>	Invoices should be sent to both <a href="mailto:IT.Commercial@food.gov.uk">IT.Commercial@food.gov.uk</a> and <a href="mailto:accounts-payable.def@gov.sscl.com">accounts-payable.def@gov.sscl.com</a> .
<b>Invoice information required – eg PO, project ref, etc.</b>	A valid PO number, Project reference FSA715 and the Statement of Work number.
<b>Invoice frequency</b>	Monthly in arrears unless agreed differently in an SOW.
<b>Call-Off Contract value:</b>	Up to £3,000,000

### Call-Off Contract Charges:

*All Work Packages called off under this contract will be based on the Rates offered as part of Cognizants response to the FSA's requirement, seen below:*

<b>FSA715 – Call-Off Contract – Strategic Surveillance Delivery</b>		
Please detail the daily charge rate for each role that you will apply to future work packages during the call-off agreement		
Role	DOS Framework Daily Rate	Daily rate offered
Data Science Consulting Manager		
Data Science Technical Lead		
Junior Data Scientist		
Mid level Data Scientist		
Data Scientist		
Senior Data Scientist		
Senior Business Analyst		
Change Lead		
AI Lead		
Senior AI Developer		
AI Developer		
Ethicist		
DevOps Engineer		
Tester		
Senior DevOps		
Testing Lead		
Developer		
Senior Developer		

### Additional Buyer terms

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<b>Warranties, representations and acceptance criteria</b>	The Supplier warrants and undertakes to the Buyer that: N/A
<b>Supplemental requirements in addition to the call-off terms</b>	N/A
<b>Buyer specific amendments to/refinements of the Call-Off Contract terms</b>	N/A
<b>Specific terms:</b>	N/A

<b>Formation of Contract</b>
1.1 By signing and returning this Order Form (Part A), the Supplier agrees to enter into a Call-Off Contract with the Buyer.
1.2 The Parties agree that they have read the Order Form (Part A), the Call-Off Contract terms and conditions (Part B), and the Schedules (Part C), and by signing below agree to be bound by this Call-Off Contract.
<p>1.3 In accordance with the Further Competition procedure set out in Section 3 of the Framework Agreement, this Call-Off Contract will be formed when the Buyer acknowledges the receipt of the signed copy of the Order Form from the Supplier (the “call-off effective date”).</p> <p>1.4 The Call-Off Contract outlines the Deliverables of the agreement. The Order Form outlines any amendment of the terms and conditions set out in Part B. The terms and conditions of the Call-Off Contract Order Form will supersede those of the Call-Off Contract standard terms and conditions.</p> <p><b>2. Background to the agreement</b></p> <p>(A) The Supplier is a provider of digital outcomes and specialists services and undertook to provide such Services under the terms set out in Framework Agreement number RM1043.6 (the “Framework Agreement”).</p> <p>(B) The Buyer served an Order Form for Services to the Supplier on the Order Date stated in the Order Form.</p>


## **Part B – Terms and conditions**

### **1. Call-Off Contract start date, length and methodology**

1.1 The Supplier will start providing the Services in accordance with the dates specified in any Statement of Work (SOW).

1.2 Completion dates for Deliverables will be set out in any SOW.

1.3 Unless the Call-Off Contract period has been either increased in accordance with Clause 1.4 or decreased in accordance with Clause 1.5 then the term of the Call-Off Contract will end when the first of these occurs:

- the Call-Off Contract period End Date listed in the Order Form is reached; or
- the final Deliverable, specified in the final SOW, is completed.

1.4 The Buyer can extend the term of the Call-Off Contract by amending the Call-Off Contract End Date where:

- an Extension Period was specified in the Order Form; and
- written notice was given to the Supplier before the expiry of the notice period set out in the Order Form. The notice must state that the Call-Off Contract term will be extended, and must specify the number of whole days of the extension.

After this, the term of the Call-Off Contract will end on the last day of the Extension Period listed in the notice (the “Extension Period End Date”).

1.5 If the Call-Off Contract is terminated early, either during the initial Call-Off Contract period, or during any Extension Period, the term of the Call-Off Contract will end on the termination date.

1.6 The Supplier will plan on using an agile process, starting with user needs. The methodology will be outlined in the SOW. Waterfall methodology will only be used in exceptional circumstances, and where it can be shown to best meet user needs. Projects may need a combination of both waterfall and agile methods, playing to their respective strengths.

### **2. Supplier Staff**

2.1 The Supplier Staff will:

- fulfil all reasonable requests of the Buyer;
- apply all due skill, care and diligence to the provisions of the Services;

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<https://www.gov.uk/government/publications/digital-outcomes-and-specialists-4-call-off-contract>

- be appropriately experienced, qualified and trained to supply the Services;
  - respond to any enquiries about the Services as soon as reasonably possible;
- and
- complete any necessary vetting procedures specified by the Buyer.

2.2 The Supplier will ensure that Key Staff are assigned to provide the Services for their Working Days (agreed between Supplier and Buyer) and are not removed from the Services during the dates specified in the relevant SOW.

2.3 The Supplier will promptly replace any Key Staff that the Buyer considers unsatisfactory at no extra charge. The Supplier will promptly replace anyone who resigns with someone who is acceptable to the Buyer. If the Supplier cannot provide an acceptable replacement, the Buyer may terminate the Call-Off Contract subject to clause 23.

2.4 Supplier Staff will comply with Buyer requirements for the conduct of staff when on Buyer's premises.

2.5 The Supplier will comply with the Buyer's staff vetting procedures for all or part of the Supplier Staff.

2.6 The Supplier will, on request (and subject to any obligations under the Data Protection Legislation), provide a copy of the contract of employment or engagement (between the Supplier and the Supplier Staff) for every member of Supplier Staff made available to the Buyer.

### **3. Swap-out**

3.1 Supplier Staff providing the Services may only be swapped out with the prior approval of the Buyer. For this approval, the Buyer will consider:

- the provisions of Clause 2.1; and
- their Statement of Requirements and the Supplier's response.

### **4. Staff vetting procedures**

4.1 All Supplier Staff will need to be cleared to the level determined by the Buyer prior to the commencement of work.

4.2 The Buyer may stipulate differing clearance levels for different roles during the Call-Off Contract period.

4.3 The Supplier will ensure that it complies with any additional staff vetting procedures requested by the Buyer.

### **5. Due diligence**

5.1 Both Parties acknowledge that information will be needed to provide the Services throughout the term of the Call-Off Contract and not just during the Further Competition process. Both Parties agree to share such information freely.

5.2 Further to Clause 5.1, both Parties agree that when entering into a Call-Off Contract, they:

5.2.1 have made their own enquiries and are satisfied by the accuracy of any information supplied by the other Party

5.2.2 are confident that they can fulfil their obligations according to the terms of the Call-Off Contract

5.2.3 have raised all due diligence questions before signing the Call-Off Contract

5.2.4 have entered into the Call-Off Contract relying on its own due diligence

## **6. Warranties, representations and acceptance criteria**

6.1 The Supplier will use the best applicable and available techniques and standards and will perform the Call-Off Contract with all reasonable care, skill and diligence, and according to Good Industry Practice.

6.2 The Supplier warrants that all Supplier Staff assigned to the performance of the Services have the necessary qualifications, skills and experience for the proper performance of the Services.

6.3 The Supplier represents and undertakes to the Buyer that each Deliverable will meet the Buyer's acceptance criteria, as defined in the Call-Off Contract Order Form.

6.4 The Supplier undertakes to maintain any interface and interoperability between third-party software or Services and software or Services developed by the Supplier.

6.5 The Supplier warrants that it has full capacity and authority and all necessary authorisations, consents, licences and permissions to perform the Call-Off Contract.

## **7. Business continuity and disaster recovery**

7.1 If required by the Buyer, the Supplier will ensure a disaster recovery approach is captured in a clear disaster recovery plan. All Supplier Staff must also adhere to the Buyer's business continuity and disaster recovery procedure as required in the delivery of the Services for this project.

## **8. Payment terms and VAT**

8.1 The Buyer will pay the Supplier within 30 days of receipt of an Electronic Invoice subject to the provisions of Clauses 8.5 and 8.6 or a valid invoice submitted in accordance with the Call-Off Contract.

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8.2 The Supplier will ensure that each invoice or Electronic Invoice contains the information specified by the Buyer in the Order Form.

8.3 The Call-Off Contract Charges are deemed to include all Charges for payment processing. All invoices and Electronic Invoices submitted to the Buyer for the Services shall be exclusive of any Management Charge.

8.4 All payments under the Call-Off Contract are inclusive of VAT.

8.5 The Buyer shall accept and process for payment an Electronic Invoice submitted for payment by the Supplier where the invoice is undisputed and where it complies with the standard on electronic invoicing.

8.6 For the purposes of Clause 8.5 an Electronic Invoice complies with the standard on electronic invoicing where it complies with the European standard and any of the syntaxes published in Commission Implementing Decision (EU) 2017/1870.

## **9. Recovery of sums due and right of set-off**

9.1 The Buyer may retain or set-off payment of any amount owed to it by the Supplier if notice and reasons are provided.

## **10. Insurance**

The Supplier will maintain the insurances required by the Buyer including those set out in this Clause.

### **10.1 Subcontractors**

10.1.1 The Supplier will ensure that, during the Call-Off Contract, Subcontractors hold third-party public and products liability insurance of the same amounts that the Supplier would be legally liable to pay as damages, including claimant's costs and expenses, for accidental death or bodily injury and loss of or damage to Property, to a minimum of £5,000,000.

### **10.2 Agents and professional consultants**

10.2.1 The Supplier will also ensure that all agents and professional consultants involved in the supply of Services hold professional indemnity insurance to a minimum indemnity of £1,000,000 for each individual claim during the Call-Off Contract, and for 6 years after the termination or expiry date to the Call-Off Contract to which the insurance relates.

### **10.3 Additional or extended insurance**

10.3.1 If requested by the Buyer, the Supplier will obtain additional insurance policies, or extend existing insurance policies procured under the Framework Agreement.

10.3.2 The Supplier will provide CCS and the Buyer, the following evidence that they have complied with Clause 10.3.1 above:

- a broker's verification of insurance; or
- receipts in respect of the insurance premium; or
- other satisfactory evidence of payment of the latest premiums due.

#### 10.4 Supplier liabilities

10.4.1 Insurance will not relieve the Supplier of any liabilities under the Framework Agreement or the Call-Off Contract.

10.4.2 Without limiting the other provisions of the Call-Off Contract, the Supplier will:

- take all risk control measures relating to the Services as it would be reasonable to expect of a contractor acting in accordance with Good Industry Practice, including the investigation and reports of claims to insurers;
- promptly notify the insurers in writing of any relevant material fact under any insurances of which the Supplier is, or becomes, aware; and
- hold all insurance policies and require any broker arranging the insurance to hold any insurance slips and other evidence of placing cover representing any of the insurance to which it is a Party.

10.4.3 The Supplier will not do or omit to do anything, which would entitle any insurer to refuse to pay any claim under any of the insurances.

#### 10.5 Indemnity to principals

10.5.1 Where specifically outlined in the Call-Off Contract, the Supplier will ensure that the third-party public and products liability policy will contain an 'indemnity to principals' clause under which the Buyer will be compensated for both of the following claims against the Buyer:

- death or bodily injury; and
- third-party Property damage arising from connection with the Services and for which the Supplier is legally liable.

#### 10.6 Cancelled, suspended, terminated or unrenewed policies

10.6.1 The Supplier will notify CCS and any Buyers as soon as possible if the Supplier becomes aware that any of the insurance policies have been, or are due to be, cancelled, suspended, terminated or not renewed.

#### 10.7 Premium, excess and deductible payments

10.7.1 Where any insurance requires payment of a premium, the Supplier will:

- be liable for the premium; and

- pay such premium promptly.

10.7.2 Where any insurance is subject to an excess or deductible below the Supplier will be liable for it. The Supplier will not be entitled to recover any sum paid for insurance excess or any deductible from CCS or the Buyer.

## **11. Confidentiality**

11.1 Except where disclosure is clearly permitted by the Call-Off Contract, neither Party will disclose the other Party's Confidential Information without the relevant Party's prior written consent.

11.2 Disclosure of Confidential Information is permitted where information:

- must be disclosed to comply with legal obligations placed on the Party making the disclosure
- belongs to the Party making the disclosure (who is not under any obligation of confidentiality) before its disclosure by the information owner
- was obtained from a third party who is not under any obligation of confidentiality, before receiving it from the disclosing Party
- is, or becomes, public knowledge, other than by breach of this Clause or the Call-Off Contract
- is independently developed without access to the other Party's Confidential Information
- is disclosed to obtain confidential legal professional advice.

11.3 The Buyer may disclose the Supplier's Confidential Information:

- to any central government body on the basis that the information may only be further disclosed to central government bodies;
- to the UK Parliament, Scottish Parliament or Welsh or Northern Ireland Assemblies, including their committees;
- if the Buyer (acting reasonably) deems disclosure necessary or appropriate while carrying out its public functions;
- on a confidential basis to exercise its rights or comply with its obligations under the Call-Off Contract; or
- to a proposed transferee, assignee or novatee of, or successor in title to, the Buyer.

11.4 References to disclosure on a confidential basis will mean disclosure subject to a confidentiality agreement or arrangement containing the same terms as those placed on the Buyer under this Clause.

11.5 The Supplier may only disclose the Buyer's Confidential Information to Supplier Staff who are directly involved in the provision of the Services and who need to know the information to provide the Services. The Supplier will ensure that its Supplier Staff will comply with these obligations.

11.6 Either Party may use techniques, ideas or knowledge gained during the Call-Off Contract unless the use of these things results in them disclosing the other Party's Confidential Information where such disclosure is not permitted by the Framework Agreement, or is an infringement of Intellectual Property Rights.

11.7 Information about orders placed by a Buyer (including pricing information and the terms of any Call-Off Contract) may be published by CCS and may be shared with other Buyers. Where Confidential Information is shared with other Buyers, CCS will notify the recipient of the information that its contents are confidential.

## **12. Conflict of Interest**

12.1 The Supplier will take all appropriate steps to ensure that Supplier Staff are not in a position where there is or may be an actual conflict between the financial or personal interests of the Supplier Staff and another Supplier where both are providing the Services to the Buyer under any Call-Off Contract in accordance with the Framework Agreement.

12.2 Any breach of this Clause will be deemed to be a Material Breach.

12.3 A conflict of interest may arise in situations including where a member of the Supplier Staff:

- is related to someone in another Supplier team who both form part of the same team performing the Services under the Framework Agreement;
- has a business interest in another Supplier who is part of the same team performing the Services under the Framework Agreement;
- is providing, or has provided, Services to the Buyer for the discovery phase; or
- has been provided with, or had access to, information which would give the Supplier or an affiliated company an unfair advantage in a Further Competition procedure.

12.4 Where the Supplier identifies a risk of a conflict or potential conflict, they will (before starting work under the Call-Off Contract, unless otherwise agreed with the Buyer) inform the Buyer of such conflicts of interest and how they plan to mitigate the risk. Details of such mitigation arrangements are to be sent to the Buyer as soon as possible. On receiving this notification, the Buyer will, at its sole discretion, notify the Supplier if the mitigation arrangements are acceptable or whether the risk or conflict remains a Material Breach.

## **13. Intellectual Property Rights**

13.1 Unless otherwise specified in the Call-Off Contract:

- the Buyer will not have any right to the Intellectual Property Rights (IPRs) of the Supplier or its licensors, including the Supplier Background IPRs and any IPRs in the Supplier Software.
- the Buyer may publish any Deliverable that is software as open source.
- the Supplier will not, without prior written approval from the Buyer, include any Supplier Background IPR or third party IPR in any Deliverable in such a way to

prevent its publication and failure to seek prior approval gives the Buyer the right to use all Deliverables.

- the Supplier assigns (by present assignment of future rights to take effect immediately on it coming into existence) to the Buyer with full guarantee (or shall procure assignment to the Buyer), title to and all rights and interest in the Project-Specific IPRs together with and including any documentation, source code and object code comprising the Project-Specific IPRs and all build instructions, test instructions, test scripts, test data, operating instructions and other documents and tools necessary for maintaining and supporting the Project-Specific IPRs.
- the Supplier will not have any right to the Intellectual Property Rights of the Buyer or its licensors, including:
  - the Buyer Background IPRs;
  - the Project-Specific IPRs;
  - IPRs in the Buyer Data.

13.2 Where either Party acquires, by operation of Law, rights to IPRs that are inconsistent with the allocation of rights set out above, it will assign in writing such IPRs as it has acquired to the other Party.

13.3 Except where necessary for the performance of the Call-Off Contract (and only where the Buyer has given its prior approval), the Supplier will not use or disclose any of the Buyer Background IPRs, Buyer Data or the Project-Specific IPRs to or for the benefit of any third party.

13.4 The Supplier will not include any Supplier Background IPRs or third-party IPRs in any release or Deliverable that is to be assigned to the Buyer under the Call-Off Contract, without approval from the Buyer.

13.5 The Supplier will grant the Buyer (and any replacement Supplier) a perpetual, transferable, sub-licensable, non-exclusive, royalty-free licence to copy, modify, disclose and use the Supplier Background IPRs for any purpose connected with the receipt of the Services that is additional to the rights granted to the Buyer under the Call-Off Contract and to enable the Buyer:

- to receive the Services;
- to make use of the Services provided by the replacement Supplier; and
- to use any Deliverables

and where the Supplier is unable to provide such a licence it must meet the requirement by creating new Project-Specific IPR at no additional cost to the Buyer.

13.6 The Buyer grants the Supplier a non-exclusive, non-assignable, royalty-free licence to use the Buyer Background IPRs, the Buyer Data and the Project-Specific IPRs during the term of the Call-Off Contract for the sole purpose of enabling the Supplier to provide the Services.

13.7 The Buyer gives no warranty as to the suitability of any IPRs licensed to the Supplier hereunder. Any such licence:

- may include the right to grant sub-licences to Subcontractors engaged in providing any of the Services (or part thereof) provided that any such Subcontractor

has entered into a confidentiality undertaking with the Supplier on the same terms as in clause 11 (Confidentiality) and that any such subcontracts will be non-transferable and personal to the relevant Subcontractor; and

- is granted solely to the extent necessary for the provision of the Services in accordance with the Call-Off Contract. The Supplier will ensure that the Subcontractors do not use the licensed materials for any other purpose.

13.8 The Supplier will ensure that no unlicensed software or open source software (other than the open source software specified by the Buyer) is interfaced with or embedded within any Buyer Software or Deliverable.

13.9 Before using any third-party IPRs related to the supply of the Services, the Supplier will submit to the Buyer for approval, all details of any third-party IPRs.

13.10 Where the Supplier is granted permission to use third-party IPRs in a request for approval, the Supplier will ensure that the owner of such third-party IPRs grants to the Buyer a licence on the terms informed to the Buyer in the request for approval.

13.11 If the third-party IPR is made available on terms equivalent to the Open Government Licence v3.0, the request for approval will be agreed and the Supplier will buy licences under these terms. If not, the Supplier shall notify the Buyer in writing giving details of what licence terms can be obtained and other alternatives and no third-party IPRs may be used without Buyer approval in writing.

13.12 The Supplier will, on written demand, fully indemnify the Buyer and the Crown for all losses which it may incur at any time as a result of any claim (whether actual alleged asserted and/or substantiated and including third party claims) that the rights granted to the Buyer in accordance with the Call-Off Contract or the performance by the Supplier of the provision of the Services or the possession or use by the Buyer of the Services or Deliverables delivered by the Supplier, including the publication of any Deliverable that is software as open source, infringes or allegedly infringes a third party's Intellectual Property Rights (an 'IPR Claim').

13.13 Clause 13.12 will not apply if the IPR Claim arises from:

- designs supplied by the Buyer;
- the use of data supplied by the Buyer which is not required to be verified by the Supplier under any provision of the Call-Off Contract; or
- other material provided by the Buyer necessary for the provision of the Services.

13.14 The indemnity given in Clause 13.12 will be uncapped.

13.15 The Buyer will notify the Supplier in writing of the IPR Claim made against the Buyer and the Buyer will not make any admissions which may be prejudicial to the defence or settlement of the IPR Claim. The Supplier will at its own expense conduct all negotiations and any litigation arising in connection with the IPR Claim provided always that the Supplier:

- consults the Buyer on all substantive issues which arise during the conduct of such litigation and negotiations;
- takes due and proper account of the interests of the Buyer;
- considers and defends the IPR Claim diligently using competent counsel and in such a way as not to bring the reputation of the Buyer into disrepute; and
- does not settle or compromise the IPR Claim without the prior approval of the Buyer (such decision not to be unreasonably withheld or delayed).

13.16 If an IPR Claim is made (or in the reasonable opinion of the Supplier is likely to be made) in connection with the Call-Off Contract, the Supplier will, at the Supplier's own expense and subject to the prompt approval of the Buyer, use its best endeavours to:

- modify the relevant part of the Services or Deliverables without reducing their functionality or performance, or substitute Services or Deliverables of equivalent functionality or performance, to avoid the infringement or the alleged infringement, provided that there is no additional cost or burden to the Buyer;
- buy a licence to use and supply the Services or Deliverables, which are the subject of the alleged infringement, on terms which are acceptable to the Buyer; and
- promptly perform any responsibilities and obligations to do with the Call-Off Contract.

13.17 If an IPR Claim is made (or in the reasonable opinion of the Supplier is likely to be made) against the Supplier, the Supplier will immediately notify the Buyer in writing.

13.18 If the Supplier does not comply with provisions of this Clause within 20 Working Days of receipt of notification by the Supplier from the Buyer under clause 13.15 or receipt of the notification by the Buyer from the Supplier under clause 13.17 (as appropriate), the Buyer may terminate the Call-Off Contract for Material Breach and the Supplier will, on demand, refund the Buyer with all monies paid for the Service or Deliverable that is subject to the IPR Claim.

13.19 The Supplier will have no rights to use any of the Buyer's names, logos or trademarks without the Buyer's prior written approval.

13.20 The Supplier will, as an enduring obligation throughout the term of the Call-Off Contract where any software is used in the provision of the Services or information uploaded, interfaced or exchanged with the CCS or Buyer systems, use software and the most up-to-date antivirus definitions from an industry-accepted antivirus software vendor. It will use the software to check for, contain the spread of, and minimise the impact of Malicious Software (or as otherwise agreed between CCS or the Buyer, and the Supplier).

13.21 If Malicious Software is found, the Supplier will co-operate with the Buyer to reduce the effect of the Malicious Software. If Malicious Software causes loss of operational efficiency or loss or corruption of Buyer Data, the Supplier will use all reasonable endeavours to help the Buyer to mitigate any losses and restore the provision of the Services to the desired operating efficiency as soon as possible.

13.22 Any costs arising from the actions of the Buyer or Supplier taken in compliance with the provisions of the above clause, and clause 20.3, will be dealt with by the Buyer and the Supplier as follows:

- by the Supplier, where the Malicious Software originates from the Supplier Software or the Buyer Data while the Buyer Data was under the control of the Supplier, unless the Supplier can demonstrate that such Malicious Software was present and not quarantined or otherwise identified by the Buyer when provided to the Supplier.
- by the Buyer if the Malicious Software originates from the Buyer Software or the Buyer Data, while the Buyer Data was under the control of the Buyer.

13.23 All Deliverables that are software shall be created in a format, or able to be converted into a format, which is suitable for publication by the Buyer as open source software, unless otherwise agreed by the Buyer, and shall be based on open standards where applicable. The Supplier warrants that the Deliverables:

- are suitable for release as open source;
- have been developed using reasonable endeavours to ensure that their publication by the Buyer shall not cause any harm or damage to any party using them;
- do not contain any material which would bring the Buyer into disrepute;
- can be published as open source without breaching the rights of any third party; and
- do not contain any Malicious Software.

13.24 Where Deliverables that are software are written in a format that requires conversion before publication as open source software, the Supplier shall also provide the converted format to the Buyer unless the Buyer agrees in advance in writing that the converted format is not required.

13.25 Where the Buyer has authorised a Supplier request not to make an aspect of the Deliverable open source, the Supplier shall as soon as reasonably practicable provide written details of what will not be made open source and what impact that exclusion will have on the ability of the Buyer to use the Deliverable and Project Specific IPRs going forward as open source.

13.26 The Buyer may assign, novate or otherwise transfer its rights and obligations under the licences granted pursuant to this clause to:

- a Central Government Body; or
- to any body (including any private sector body) which performs or carries on any of the functions and/or activities that previously had been performed and/or carried on by the Buyer.

If the Buyer ceases to be a Central Government Body, the successor body to the Buyer shall still be entitled to the benefit of the licences granted in this clause.

## **14. Data Protection and Disclosure**

14.1 The Parties will comply with the Data Protection Legislation and agree that the Buyer is the Controller and the Supplier is the Processor. The only processing the Supplier is authorised to do is listed at Schedule 9 unless Law requires otherwise (in which case the Supplier will promptly notify the Buyer of any additional processing if permitted by Law).

14.2 The Supplier will provide all reasonable assistance to the Buyer to prepare any Data Protection Impact Assessment before commencing any processing (including provision of detailed information and assessments in relation to processing operations, risks and measures) and must notify the Buyer immediately if it considers that the Buyer's instructions infringe the Data Protection Legislation.

14.3 The Supplier must have in place Protective Measures, which have been reviewed and approved by the Buyer as appropriate, to guard against a Data Loss Event, which take into account the nature of the data, the harm that might result, the state of technology and the cost of implementing the measures.

14.4 The Supplier will ensure that the Supplier Personnel only process Personal Data in accordance with this Call-Off Contract and take all reasonable steps to ensure the reliability and integrity of Supplier Personnel with access to Personal Data, including by ensuring they:

- i) are aware of and comply with the Supplier's obligations under this Clause;
- ii) are subject to appropriate confidentiality undertakings with the Supplier or relevant Subprocessor
- iii) are informed of the confidential nature of the Personal Data and don't publish, disclose or divulge it to any third party unless directed by the Buyer or in accordance with this Call-Off Contract
- iv) are given training in the use, protection and handling of Personal Data

14.5 The Supplier will not transfer Personal Data outside of the European Economic Area unless the prior written consent of the Buyer has been obtained and the following conditions are met:

- i) the Buyer or the Supplier has provided appropriate safeguards in relation to the transfer (whether in accordance with GDPR Article 46 or LED Article 37) as determined by the Buyer;
- ii) the Data Subject has enforceable rights and effective legal remedies;

- iii) the Supplier complies with its obligations under the Data Protection Legislation by providing an adequate level of protection to any Personal Data that is transferred (or, if it is not so bound, uses its best endeavours to assist the Buyer in meeting its obligations); and
- iv) the Supplier complies with any reasonable instructions notified to it in advance by the Buyer with respect to the processing of the Personal Data

14.6 The Supplier will delete or return the Buyer's Personal Data (including copies) if requested in writing by the Buyer at the termination or expiry of this Call-Off Contract, unless required to retain the Personal Data by Law.

14.7 The Supplier will notify the Buyer immediately if it receives any communication from a third party relating to the Parties' obligations under the Data Protection Legislation, or it becomes aware of a Data Loss Event, and will provide the Buyer with full and ongoing assistance in relation to each Party's obligations under the Data Protection Legislation in accordance with any timescales reasonably required by the Buyer.

14.8 The Supplier will maintain complete and accurate records and information to demonstrate its compliance with this clause. This requirement does not apply where the Supplier employs fewer than 250 staff, unless:

- i) the Buyer determines that the processing is not occasional;
- ii) the Buyer determines the processing includes special categories of data as referred to in Article 9(1) of the GDPR or Personal Data relating to criminal convictions and offences referred to in Article 10 of the GDPR; and
- ii) the Buyer determines that the processing is likely to result in a risk to the rights and freedoms of Data Subjects.

14.9 Before allowing any Subprocessor to process any Personal Data related to this Call-Off Contract, the Supplier must obtain the prior written consent of the Buyer, and shall remain fully liable for the acts and omissions of any Subprocessor.

14.10 The Buyer may amend this Call-Off Contract on not less than 30 Working Days' notice to the Supplier to ensure that it complies with any guidance issued by the Information Commissioner's Office.

## **15. Buyer Data**

15.1 The Supplier will not remove any proprietary notices relating to the Buyer Data.

15.2 The Supplier will not store or use Buyer Data except where necessary to fulfil its obligations.

15.3 If Buyer Data is processed by the Supplier, the Supplier will supply the data to the Buyer as requested and in the format specified by the Buyer.

15.4 The Supplier will preserve the integrity of Buyer Data processed by the Supplier and prevent its corruption and loss.

15.5 The Supplier will ensure that any system which holds any Buyer Data complies with the security requirements prescribed by the Buyer.

15.6 The Supplier will ensure that any system on which the Supplier holds any protectively marked Buyer Data will be accredited as specific to the Buyer and will comply with:

- the government security policy framework and information assurance policy;
- guidance issued by the Centre for Protection of National Infrastructure on Risk Management and Accreditation of Information Systems; and
- the relevant government information assurance standard(s).

15.7 Where the duration of the Call-Off Contract exceeds one year, the Supplier will review the accreditation status at least once a year to assess whether material changes have occurred which could alter the original accreditation decision in relation to Buyer Data. If any changes have occurred, the Supplier will re-submit such system for accreditation.

15.8 If at any time the Supplier suspects that the Buyer Data that the Supplier has held, used, or accessed has or may become corrupted, lost, breached or significantly degraded in any way for any reason, then the Supplier will notify the Buyer immediately and will at its own cost comply with any remedial action proposed by the Buyer.

15.9 The Supplier will provide, at the request of CCS or the Buyer, any information relating to the Supplier's compliance with its obligations under the Data Protection Legislation. The Supplier will also ensure that it does not knowingly or negligently fail to do something that places CCS or any Buyer in breach of its obligations of the Data Protection Legislation. This is an absolute obligation and is not qualified by any other provision of the Call-Off Contract.

15.10 The Supplier agrees to use the appropriate organisational, operational and technological processes and procedures to keep the Buyer Data safe from unauthorised use or access, loss, destruction, theft or disclosure.

## **16. Document and source code management repository**

16.1 The Supplier will comply with any reasonable instructions given by the Buyer as to where it will store documents and source code, both finished and in progress, during the term of the Call-Off Contract.

16.2 The Supplier will ensure that all items that are uploaded to any repository contain sufficient detail, code annotations and instructions so that a third-party developer with the relevant technical abilities within the applicable role would be able to understand how the item was created and how it works together with the other items in the repository within a reasonable timeframe.

## **17. Records and audit access**

17.1 The Supplier will allow CCS (and CCS's external auditor) to access its information and conduct audits of the Services provided under the Call-Off Contract and the provision of Management Information (subject to reasonable and appropriate confidentiality undertakings).

## **18. Freedom of Information (FOI) requests**

18.1 The Supplier will transfer any Request for Information to the Buyer within 2 Working Days of receipt.

18.2 The Supplier will provide all necessary help reasonably requested by the Buyer to enable the Buyer to respond to the Request for Information within the time for compliance set out in section 10 of the Freedom of Information Act or Regulation 5 of the Environmental Information Regulations.

18.3 To the extent it is permissible and reasonably practical for it to do so, CCS will make reasonable efforts to notify the Supplier when it receives a relevant FoIA or EIR request so that the Supplier may make appropriate representations.

## **19. Standards and quality**

19.1 The Supplier will comply with any standards in the Call-Off Contract and Section 4 (How Services will be delivered) of the Framework Agreement, and with Good Industry Practice.

## **20. Security**

20.1 If requested to do so by the Buyer, the Supplier will, within 5 Working Days of the date of the Call-Off Contract, develop, obtain Buyer's approval of, maintain and observe a Security Management Plan and an Information Security Management System (ISMS) which, after Buyer approval, will apply during the term of the Call-Off Contract. Both the ISMS and the Security Management Plan will comply with the security policy of the Buyer and protect all aspects of the Services, and all processes associated with the delivery of the Services.

20.2 The Supplier will use software and the most up-to-date antivirus definitions available from an industry accepted antivirus software vendor to minimise the impact of Malicious Software.

20.3 If Malicious Software causes loss of operational efficiency or loss or corruption of Buyer Data, the Supplier will help the Buyer to mitigate any losses and will restore the Services to their desired operating efficiency as soon as possible.

20.4 The Supplier will immediately notify CCS of any breach of security in relation to CCS's Confidential Information (and the Buyer in relation to any breach regarding Buyer Confidential Information). The Supplier will recover such CCS and Buyer Confidential Information however it may be recorded.

20.5 Any system development by the Supplier must also comply with the government's '10 Steps to Cyber Security' guidance, as amended from time to time and currently available at: <https://www.ncsc.gov.uk/guidance/10-steps-cyber-security>

20.6 The Buyer will specify any security requirements for this project in the Order Form.

## **21. Incorporation of terms**

21.1 Upon the execution of a Statement of Work (SOW), the terms and conditions agreed in the SOW will be incorporated into the Call-Off Contract that the terms of the SOW are agreed under.

## **22. Managing disputes**

22.1 When either Party notifies the other of a dispute, both Parties will attempt in good faith to negotiate a settlement as soon as possible.

22.2 Nothing in this prevents a Party from seeking any interim order restraining the other Party from doing any act or compelling the other Party to do any act.

22.3 If the dispute cannot be resolved, either Party will be entitled to refer it to mediation in accordance with the procedures below, unless:

- the Buyer considers that the dispute is not suitable for resolution by mediation;
- the Supplier does not agree to mediation.

22.4 The procedure for mediation is as follows:

- A neutral adviser or mediator will be chosen by agreement between the Parties. If the Parties cannot agree on a mediator within 10 Working Days after a request by one Party to the other, either Party will as soon as possible, apply to the mediation provider or to the Centre for Effective Dispute Resolution (CEDR) to appoint a mediator. This application to CEDR must take place within 12 Working

Days from the date of the proposal to appoint a mediator, or within 3 Working Days of notice from the mediator to either Party that they are unable or unwilling to act.

- The Parties will meet with the mediator within 10 Working Days of the mediator's appointment to agree a programme for the exchange of all relevant information and the structure for negotiations to be held. The Parties may at any stage seek help from the mediation provider specified in this clause to provide guidance on a suitable procedure.
- Unless otherwise agreed, all negotiations connected with the dispute and any settlement agreement relating to it will be conducted in confidence and without prejudice to the rights of the Parties in any future proceedings.
- If the Parties reach agreement on the resolution of the dispute, the agreement will be recorded in writing and will be binding on the Parties once it is signed by their duly authorised representatives.
- Failing agreement, either Party may invite the mediator to provide a non-binding but informative opinion in writing. Such an opinion will be provided without prejudice and will not be used in evidence in any proceedings relating to the Call-Off Contract without the prior written consent of both Parties.
- If the Parties fail to reach agreement in the structured negotiations within 60 Working Days of the mediator being appointed, or such longer period as may be agreed by the Parties, then any dispute or difference between them may be referred to the courts.

22.5 Either Party may request by written notice that the dispute is referred to expert determination if the dispute relates to:

- any technical aspect of the delivery of the digital services;
- the underlying technology; or
- is otherwise of a financial or technical nature.

22.6 An expert will be appointed by written agreement between the Parties, but if there's a failure to agree within 10 Working Days, or if the person appointed is unable or unwilling to act, the expert will be appointed on the instructions of the President of the British Computer Society (or any other association that has replaced the British Computer Society).

22.7 The expert will act on the following basis:

- they will act as an expert and not as an arbitrator and will act fairly and impartially;
- the expert's determination will (in the absence of a material failure to follow the agreed procedures) be final and binding on the Parties;
- the expert will decide the procedure to be followed in the determination and will be requested to make their determination within 30 Working Days of their appointment or as soon as reasonably practicable and the Parties will help and provide the documentation that the expert needs for the determination;
- any amount payable by one Party to another as a result of the expert's determination will be due and payable within 20 Working Days of the expert's determination being notified to the Parties
- the process will be conducted in private and will be confidential;

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- the expert will determine how and by whom the costs of the determination, including their fees and expenses, are to be paid.

22.8 Without prejudice to any other rights of the Buyer under the Call-Off Contract, the obligations of the Parties under the Call-Off Contract will not be suspended, ceased or delayed by the reference of a dispute submitted to mediation or expert determination and the Supplier and the Supplier Staff will comply fully with the Requirements of the Call-Off Contract at all times.

## **23. Termination**

23.1 The Buyer will have the right to terminate the Call-Off Contract at any time by giving the notice to the Supplier specified in the Order Form, subject to clause 23.2 and 23.3 below. The Supplier's obligation to provide the Services will end on the date set out in the Buyer's notice.

23.2 The minimum notice period (expressed in Working Days) to be given by the Buyer to terminate under this Clause will be the number of whole days that represent 20% of the total duration of the current SOW to be performed under the Call-Off Contract, up to a maximum of 30 Working Days.

23.3 Partial days will be discounted in the calculation and the duration of the SOW will be calculated in full Working Days.

23.4 The Parties acknowledge and agree that:

- the Buyer's right to terminate under this Clause is reasonable in view of the subject matter of the Call-Off Contract and the nature of the Service being provided.
- the Call-Off Contract Charges paid during the notice period given by the Buyer in accordance with this Clause are a reasonable form of compensation and are deemed to fully cover any avoidable costs or losses incurred by the Supplier which may arise either directly or indirectly as a result of the Buyer exercising the right to terminate under this Clause without cause.
- Subject to clause 34 (Liability), if the Buyer terminates the Call-Off Contract without cause, they will indemnify the Supplier against any commitments, liabilities or expenditure which result in any unavoidable Loss by the Supplier, provided that the Supplier takes all reasonable steps to mitigate such Loss. If the Supplier holds insurance, the Supplier will reduce its unavoidable costs by any insurance sums available. The Supplier will submit a fully itemised and costed list of such Loss, with supporting evidence of unavoidable Losses incurred by the Supplier as a result of termination.

23.5 The Buyer will have the right to terminate the Call-Off Contract at any time with immediate effect by written notice to the Supplier if:

- the Supplier commits a Supplier Default and if the Supplier Default cannot, in the opinion of the Buyer, be remedied; or
- the Supplier commits any fraud.

23.6 Either Party may terminate the Call-Off Contract at any time with immediate effect by written notice to the other if:

- the other Party commits a Material Breach of any term of the Call-Off Contract (other than failure to pay any amounts due under the Call-Off Contract) and, if such breach is remediable, fails to remedy that breach within a period of 15 Working Days of being notified in writing to do so;
- an Insolvency Event of the other Party occurs, or the other Party ceases or threatens to cease to carry on the whole or any material part of its business
- a Force Majeure Event occurs for a period of more than 15 consecutive calendar days.

23.7 If a Supplier Insolvency Event occurs, the Buyer is entitled to terminate the Call-Off Contract.

## **24. Consequences of termination**

24.1 If the Buyer contracts with another Supplier, the Supplier will comply with Clause 29.

24.2 The rights and obligations of the Parties in respect of the Call-Off Contract (including any executed SOWs) will automatically terminate upon the expiry or termination of the relevant Call-Off Contract, except those rights and obligations set out in clause 24.6.

24.3 At the end of the Call-Off Contract period (howsoever arising), the Supplier must:

- immediately return to the Buyer:
  - all Buyer Data including all copies of Buyer Software and any other software licensed by the Buyer to the Supplier under the Call-Off Contract;
  - any materials created by the Supplier under the Call-Off Contract where the IPRs are owned by the Buyer;
  - any items that have been on-charged to the Buyer, such as consumables; and
  - all equipment provided to the Supplier. This equipment must be handed back to the Buyer in good working order (allowance will be made for reasonable wear and tear).
- immediately upload any items that are or were due to be uploaded to the repository when the Call-Off Contract was terminated (as specified in Clause 27);
- cease to use the Buyer Data and, at the direction of the Buyer, provide the Buyer and the replacement Supplier with a complete and uncorrupted version of the Buyer Data in electronic form in the formats and on media agreed with the Buyer and the replacement Supplier;
- destroy all copies of the Buyer Data when they receive the Buyer's written instructions to do so or 12 months after the date of expiry or termination (whichever is the earlier), and provide written confirmation to the Buyer that the data has been destroyed, except where the retention of Buyer Data is required by Law;
- vacate the Buyer premises;

- work with the Buyer on any work in progress and ensure an orderly transition of the Services to the replacement supplier;
- return any sums prepaid for Services which have not been delivered to the Buyer by the date of expiry or termination;
- provide all information requested by the Buyer on the provision of the Services so that:
  - the Buyer is able to understand how the Services have been provided; and
  - the Buyer and the replacement supplier can conduct due diligence.

24.4 Each Party will return all of the other Party's Confidential Information. Each Party will confirm that it does not retain the other Party's Confidential Information except where the information must be retained by the Party as a legal requirement or where the Call-Off Contract states otherwise.

24.5 All licences, leases and authorisations granted by the Buyer to the Supplier in relation to the Services will be terminated at the end of the Call-Off Contract period (howsoever arising) without the need for the Buyer to serve notice except where the Call-Off Contract states otherwise.

24.6 Termination or expiry of the Call-Off Contract will not affect:

- any rights, remedies or obligations accrued under the Call-Off Contract prior to termination or expiration;
- the right of either Party to recover any amount outstanding at the time of such termination or expiry;
- the continuing rights, remedies or obligations of the Buyer or the Supplier under clauses:
  - 8 - Payment Terms and VAT
  - 9 - Recovery of Sums Due and Right of Set-Off
  - 11 - Confidentiality
  - 12 - Conflict of Interest
  - 13 - Intellectual Property Rights
  - 24 - Consequences of Termination
  - 28 - Staff Transfer
  - 34 - Liability
  - 35 - Waiver and cumulative remedies
- any other provision of the Framework Agreement or the Call-Off Contract which expressly or by implication is to be performed or observed notwithstanding termination or expiry will survive the termination or expiry of the Call-Off Contract.

## 25. Supplier's status

25.1 The Supplier is an independent Contractor and no contract of employment or partnership is created between the Supplier and the Buyer. Neither Party is authorised to act in the name of, or on behalf of, the other Party.

## **26. Notices**

26.1 Any notices sent must be in writing. For the purpose of this Clause, an email is accepted as being in writing.

26.2 The following table sets out the method by which notices may be served under the Call-Off Contract and the respective deemed time and proof of Service:

Delivery type	Deemed delivery time	Proof of Service
Email	9am on the first Working Day after sending	Dispatched in a pdf form to the correct email address without any error message

26.3 The address and email address of each Party will be the address and email address in the Order Form.

## **27. Exit plan**

27.1 The Buyer and the Supplier will agree an exit plan during the Call-Off Contract period to enable the Supplier Deliverables to be transferred to the Buyer ensuring that the Buyer has all the code and documentation required to support and continuously develop the Service with Buyer resource or any third party as the Buyer requires. The Supplier will update this plan whenever there are material changes to the Services. A Statement of Work may be agreed between the Buyer and the Supplier to specifically cover the exit plan.

## **28. Staff Transfer**

28.1 The Parties agree that nothing in the Call-Off Contract or the provision of the Services is expected to give rise to a transfer of employment to which the Employment Regulations apply.

28.2 The Supplier will fully indemnify the Buyer against all Supplier Staff Liabilities which arise as a result of any claims brought against the Buyer due to any act or omission of the Supplier or any Supplier Staff.

28.3 The indemnity given in Clause 28.2 will be uncapped.

## **29. Help at retendering and handover to replacement supplier**

29.1 When requested, the Supplier will (at its own expense where the Call-Off Contract has been terminated before end of term due to Supplier cause) help the Buyer to migrate the Services to a replacement Supplier in line with the exit plan (Clause 27) to ensure continuity of the Services. Such help may include Supplier demonstrations of the existing code and development documents, software licences used and Buyer approval documents. The Supplier will also answer Service and development-related clarification questions.

29.2 Within 10 Working Days of a request by the Buyer, the Supplier will provide any information needed by the Buyer to prepare for any procurement exercise or to facilitate any potential replacement Supplier undertaking due diligence. The exception to this is where such information is deemed to be Commercially Sensitive Information, in which case the Supplier will provide the information in a redacted form.

### **30. Changes to services**

30.1 It is likely that there will be changes to the scope of the Services during the Call-Off Contract period. Agile projects have a scope that will change over time. The detailed scope (eg as defined in user stories) can evolve and change during the Call-Off Contract Period. These changes do not require formal contract changes but do require the Buyer and Supplier to agree these changes.

30.2 Any changes to the high-level scope of the Services must be agreed between the Buyer and Supplier. The Supplier will consider any request by the Buyer to change the scope of the Services, and may agree to such request.

### **31. Contract changes**

31.1 All changes to the Call-Off Contract which cannot be accommodated informally as described in Clause 30 will require a Contract Change Note.

31.2 Either Party may request a contract change by completing and sending a draft Contract Change Note in the form in Schedule 4 of Part C - The Schedules ('the **Contract Change Notice**') to the other Party giving sufficient information to enable the other Party to assess the extent of the change and any additional cost that may be incurred. The Party requesting the contract change will bear the costs of preparation of the Contract Change Notice. Neither Party will unreasonably withhold nor delay consent to the other Party's proposed changes to the Call-Off Contract.

31.3 Due to the agile-based delivery methodology recommended by the Framework Agreement, it may not be possible to exactly define the consumption of Services over the duration of the Call-Off Contract in a static Order Form. The Supplier should state the initial value of all Services that are likely to be consumed under the Call-Off Contract.

### **32. Force Majeure**

32.1 Neither Party will be liable to the other Party for any delay in performing, or failure to perform, its obligations under the Call-Off Contract (other than a payment of money) to the extent that such delay or failure is a result of a Force Majeure event. Each Party will use all reasonable endeavours to continue to perform its obligations under the Call-Off Contract for the length of a Force Majeure event. If a Force Majeure event prevents a Party from performing its obligations under the Call-Off Contract for more than 15 consecutive calendar days, the other Party may terminate the Call-Off Contract with immediate effect by notice in writing.

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### **33. Entire agreement**

33.1 The Call-Off Contract constitutes the entire agreement between the Parties relating to the matters dealt within it. It supersedes any previous agreement between the Parties relating to such matters.

33.2 Each of the Parties agrees that in entering into the Call-Off Contract it does not rely on, and will have no remedy relating to, any agreement, statement, representation, warranty, understanding or undertaking (whether negligently or innocently made) other than as described in the Call-Off Contract.

33.3 Nothing in this Clause or Clause 34 will exclude any liability for (or remedy relating to) fraudulent misrepresentation or fraud.

### **34. Liability**

34.1 Neither Party excludes or limits its liability for:

- death or personal injury;
- bribery or fraud by it or its employees;
- breach of any obligation as to title implied by section 12 of the Sale of Goods Act 1979 or section 2 of the Supply of Goods and Services Act 1982; or
- any liability to the extent it cannot be excluded or limited by Law.

34.2 In respect of the indemnities in Clause 13 (Intellectual Property Rights) and Clause 28 (Staff Transfer) and a breach of Clause 14 (Data Protection and Disclosure) the Supplier's total liability will be unlimited. Buyers are not limited in the number of times they can call on this indemnity.

34.3 Subject to the above, each Party's total aggregate liability relating to all Losses due to a Default in connection with this agreement will be limited to the greater of the sum of £500,000 or a sum equal to 200% of the Call-Off Contract Charges paid, due or which would have been payable under the Call-Off Contract in the 6 months immediately preceding the event giving rise to the liability.

- Losses covered by this clause 34.3 that occur in the first 6 months of a Call-Off Contract, will be limited to the greater of the sum of £500,000 or a sum equal to 200% of the estimated Call-Off Contract Charges for the first 6 months of the Call-Off Contract.

34.4 Subject to clause 34.1, in no event will either Party be liable to the other for any:

- loss of profits;
- loss of business;
- loss of revenue;
- loss of or damage to goodwill;
- loss of savings (whether anticipated or otherwise); or
- any indirect, special or consequential loss or damage.

34.5 The Supplier will be liable for the following types of loss which will be regarded as direct and will be recoverable by the Buyer:

- the additional operational or administrative costs and expenses arising from any Material Breach; and/or
- any regulatory losses, fines, expenses or other losses arising from a breach by the Supplier of any Law.

34.6 No enquiry, inspection, approval, sanction, comment, consent, or decision at any time made or given by, or on behalf of, the Buyer to any document or information provided by the Supplier in its provision of the Services, and no failure of the Buyer to discern any defect in, or omission from, any such document or information will exclude or limit the obligation of the Supplier to carry out all the obligations of a professional Supplier employed in a client and Buyer relationship.

34.7 Unless otherwise expressly provided, the obligations of the Buyer under the Call-Off Contract are obligations of the Buyer in its capacity as a contracting counterparty and nothing in the Call-Off Contract will be an obligation on, or in any other way constrain the Buyer in any other capacity, nor will the exercise by the Buyer of its duties and powers in any other capacity lead to any liability under the Call-Off Contract on the part of the Buyer to the Supplier.

34.8 Any liabilities which are unlimited will not be taken into account for the purposes of establishing whether any limits relating to direct loss or damage to physical Property within this Clause have been reached.

34.9 Each Party must use all reasonable endeavours to mitigate any Loss or damage which it suffers under or in connection with this Call-Off Contract, including any indemnities.

## **35. Waiver and cumulative remedies**

35.1 The rights and remedies provided by this agreement may be waived only in writing by the Buyer or the Supplier representatives in a way that expressly states that a waiver is intended, and such waiver will only be operative regarding the specific circumstances referred to.

35.2 Unless a right or remedy of the Buyer is expressed to be exclusive, the exercise of it by the Buyer is without prejudice to the Buyer's other rights and remedies. Any failure to exercise, or any delay in exercising, a right or remedy by either Party will not constitute a waiver of that right or remedy, or of any other rights or remedies.

## **36. Fraud**

36.1 The Supplier will notify the Buyer if it suspects that any fraud has occurred, or is likely to occur. The exception to this is if while complying with this, it would cause the Supplier or its employees to commit an offence.

36.2 If the Supplier commits any fraud relating to a Framework Agreement, the Call-Off Contract or any other Contract with the government:

- the Buyer may terminate the Call-Off Contract
- CCS may terminate the Framework Agreement
- CCS and/or the Buyer may recover in full from the Supplier whether under Clause 36.3 below or by any other remedy available in law.

36.3 The Supplier will, on demand, compensate CCS and/or the Buyer, in full, for any loss sustained by CCS and/or the Buyer at any time (whether such loss is incurred before or after the making of a demand following the indemnity hereunder) in consequence of any breach of this Clause.

## **37. Prevention of bribery and corruption**

37.1 The Supplier will not commit any Prohibited Act.

37.2 The Buyer and CCS will be entitled to recover in full from the Supplier and the Supplier will, on demand, compensate CCS and/or the Buyer in full from and against:

- the amount of value of any such gift, consideration or commission; and
- any other loss sustained by CCS and/or the Buyer in consequence of any breach of this Clause

## **38. Legislative change**

38.1 The Supplier will neither be relieved of its obligations under the Call-Off Contract nor be entitled to increase the Call-Off Contract prices as the result of a general change in Law or a Specific Change in Law without prior written approval from the Buyer.

## **39. Publicity, branding, media and official enquiries**

39.1 The Supplier will take all reasonable steps to not do anything which may damage the public reputation of the Buyer. The Buyer may terminate the Call-Off Contract for Material Breach where the Supplier, by any act or omission, causes material adverse publicity relating to or affecting the Buyer or the Call-Off Contract. This is true whether or not the act or omission in question was done in connection with the performance by the Supplier of its obligations hereunder.

## **40. Non Discrimination**

40.1 The Supplier will notify CCS and relevant Buyers immediately of any legal proceedings issued against it by any Supplier Staff on the grounds of discrimination.

## **41. Premises**

41.1 Where either Party uses the other Party's premises, such Party is liable for all Loss or damage it causes to the premises. Such Party is responsible for repairing any damage to the premises or any objects on the premises, other than fair wear and tear.

- 41.2 The Supplier will use the Buyer's premises solely for the Call-Off Contract.
- 41.3 The Supplier will vacate the Buyer's premises upon termination or expiry of the Call-Off Contract.
- 41.4 This Clause does not create any tenancy or exclusive right of occupation.
- 41.5 While on the Buyer's premises, the Supplier will:
- ensure the security of the premises;
  - comply with Buyer requirements for the conduct of personnel;
  - comply with any health and safety measures implemented by the Buyer;
  - comply with any instructions from the Buyer on any necessary associated safety measures; and
  - notify the Buyer immediately in the event of any incident occurring on the premises where that incident causes any personal injury or damage to Property which could give rise to personal injury.
- 41.6 The Supplier will ensure that its health and safety policy statement (as required by the Health and Safety at Work etc Act 1974) is made available to the Buyer on request.
- 41.7 All Equipment brought onto the Buyer's premises will be at the Supplier's risk. Upon termination or expiry of the Call-Off Contract, the Supplier will remove such Equipment.

## **42. Equipment**

- 42.1 Any Equipment brought onto the premises will be at the Supplier's own risk and the Buyer will have no liability for any loss of, or damage to, any Equipment.
- 42.2 Upon termination or expiry of the Call-Off Contract, the Supplier will remove the Equipment, and any other materials, leaving the premises in a safe and clean condition.

## **43. Law and jurisdiction**

- 43.1 The Call-Off Contract will be governed by the Laws of England and Wales. Each Party agrees to submit to the exclusive jurisdiction of the courts of England and Wales and for all disputes to be conducted within England and Wales.

## **44. Defined Terms**

<b>'Assurance'</b>	The verification process undertaken by CCS as described in section 5 of the Framework Agreement
<b>'Background IPRs'</b>	Any and all IPR that are owned by or licensed to either Party and which are or have been developed independently of the Call-Off Contract (whether prior to the start date or otherwise)
<b>'Buyer'</b>	A UK public sector body, or Contracting Authority, as described in the OJEU Contract Notice, that can

	execute a competition and a Call-Off Contract within the Framework Agreement
<b>'Buyer Background IPRs'</b>	Background IPRs of the Buyer
<b>'Buyer's Confidential Information'</b>	<p>All Buyer Data and any information that relates to the business, affairs, developments, trade secrets, know-how, personnel, and Suppliers of the Buyer, including all Intellectual Property Rights (IPRs), together with all information derived from any of the above</p> <p>Any other information clearly designated as being confidential or which ought reasonably be considered to be confidential (whether or not it is marked 'confidential')</p>
<b>'Buyer Data'</b>	Data that is owned or managed by the Buyer, including Personal Data gathered for user research, eg recordings of user research sessions and lists of user research participants
<b>'Buyer Software'</b>	Software owned by or licensed to the Buyer (other than under or pursuant to this Call-Off Contract), which is or will be used by the Supplier for the purposes of providing the Services
<b>'Call-Off Contract'</b>	<p>The legally binding agreement (entered into following the provisions of the Framework Agreement) for the provision of Services made between a Buyer and the Supplier</p> <p>This may include the key information summary, Order Form, requirements, Supplier's response, Statement of Work (SOW), Contract Change Notice (CCN) and terms and conditions as set out in the Call-Off Contract Order Form</p>
<b>'Charges'</b>	The prices (excluding any applicable VAT), payable to the Supplier by the Buyer under the Call-Off Contract, as set out in the applicable SOW(s), in consideration of the full and proper performance by the Supplier of the Supplier's obligations under the Call-Off Contract and the specific obligations in the applicable SOW
<b>'Commercially Sensitive Information'</b>	Information, which CCS has been notified about, (before the start date of the Framework Agreement) or the Buyer (before the Call-Off Contract start date) with full details of why the Information is deemed to be commercially sensitive
<b>'Comparable Supply'</b>	The supply of services to another customer of the Supplier that are the same or similar to any of the Services

<b>'Confidential Information'</b>	<p>Buyer's Confidential Information or the Supplier's Confidential Information, which may include (but is not limited to):</p> <ul style="list-style-type: none"> <li>• any information that relates to the business, affairs, developments, trade secrets, know-how, personnel, and third parties, including all Intellectual Property Rights (IPRs), together with all information derived from any of the above</li> <li>• any other information clearly designated as being confidential or which ought reasonably be considered to be confidential (whether or not it is marked 'confidential')</li> </ul>
<b>'Contracting Authority'</b>	The Buyer and any other person as listed in the OJEU Contract Notice or Regulation 2 of the Public Contracts Regulations 2015, as amended from time to time, including CCS
<b>'Control'</b>	Control as defined in section 1124 and 450 of the Corporation Tax Act 2010. 'Controls' and 'Controlled' will be interpreted accordingly
<b>'Controller'</b>	Takes the meaning given in the Data Protection Legislation.
<b>'Crown'</b>	The government of the United Kingdom (including the Northern Ireland Assembly and Executive Committee, the Scottish Executive and the National Assembly for Wales), including government ministers and government departments and particular bodies, persons, commissions or agencies from time to time carrying out functions on its behalf
<b>'Data Loss Event'</b>	Any event that results, or may result, in unauthorised access to Personal Data held by the Supplier under this Call-Off Contract, and/or actual or potential loss and/or destruction of Personal Data in breach of this Call-Off Contract, including any Personal Data Breach.
<b>'Data Protection Impact Assessment'</b>	An assessment by the Controller of the impact of the envisaged processing on the protection of Personal Data.
<b>'Data Protection Legislation'</b>	All applicable Law about the processing of personal data and privacy (including the GDPR, LED and DPA 2018) and including if applicable legally binding guidance and codes of practice issued by the Information Commissioner.
<b>'Data Protection Officer'</b>	Takes the meaning given in the Data Protection Legislation.
<b>'Data Subject'</b>	Takes the meaning given in the Data Protection Legislation.
<b>'Default'</b>	<ul style="list-style-type: none"> <li>• any breach of the obligations of the Supplier</li> </ul>

	<p>(including any fundamental breach or breach of a fundamental term)</p> <ul style="list-style-type: none"> <li>any other default, act, omission, negligence or negligent statement of the Supplier, of its Subcontractors or any Supplier Staff in connection with or in relation to the Framework Agreement or this Call-Off Contract</li> </ul> <p>Unless otherwise specified in this Call-Off Contract the Supplier is liable to CCS for a Default of the Framework Agreement and in relation to a Default of the Call-Off Contract, the Supplier is liable to the Buyer</p>
<b>'Deliverable'</b>	A tangible work product, professional service, outcome or related material or item that is to be achieved or delivered to the Buyer by the Supplier as part of the Services as defined in the Order Form and all subsequent Statement of Work
<b>'Digital Marketplace'</b>	<p>The government marketplace where Services will be bought</p> <p><a href="https://www.digitalmarketplace.service.gov.uk/">(https://www.digitalmarketplace.service.gov.uk/)</a></p>
<b>'DPA 2018'</b>	Data Protection Act 2018.
<b>'Employment Regulations'</b>	The Transfer of Undertakings (Protection of Employment) Regulations 2006 (SI 2006/246) as amended or replaced or any other Regulations implementing the European Council Directive 77/187/EEC on the approximation of laws of European member states relating to the safeguarding of employees' rights in the event of transfers of undertakings, businesses or parts of undertakings or businesses, as amended or re-enacted from time to time
<b>'Electronic Invoice'</b>	An invoice which has been issued, transmitted and received in a structured electronic format which allows for its automatic and electronic processing
<b>'Equipment'</b>	The Supplier's hardware, computer and telecoms devices, plant, materials and such other items supplied and used by the Supplier (but not hired, leased or loaned from CCS or the Buyer) in the performance of its obligations under the Call-Off Contract
<b>'Extension Period'</b>	The period (expressed in Working Days) that the initial Call-Off Contract term is extended by following notice given by the Buyer to the Supplier in accordance with Clause 1.4, such period not to exceed the number of whole days that represent 25% of the initial Call-Off Contract period.
<b>'FoIA'</b>	The Freedom of Information Act 2000 and any subordinate legislation made under the Act

	occasionally together with any guidance or codes of practice issued by the Information Commissioner or relevant Government department in relation to such legislation
<b>'Force Majeure'</b>	<p>Force Majeure means anything affecting either Party's performance of their obligations arising from any of the following:</p> <ul style="list-style-type: none"> <li>• acts, events, omissions, happenings or non-happenings beyond the reasonable control of the affected Party</li> <li>• riots, war or armed conflict, acts of terrorism, nuclear, biological or chemical warfare</li> <li>• acts of government, local government or Regulatory Bodies</li> <li>• fire, flood, any disaster and any failure or shortage of power or fuel</li> <li>• an industrial dispute affecting a third party for which a substitute third party is not reasonably available</li> </ul> <p>The following do not constitute a Force Majeure event:</p> <ul style="list-style-type: none"> <li>• any industrial dispute relating to the Supplier, its staff, or any other failure in the Supplier's (or a Subcontractor's) supply chain</li> <li>• any event or occurrence which is attributable to the wilful act, neglect or failure to take reasonable precautions against the event or occurrence by the Party concerned</li> </ul>
<b>'Framework Agreement'</b>	The Framework Agreement between CCS and the Supplier for the provision of the Services dated 01/10/2019
<b>'Fraud'</b>	The making of a false representation or failing to disclose relevant information, or the abuse of position, in order to make a financial gain or misappropriate assets
<b>'Further Competition'</b>	The Further Competition procedure as described in Section 3 (how Services will be bought) of the Framework Agreement.
<b>'GDPR'</b>	The General Data Protection Regulation (Regulation (EU) 2016/679).
<b>'Good Industry Practice'</b>	<p>Standards and procedures conforming to the Law and the application of skill, care and foresight which would be expected from a person or body who has previously been engaged in a similar type of undertaking under similar circumstances. The person or body must adhere to the technology code of practice</p> <p>(<a href="https://www.gov.uk/service-manual/technology/code-">https://www.gov.uk/service-manual/technology/code-</a></p>

	<a href="#">of-practice.html</a> ) and the government service design manual ( <a href="https://www.gov.uk/service-manual">https://www.gov.uk/service-manual</a> )
<b>'Group'</b>	A company plus any subsidiary or holding company. 'Holding company' and 'Subsidiary' are defined in section 1159 of the Companies Act 2006
<b>'Group of Economic Operators'</b>	A partnership or consortium not (yet) operating through a separate legal entity.
<b>'Holding Company'</b>	As described in section 1159 and Schedule 6 of the Companies Act 2006
<b>'Information'</b>	As described under section 84 of the Freedom of Information Act 2000, as amended from time to time
<b>'Insolvency Event'</b>	may be: <ul style="list-style-type: none"> <li>• a voluntary arrangement</li> <li>• a winding-up petition</li> <li>• the appointment of a receiver or administrator</li> <li>• an unresolved statutory demand</li> <li>• a Schedule A1 moratorium</li> </ul>
<b>'Intellectual Property Rights' or 'IPR'</b>	means: <p>a) copyright, rights related to or affording protection similar to copyright, rights in databases, patents and rights in inventions, semi-conductor topography rights, service marks, logos, database rights, trade marks, rights in internet domain names and website addresses and other rights in trade or business names, design rights (whether registerable or otherwise), know-how, trade secrets and moral rights and other similar rights or obligations whether registerable or not;</p> <p>b) applications for registration, and the right to apply for registration, for any of the rights listed at (a) that are capable of being registered in any country or jurisdiction; and</p> <p>c) all other rights whether registerable or not having equivalent or similar effect in any country or jurisdiction (including but not limited to the United Kingdom) and the right to sue for passing off.</p>
<b>'Key Staff'</b>	Means the Supplier Staff named in the SOW as such
<b>'KPI Target'</b>	The acceptable performance level for a key performance indicator (KPI)
<b>'Law'</b>	Any applicable Act of Parliament, subordinate legislation within the meaning of Section 21(1) of the Interpretation Act 1978, exercise of the royal prerogative, enforceable community right within the meaning of Section 2 of the European Communities Act 1972, judgment of a relevant court of law, or directives or requirements of any Regulatory Body
<b>'LED'</b>	Law Enforcement Direction (Directive (EU) 2016/680).
<b>'Loss'</b>	All losses, liabilities, damages, costs, expenses

	(including legal fees), disbursements, costs of investigation, litigation, settlement, judgment, interest and penalties whether arising in contract, tort (including negligence), breach of statutory duty, misrepresentation or otherwise and 'Losses' will be interpreted accordingly
<b>'Lot'</b>	A subdivision of the Services which are the subject of this procurement as described in the OJEU Contract Notice
<b>'Malicious Software'</b>	Any software program or code intended to destroy, or cause any undesired effects. It could be introduced wilfully, negligently or without the Supplier having knowledge of its existence.
<b>'Management Charge'</b>	The sum paid by the Supplier to CCS being an amount of 1.0% of all Charges for the Services invoiced to Buyers (net of VAT) in each month throughout the duration of the Framework Agreement and thereafter, until the expiry or termination of any Call-Off Contract
<b>'Management Information'</b>	The Management Information (MI) specified in section 6 of the Framework Agreement
<b>'Management Information (MI) Failure'</b>	If any of the below instances occur, CCS may treat this as an 'MI Failure': <ul style="list-style-type: none"> <li>• there are omissions or errors in the Supplier's submission</li> <li>• the Supplier uses the wrong template</li> <li>• the Supplier's report is late</li> <li>• the Supplier fails to submit a report</li> </ul>
<b>'Material Breach' (Framework Agreement)</b>	A breach by the Supplier of the following Clauses in the Framework Agreement: <ul style="list-style-type: none"> <li>• Subcontracting</li> <li>• Non-Discrimination</li> <li>• Conflicts of Interest and Ethical Walls</li> <li>• Warranties and Representations</li> <li>• Provision of Management Information</li> <li>• Management Charge</li> <li>• Prevention of Bribery and Corruption</li> <li>• Safeguarding against Fraud</li> <li>• Data</li> <li>• Intellectual Property Rights and Indemnity</li> <li>• Confidentiality</li> <li>• Official Secrets Act</li> <li>• Audit</li> <li>• Assurance</li> </ul>
<b>'Material Breach' (Call-Off Contract)</b>	A single serious breach of or persistent failure to perform as required in the Call-Off Contract
<b>'OJEU Contract Notice'</b>	The advertisement for this procurement issued in the Official Journal of the European Union

<b>'Order Form'</b>	An order in the form set out in Part A of the Call-Off Contract for Digital Outcome and Specialist Services placed by a Buyer with the Supplier
<b>'Other Contracting Authorities'</b>	All Contracting Authorities, or Buyers, except CCS
<b>'Party'</b>	<ul style="list-style-type: none"> <li>• for the purposes of the Framework Agreement; CCS or the Supplier</li> <li>• for the purposes of the Call-Off Contract; the Supplier or the Buyer, and 'Parties' will be interpreted accordingly</li> </ul>
<b>'Personal Data'</b>	Takes the meaning given in the Data Protection Legislation.
<b>'Personal Data Breach'</b>	Takes the meaning given in the Data Protection Legislation.
<b>'Processing'</b>	This has the meaning given to it under the Data Protection Legislation but, for the purposes of this Framework Agreement and Call-Off Contract, it will include both manual and automatic processing. 'Process' and 'processed' will be interpreted accordingly.
<b>'Processor'</b>	Takes the meaning given in the Data Protection Legislation.
<b>'Prohibited Act'</b>	<p>To directly or indirectly offer, promise or give any person working for or engaged by a Buyer or CCS a financial or other advantage to:</p> <ul style="list-style-type: none"> <li>• induce that person to perform improperly a relevant function or activity</li> <li>• reward that person for improper performance of a relevant function or activity</li> <li>• commit any offence: <ul style="list-style-type: none"> <li>○ under the Bribery Act 2010</li> <li>○ under legislation creating offences concerning Fraud</li> <li>○ at common Law concerning Fraud</li> <li>○ committing or attempting or conspiring to commit Fraud</li> </ul> </li> </ul>
<b>'Project-Specific IPRs'</b>	<ul style="list-style-type: none"> <li>• Intellectual Property Rights in items, including Deliverables, created by the Supplier (or by a third party on behalf of the Supplier) specifically for the purposes of the Call-Off Contract and updates and amendments of these items including (but not limited to) database schema; and/or</li> <li>• Intellectual Property Rights arising as a result of the performance of the Supplier's obligations under the Call-Off Contract; but not including the Supplier Background IPRs</li> </ul>

<b>'Property'</b>	The property, other than real property and IPR, issued or made available to the Supplier by the Buyer in connection with a Call-Off Contract
<b>'Protective Measures'</b>	Appropriate technical and organisational measures which may include: pseudonymising and encrypting Personal Data, ensuring confidentiality, integrity, availability and resilience of systems and services, ensuring that availability of and access to Personal Data can be restored in a timely manner after an incident, and regularly assessing and evaluating the effectiveness of such measures adopted by it.
<b>'Regulations'</b>	The Public Contracts Regulations 2015 (at <a href="http://www.legislation.gov.uk/ukxi/2015/102/contents/made">http://www.legislation.gov.uk/ukxi/2015/102/contents/made</a> ) and the Public Contracts (Scotland) Regulations 2012 (at <a href="http://www.legislation.gov.uk/ssi/2012/88/made">http://www.legislation.gov.uk/ssi/2012/88/made</a> ), as amended from time to time
<b>'Regulatory Bodies'</b>	Government departments and other bodies which, whether under statute, codes of practice or otherwise, are entitled to investigate or influence the matters dealt with in the Framework Agreement or the Call-Off Contract
<b>'Release'</b>	The Deliverable for a particular Statement of Work. Its delivery by the Supplier and its acceptance by the Buyer completes the Statement of Work.
<b>'Reporting Date'</b>	The seventh day of each month following the month to which the relevant MI relates. A different date may be chosen if agreed between the Parties
<b>'Request for Information'</b>	A request for information or an apparent request under the Code of Practice on Access to Government Information, FoIA or the Environmental Information Regulations
<b>'Self Audit Certificate'</b>	The certificate in the form as set out in Framework Agreement Schedule 1 - Self Audit Certificate, to be provided to CCS by the Supplier in accordance with Framework Agreement Clause 7.6.
<b>'Services'</b>	Digital outcomes, digital specialists, user research studios or user research participants to be provided by the Supplier under this Call-Off Contract
<b>'Specific Change in Law'</b>	A change in the Law that relates specifically to the business of CCS or the Buyer and which would not affect a Comparable Supply
<b>'Statement of Requirements'</b>	A statement issued by CCS or any Buyer detailing its Services requirements issued in the Call-Off Contract
<b>'Statement of Work' (SOW)</b>	The document outlining the agreed body of works to be undertaken as part of the Call-Off Contract between

	the Buyer and the Supplier. This may include (but is not limited to) the Statement of Requirements, the Deliverable(s), the completion dates, the charging method. Multiple SOWs can apply to one Call-Off Contract
<b>'Subcontractor'</b>	Each of the Supplier's Subcontractors or any person engaged by the Supplier in connection with the provision of the digital services as may be permitted by Clause 9.18 of the Framework Agreement or the Call-Off Contract
<b>'Subprocessor'</b>	Any third party appointed to process Personal Data on behalf of the Supplier under this Call-Off Contract.
<b>'Supplier'</b>	The Supplier of Digital Outcomes and Specialists services who successfully bid for Call-Off Contracts as outlined in the Contract Notice within the Official Journal of the European Union (OJEU Notice). The identifying details of the Supplier to be bound by the terms of this Call-Off Contract are set out in the Order Form.
<b>'Supplier Background IPRs'</b>	Background IPRs of the Supplier
<b>'Supplier Software'</b>	Software which is proprietary to the Supplier and which is or will be used by the Supplier for the purposes of providing the Services
<b>'Supplier Staff'</b>	All persons employed by the Supplier including the Supplier's agents and consultants used in the performance of its obligations under the Framework Agreement or the Call-Off Contract
<b>'Supplier Staff Liabilities'</b>	Any claims, actions, proceedings, orders, demands, complaints, Losses and any awards or compensation reasonably incurred in connection with any claim or investigation related to employment
<b>'Working Day'</b>	Any day other than a Saturday, Sunday or public holiday in England and Wales, from 9am to 5pm unless otherwise agreed with the Buyer and the Supplier in the Call-Off Contract
<b>'VAT'</b>	Value added tax in accordance with the provisions of the Value Added Tax Act 1994

## Part C - The Schedules

### Schedule 1 - Requirements OUR DELIVERY GOALS

We need to identify direct impacts such as a microbiological risk through to crime, changes in consumer attitude to food to changes in business models, then to technical advancements in the production of food and how we all engage with it. We must be able to protect consumers now, and in the future, with the foresight to predict and take action in a timely manner.

### OUR DELIVERY PRINCIPLES

There are two strategic principles that are increasingly important to the FSA. They are developing further our intelligence gathering and situational awareness in food and feed risk and the use of modern approaches to its delivery.

For us, the first principle of intelligence gathering is the ongoing systematic collection, collation, analysis and interpretation of data, followed by the dissemination of information to all those involved so that directed actions may be taken.

Time is an important factor: Our intelligence gathering model encompasses the range of periodicities from the long-term horizon scanning to the day to day tactical, near time response.

The second principle is the use of modern data and technology enabled approaches. Taking cues from past and ongoing FSA Science Council work in horizon scanning, data usage and digital technology, the focus of is on using data, enabled by leading technology, with human input, to proactively develop situational awareness before issues arise, in order to protect the consumer and ensure that food is safe and authentic. This includes the analysis of past historical data; the ingestion of new data sources as appropriate; the spotting of anomalies and patterns that may indicate risks; and finally, the prescription of appropriate, evidenced actions whose impacts are clear and measurable. The recent developments in technology are allowing us to deliver solutions not possible before, and in the most cost-effective manner. We need to continue monitoring developments in this arena and learn from others, as well as building on our own experience.

In summary, our assessment is: we are increasingly recognising the importance of intelligence gathering and developing our food and feed risk situational awareness; we are making significant progress; we are already operating at the forefront of the use of data analytical techniques. However, we need to do even more, join up more, and make material impact with the greater insight we have.

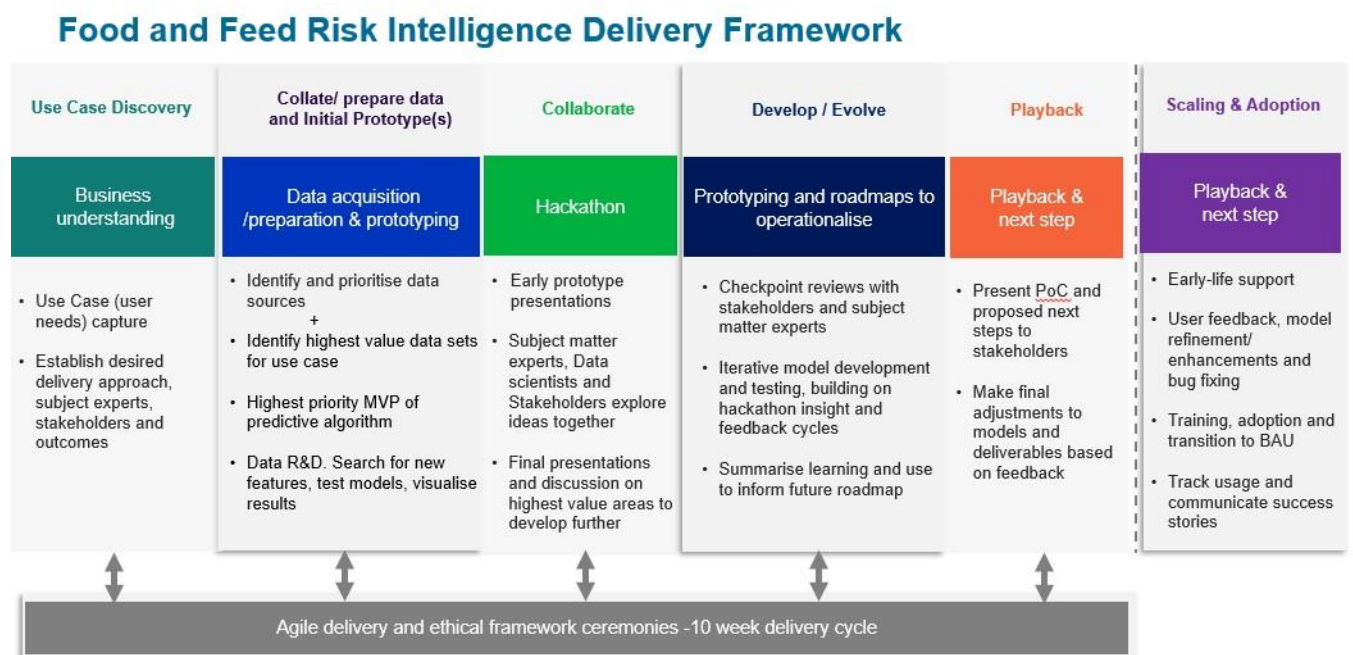
Our intended next step, is to develop an overarching integrated system that while remaining agile and decentralised, will enable additional data sharing, re-use of technical solutions across Government, a clear tie-in to actions taken by the remainder of FSA. This

builds on the existing principles and culture of the FSA to be science led, evidence based, innovative and open.

## OUR DELIVERY FRAMEWORK

The FSA has developed a flexible, responsive data enabled food and feed risk capability that has matured from a programme to a service in the last year. We have established an in-house team of data scientists to develop risk models and operationalised risk signalling services for use across the FSA.

Through this capability, we are developing a picture of the food system, its risks (safety, authenticity, assurance) and vulnerabilities, so that FSA, and others, can manage consumer food risks. We provide services to all FSA teams, to use data and analytics to help identify and address issues as they arise, be they strategic, global and long term, or immediate and operational, following a mature agile way of working that is centred around specific real life 'use cases' (projects) as sprints. A series of sprints spanning ten weeks consists of understanding a problem, finding data that might address the problem, and developing a model. At that point we decide whether we want to put what we have built into operation or not, in which case, resources are allocated for scaling and adoption as depicted below.



We have formed a Steering Committee, which has representation from the various directorates within the FSA, to decide on prioritisation of projects and align activities with the organisation's

corporate objectives. We regularly report to both the FSA's Executive Management Team and the FSA Board, which provide strategic advice and direction.

We have strengthened our capability to understand food risks by accessing and analysing various sources of data, using increasingly sophisticated analytics techniques, providing our stakeholders with critical insights and predictive models. We have collaborated with Local Authorities, Port Health Authorities, other government departments, academics and the industry to utilise their expertise and share the insights.

We have achieved our primary objective for this year, which was to provide a responsive capability to help mitigate risks associated with future changes in trade patterns. The capability includes the systems, better knowledge of the available data, models, algorithms and skills.

## DEVELOPING EXTERNAL RELATIONSHIPS

We have shared our work with various external organisations such as The Office for Product Safety & Standards (OPSS), The Chartered Institute of Environmental Health (CIEH), The Global Food Safety Initiative (GFSI), The Food and Drug Administration (FDA) and the European Food Safety Authority (EFSA). It has been met positively, and based on the feedback received, we appear to be in the leading pack of food safety regulators in the use of analytics.

We hope that the international relationships we have established will bear fruit in the generation of more use cases and access to more data.

## DELIVERING INSIGHT

### Summary of our use cases in the last year:

Title	Description
Risk Likelihood Dashboard	This tool helps present complex information on risky food and feed in an understandable way and flags potential and emerging food and feed safety risks in terms of commodity, country of origin and hazard. Access to this tool has been extended to other bodies like PHAs, LAs etc.
Aflatoxin risk prediction	This tool helps establish the relation between known hazards and climate, and then applies that intelligence to predict unknown hazards by looking at similar climates.
Meat establishments dashboard	This tool offers a comprehensive view of different types of data related to FSA-approved meat establishments, and thus helps identify potential indicators of risk and geographical hotspots. A separate project is underway to extend the tool to Local Authorities by bringing in data about the meat establishments under their purview.
Unregistered businesses	This project analysed various data sources to match them against FHRS and identify unregistered businesses. We worked closely with 2 LAs to confirm our findings.
Signal prioritisation	This tool helps learn about potential and emerging food safety and fraud issues by using machine learning algorithms to extract and summarise risks with commodity, origin country, and hazard, by accessing various data sources (including various official data sources and news websites).

<b>Title</b>	<b>Description</b>
Pesticide risk prediction	Extended from the aflatoxin model, this tool helps predict increased pesticide residue using climate data.
Food Consumer experience	A change in food price, availability or quality could indicate where there is a vulnerability in the food chain, giving greater opportunity for food fraud. The project aimed to establish whether people discussed this on social media and whether we could develop a method to reliably identify this discussion amongst all of the noise.
Trade Routes and Volumes at Ports	This tool helps compare TRACES pre-notifications and HMRC data to anticipate and monitor where the highest risk foods are entering the UK, and ensure we are not missing any. It also helps to find commodities appearing only in HMRC which could be TRACES commodities in disguise.
Non-UK RASFFs	This tool calculates probabilities of UK RASFF alerts following a non-UK RASFF alert. (A non-UK RASFF alert is a RASFF that UK did not raise and where UK is also not listed as a country distributed to.)
Online display of FHRS scores	THIS TOOL AUTOMATICALLY SEARCHES FOOD BUSINESSES WEBSITES, LOCATES THE FHRS LOGO AND COMPARES THE INFORMATION DISPLAYED ONLINE TO THAT STORED IN THE FHRS DATABASE
UK food sectors most exposed to change in value of the pound	THIS PROJECT USED TRADE, CONSUMPTION, CONSUMER EXPENDITURE AND EXCHANGE RATE DATA TO IDENTIFY THE UK FOOD INDUSTRY EXPORTS AND IMPORTS SECTORS MOST VULNERABLE TO THE VALUE OF THE POUND.

In developing use case outcomes, we have explored and applied numerous methods, including:

#### Supervised

- Classification Techniques
  - Decision Trees
  - Random Forest
  - Neural Networks
  - Multi-model classification
  - Support Vector Machine
  - etc
- Regression Techniques
  - Linear Regression (plus OLS Regression)
  - Logistic Regression
  - Stepwise regression
  - Etc.
- Natural Language Processing
  - Tokenization,
  - Text Classification
  - Entity Extraction: DAN, Spacy, BERT, CNN etc.
- Time Series Analysis / Forecasting
  - ANOVA

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<https://www.gov.uk/government/publications/digital-outcomes-and-specialists-4-call-off-contract>

- Randomforest
- Bayesian
  - Bayesian Networks
  - Naive Bayes
  - Etc.

#### Unsupervised

- K means clustering
- Outlier Detection (Anomaly) models
- Hierarchical clustering

In addition, we also applied:

- Programming Languages: Python, R, SQL
- Data Science Libraries: TensorFlow, Pytorch, Keras, Pandas, SKLearn, Scikit-Learn, Spacy, Gensim, NLTK, beautifulsoup, Numpy etc.
- Platforms: Microsoft Azure
- Visualisation Tools: R Shiny, Power BI
- Version Control: Github
- Database: Microsoft SQL Server, PostgreSQL
- Others: JavaScript, Docker, Selenium

## BEING ETHICAL, TRANSPARENT AND ACCOUNTABLE

We recognise generating, using and disseminating data requires a holistic approach of incorporating good practice in computing techniques, ethics and information assurance.

We have recently embarked on a project to investigate the potential benefits of deep learning models in the identification of risk in food businesses. This is a novel approach for UK government for this sector, and we have therefore engaged with experts to ensure the use of data aligns with the [Data Ethics Framework](#) and using guidance published in the [Alan Turing Institute guide for responsible design and implementation of AI systems in the public sector](#).

## EFFECTIVE GOVERNANCE AND PRIORITISATION

The objective of the Data Science and AI Team (DSAIT) is to create the FSA's future food and feed risk services - building a picture of the food system, its risks and vulnerabilities, so that FSA, and others, can manage consumer risks

The remit of the DSAIT is to:

- Deliver a flexible and evolving service that provides a reliable source of robust data & intelligence across FSA/food system, that:
  - Is supported by a data and intelligence coordinating capability
  - Provides an internal and external data & intelligence assuring network

This will be achieved through:

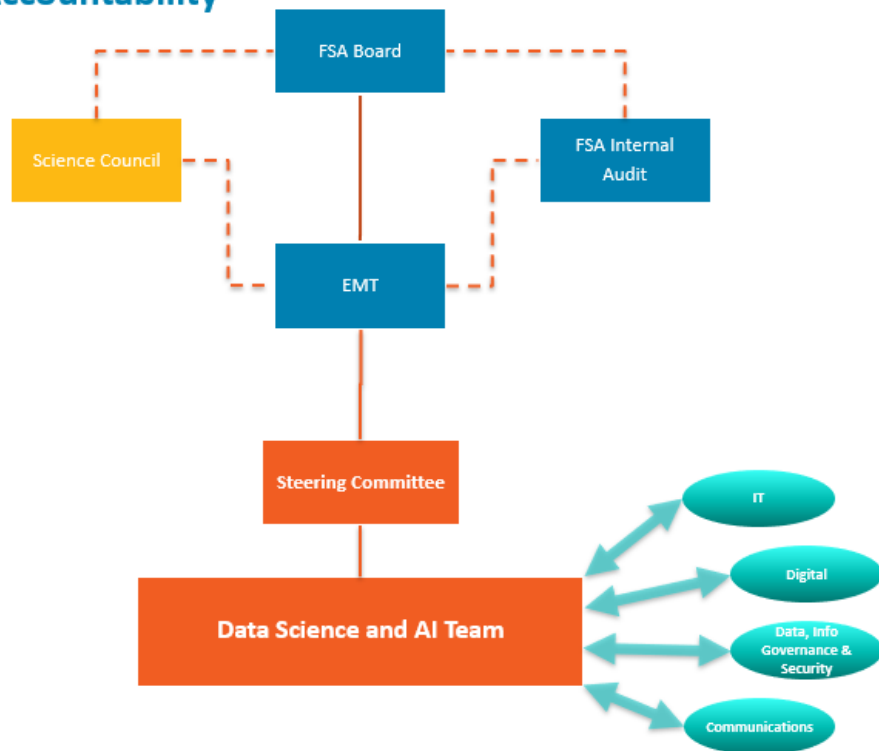
- Analysing data, where possible open data
- Deploying data science techniques to identify emerging risks to food safety
- Following an agile way of working that is centred around specific 'use cases' (projects), defining a clear business question and evolving technical prototypes and solutions through quick iterations (sprints)
- Working with partners in as open a manner as possible
- Delivery and operation of value adding business services
- Applying and evolving the application and adherence to ethical frameworks

The Steering Committee (SC) is an advisory and monitoring board that will support the direction and management of the work undertaken by the Data Science and AI Team (DSAIT)

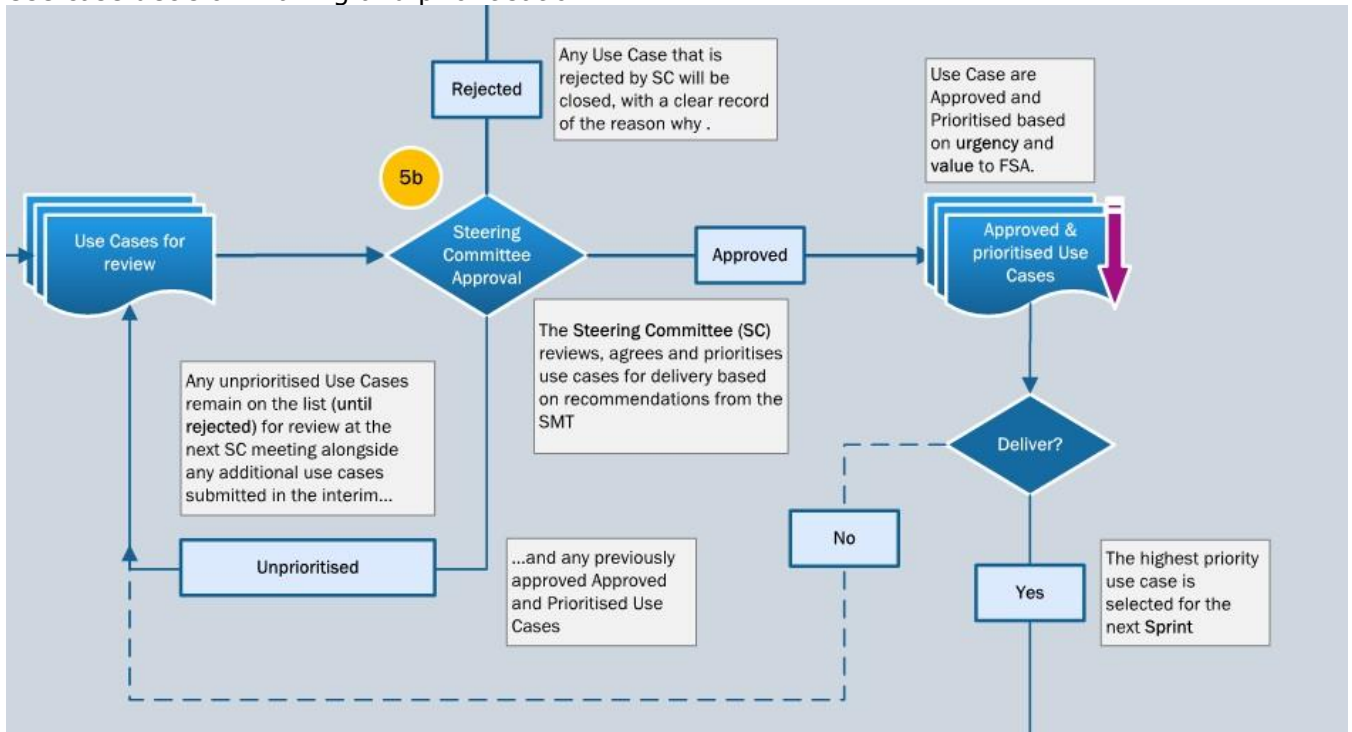
The SC:

- Supports and champions the work of DSAIT to the wider agency and other industry/cross-government stakeholders
- Develops a network of like-minded individuals, groups and programmes (locally, nationally and globally) to champion DSAIT, provide input and leadership on information gathering and horizon scanning.
- Participates in the selection and prioritisation of use case priorities.
- Reinforces the importance of information gathering and innovative approaches to risk prediction to their own directorates and teams.
- Facilitates change and engagement by:
  - Providing the necessary resources
  - Encouraging their teams to understand and follow the DSAIT engagement model to take informed actions.
- Helps to break down silos across the business by encouraging collaborative and cross-directorate working.
- Provides senior level subject matter expertise to improve assessment, and
- Contributes towards the collective experience and expertise in governance, strategy, performance, finance, setting of targets and reputation.

## Governance and Accountability



## Use case decision making and prioritisation



## **FORWARD PIPELINES WITH AGILITY**

The Steering Committee (SC) and Data Science and AI Team (DSAIT) engages across the agency to promote development of a forward pipeline for potential use cases. Business stakeholders are then encouraged to pitch their use case to the SC for consideration, approval and prioritisation. We have a strong pipeline of use case ideas for future projects from across the FSA. A strong pipeline of use-cases also highlights our progress, not only in developing predictive risk models but also contributing toward raising the bar for data literacy across the organisation. That said, there is more to do.

Whilst we acknowledge the value and necessity of forward planning use cases, in a fast-changing world of risk we also recognise the need for agility. The SC and DSAIT process actively maintains the ability to adapt to risk conditions and may expedite urgent use case approval and prioritisation.

Some examples of use cases queued within the pipeline for SC consideration:

- Understanding the food safety and hygiene behaviours of certain consumer groups.
- Bio-based food contact materials on the UK market, i.e. is the contact between the food and packaging material a cause for consumer concern?
- Honey adulteration, primarily the addition of sugars.

## **KEY REQUIREMENTS AND PROVISION OF SERVICES CONSIDERATION**

The FSA have made significant progress in using innovative methods and technology to aid in the prediction of food risk. To ensure we build on the success and maintain momentum we will continue augmenting our inhouse data science team with data science and AI specialists to deliver on the forward pipeline of use cases, to continue innovating and improve further our situational awareness for food risk.

To support this initiative, the successful bidder will be expected to:

- Bring thought leadership to the ongoing development and progression to our delivery model, methods to support wider business awareness, understanding and adoption.
- Improve the risk prediction capabilities by enhancing existing prediction models and applying innovative techniques to new predictive models.
- Support exploration of additional datasets and the sharing of transferable data and insight from other government departments and across industry.
- Review and provide a strategy for data use and governance including the exploration of new datasets to improve models and data reuse.
- Review and improve the architecture and systems design (the infrastructure for everything to work)
- Contribute to and support compliance with all relevant legislation, code of practice regulation, and guidance related to the use of AI, specifically but not limited to:
  - [Technology Code of Practice](#)
  - [Code of conduct for data-driven health and care technology](#)

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<https://www.gov.uk/government/publications/digital-outcomes-and-specialists-4-call-off-contract>

- [Government Service Design Manual](#)
  - [Digital Service Standard Guidelines](#)
  - [Data Protection law and ICO guidance](#)
  - [Freedom of Information Act](#)
- Contribute to building our culture of responsible innovation and adherence to the [data ethics framework](#) by bringing proven experience in the application of governance architecture, ensuring the prioritisation of ethical framework guidance is maintained, specifically across the four pillars below:
    - ethically permissible - consider the impacts it may have on the wellbeing of affected stakeholders and communities
    - fair and non-discriminatory - consider its potential to have discriminatory effects on individuals and social groups, mitigate biases which may influence your model's outcome, and be aware of fairness issues throughout the design and implementation lifecycle
    - worthy of public trust - guarantee as much as possible the safety, accuracy, reliability, security, and robustness of its product
    - justifiable - prioritise the transparency of how you design and implement your model, and the justification and interpretability of its decisions and behaviours
  - Comply with appropriate data policies, specifically the General Data Protection Regulations (GDPR) and the [Data Protection Act 2018](#)
  - Ensure our use of innovative methods and technologies do not become a 'black-box' solution by ensuring we implement best practices for explainable AI.
  - Augment the experience and knowledge of the existing team with provision of experienced business analysts, data engineers and data science and AI professionals to work through the use-cases and delivery of predictive insight.
  - Ensure appropriate levels of knowledge transition into the FSA data science team, including any necessary recommendations for further learning and development.

The FSA fully supports the Public Sector Equality Duty and [Equality Act 2010](#), we also recognise the value in diversity when developing AI models, alongside skills, experience and qualifications..

- Consider the Digital, Data and Technology (DDAT) guidance for data scientist roles, ensuring the supplier provides the FSA a blend of skills and experience that is both cost effective and highly capable.

<https://www.gov.uk/guidance/data-scientist>

- Engagement with business stakeholders is a critical success factor for success, the successful bidder will be expected to:

- Liaise with different parts of the business within FSA and with external entities to support the forward pipeline of use cases and areas for further collaboration.
- Conduct internet research, going through research papers, engaging with subject matter experts to build the teams understanding around new and ongoing use cases.
- Capture use case requirements in a systematic format and relay them to the team.
- Create user guides and data stories to facilitate and improve adoption.
- Support use case validation, feasibility checks, selection and prioritisation, incl. preparation of materials for the Steering Committee.
- Liaise with the Information Governance team on data privacy, data sharing and privacy impact assessments.
- Plan and develop content for internal and external presentations.

Facilitate and participate in meetings, such as the Steering Committee, Senior Management Team meetings and numerous agile delivery ceremonies, including Show & Tell, Sprint Reviews, Sprint Retrospectives etc.

# Overview

## Overview

### Opportunity attribute name

Summary of the work

### Opportunity attribute value

To ensure we build on the success in delivering on the pipeline of use cases, to continue innovating and improve further our situational awareness for food and feed risk the Food Standards Agency requires a supplier to augment our internal team with highly skilled multi-disciplinary individuals/teams.

This will be a 24 month call-off agreement

Latest start date

20th April 2020

Expected contract length

24 month call-off agreement during which time individual Work Packages will be commissioned.

Location

FSA London office preferred.

Organisation the work is for

Food Standards Agency. Any intellectual property rights (IPR) created during or resulting from supporting the Food Standards Agencies (FSA) work in the identification of food and feed risks shall remain the property of the FSA.

Budget range

The total value of all work packages commissioned under the proposed call-off agreement will not exceed £3M.

Current Team Structure

In addition to Director level leadership, the current in-house team consists of:  
1 \* Head of Data

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**Opportunity attribute name**

**Opportunity attribute value**

- 3 \* Data Scientists
- 1 \* Fast Streamer (data analytics experience)
- 2 \* Research Analysts (part-time)

The in-house team is augmented with the supplier team, consisting of:

- 1 \* Senior Manager / Project Lead (Lead Data Scientist)
  - Management for multidisciplinary data science projects and resources to ensure delivery
  - Thought leadership on using data science across multiple disciplines, drive innovation to adopt best practices during development and delivery
  - Communication with senior stakeholders across the organisation
  - Selection of the most appropriate tools and technologies for use case delivery for business problem
  - Understanding the business use case background, gaps in current capabilities and
  - Expertise of application of various Machine Learning, Artificial Intelligence and Data Engineering skills in real world scenarios
  - Experience of managing delivery of complex use cases in agile approach
  - Build robust and viable analytics roadmap for reusability of algorithms and learnings
  - Development of the analytical roadmap, implementation plan for operationalisation of use cases
  - Responsibility for applying the data science ethical framework (including data governance, privacy)
- 3 \* Senior Data Scientists
  - Strong experience in formulating and developing best fit technical approach for business use case
  - Knowledge of conducting detailed analysis of datasets available – ingesting, cleaning, analysing and modelling data as per business needs using best practices
  - Significant experience building data pipelines at scale using a range of tools and technologies
  - Strong technical knowhow of various Machine Learning platforms, tools, and algorithms

**Opportunity attribute name**

**Opportunity attribute value**

- Experience of design, code, test, validate and document complex programs and scripts from agreed specifications and subsequent iterations, using agreed standards and tools
- Development of ML models and prototype dashboard for intuitive predictive insights
- Perform detailed analysis of data sources – data quality, coherence and veracity etc.
- Lead ad hoc data exploration practices in your business area by identifying and setting best practice and standards
- Identify opportunities for future innovation of data exploration practices
- Experience of data cataloguing, utilising Github for version controlling and deployment of dashboards
- Experience in application of mathematics, statistics, and scientific practices

3 \* Junior Data Scientists

- Understanding of common ML algorithms, platforms, tools and techniques in real world scenarios
- Development of the visualisation screens, dashboards and documentation for use cases
- Experience of application of innovative approaches to resolve complex business problems
- Development of analytical model and prototype as per stakeholder workshops and requirements
- Identification of potentially useful data sources (open source) required for hackathon and prototyping
- Knowledge of conducting detailed analysis of datasets available – ingesting, cleaning, analysing and modelling data as per business needs
- Experience in application of mathematics, statistics, and scientific practices
- Experience of how to develop, code, test, correct and document programs as part of a multidisciplinary team

1 \* Business Change Lead

- Business Change Strategy & Delivery
- Change Impact Assessment
- Stakeholder Management & Employee Engagement

**Opportunity attribute name**

**Opportunity attribute value**

- Communications Strategy, Planning and Execution
- Training Strategy, Training Needs Analysis, Training Plan & TTT sessions
- Business Analysis
- End-to-end Business Change Management
- Stakeholder Engagement
- Learning & Development
- Benefits Realisation

1 \* Business Analyst

- Capture and translate business use case requirements to enable the development of prototypes using Agile based sprints
- Facilitate hackathons to support requirements capture and clarification
- Support use case validation, feasibility checks, selection and prioritisation
- Build presentations (or reports) for senior stakeholder workshops and executive committee meetings
- Develop and document user guides for the business to support sprint prototypes and continuous development
- Support development of tools and materials to carry out data collection and the timings for this both for sprints and on an enduring basis
- Support in-house testing of prototypes and maintaining request backlogs for user feedback and future use cases

In developing the previous use cases, we applied:

- Programming Languages: Python, R, SQL
- Data Science Libraries: TensorFlow, Pytorch, Keras, Pandas, SKLearn, Scikit-Learn, Spacy, Gensim, NLTK, beautifulsoup, Numpy etc.
- Platforms: Microsoft Azure
- Visualisation Tools: R Shiny, Power BI

**Opportunity attribute name**

**Opportunity attribute value**

- Version Control: Github
- Database: Microsoft SQL Server, PostgreSQL
- Others: JavaScript, Docker, Selenium

## Work setup

**Opportunity attribute name**

**Opportunity attribute value**

Address where the work will take place

We are open to discussions around the format for delivering the work but envisage most will be conducted on FSA's premises in London. The successful supplier is to be available during core operating hours Monday - Friday 09:00-17:00.

The Food Standards Agency London office address is:

Clive House,  
70 Petty France,  
London SW1H 9EX

Working arrangements

All work to be undertaken using FSA provided hardware and supported with FSA licensed software and open source applications

You will be expected to work openly and collaboratively on digital channels (eg Slack, MS Teams, Office365 etc). You will be expected to attend face-to-face key meetings at FSA offices, be involved in agile ceremonies, catch-up calls, organise and run user testing sessions, and present findings.

We expect the successful supplier to provide upskilling to permanent staff to increase internal capability.

**Opportunity attribute name****Opportunity attribute value**

Security clearance

All supplier team members will need to be cleared to Baseline Personnel Security Standard, and may be requested to sign a non-disclosure agreement (NDA). Whilst not an immediate requirement, FSA reserve the right to request Security Vetting (SC) clearances.

## Schedule 2 - Supplier's response

### FSA715 - Strategic Surveillance Delivery

Maximum 2000 words including drawings, graphs and any attachments.

Refer to the requirements and evaluation criteria the buyer published on the Digital Marketplace <https://www.digitalmarketplace.service.gov.uk/digital-outcomes-and-specialists/opportunities/11951>

You will be evaluated on how well your proposal meets the buyer's requirements.

<b>Date</b>	09 April 2020
<b>Name of requirements</b>	FSA715 – Call-Off Contract - Strategic Surveillance Delivery
<b>Supplier name</b>	Cognizant Worldwide Limited
<b>Summary</b>	Provide a summary of the issue or problem and your proposal.
	<b>Our understanding of the UK food industry, FSA and Strategic Surveillance</b> Food and drink is a £230Bn+ industry in the UK. Like any major industry, it is vulnerable to a wide range of factors such as changing geopolitics, trade patterns, climate, technological breakthroughs, social and demographic patterns, criminal activity etc., the impacts of which can be extremely harmful to individuals, the economy and the UK's reputation. The GFSI (Global Food Safety Initiative) has stressed the importance of establishing a food fraud vulnerability assessment and food fraud mitigation plan.

As the authority in charge of regulating the food and feed sector, the Food Standards Agency (FSA) needs to be aware of all food-related risks facing UK consumers, whether related to food and feed safety, or to authenticity. The FSA must be able to protect consumers now, and in the future, with the foresight to predict and act in a timely manner. It needs to identify direct impacts from microbiological risk, food crime, changes in consumer attitude and technical advancements in food production.

The FSA's Strategic Surveillance Service provides this capability by harnessing the power of data science to effectively identify food and feed risks. This approach needs to be continuously enhanced to access and provide more robust data-informed intelligence. The Strategic Surveillance Service has already made significant progress in its journey towards establishing a world-leading predictive capability that enables the FSA and others across the food system to better understand global food and feed systems, track known risks and identify emerging risks before they become issues.

#### **FSA Organisation's policy and user needs**

We understand that Strategic Surveillance Service over the course of this contract term needs to achieve the following:

- a. Optimise the use of data, mainly open data, to identify emerging food and feed risks before they become a public health concern.
- b. Ensure that the FSA continues to build on its success in delivering a meaningful pipeline of machine learning (ML) and AI use cases.
- c. Accelerate innovation and continuous improvements to further the FSA's situational awareness for food and feed risk.
- d. Develop an overarching integrated system that while agile and decentralised, will enable additional data-sharing, reuse of technical solutions across government, and a clear tie-in to actions taken by the remainder of the FSA.
- e. Build on the existing principles and culture of the FSA as being science-led, evidence-based, innovative and open.
- f. Continue running 10-week sprints that consist of understanding a problem area, finding data that might address the problem, and developing and operationalising an MVP
- g. Encourage further collaboration with leading groups in the Data Science community such as the Office of AI, Centre for Data Ethics & Innovation, other government and non-government departments as well as with other competent authorities to share learning and mutually gain from the relationships

h. Build upon the success of ML within Strategic Surveillance to validate and establish further opportunities for ML and AI, establishing a roadmap for ongoing strategic planning.

**Cognizant's journey with FSA so far**

In our journey with the FSA to date, we have demonstrated our capability to use data science-enabled intelligence to inform the decision-making process and help prioritise actions (eg identifying and acting on emerging risks before they become issues) and have helped the Strategic Surveillance team transition from a Programme to a Service.

We understand two strategic principles of increasing importance to the FSA are:

- Developing current intelligence-gathering and situational awareness in food and feed risk
- Using modern data and technology-enabled approaches to enable timely delivery of strategic long-term scanning and day-to-day tactical, near-time responses.

The FSA is already operating at the forefront of using data analytical techniques. However, we strongly believe that our collaboration with the FSA over the past 2 years has enabled it to achieve even more and made a material impact through our team's capacity to offer even greater insights.

In our engagement with the FSA, we have successfully collaborated with the Strategic Surveillance Service in delivering solutions in line with your priority focus areas. Our prototypes and solutions have ranged from tools that help identify imports which pose an increased risk, to identifying unregistered food businesses, building your cross-sector stakeholders' awareness of food/feed/FCM issues reported across the globe. Cognizant has supported you in these achievements.

We have worked closely with your in-house data scientists and other stakeholders as 'One Team', following agile ways of working to develop risk models and operationalised risk-signalling services for use across the organisation. Through this capability, the FSA has developed a picture of the food system, its risks (safety, authenticity, assurance) and vulnerabilities. This has enabled the FSA, and others, to better identify and address consumer food risks, whether strategic, global and long term, or immediate and operational.

**COVID-19**

We recognise that the ongoing COVID-19 pandemic is very much a key focus area and concern for the FSA currently. We are working with Strategic Surveillance as part of the Food Supply Chain Surveillance Group (FSCSG) that has been set up in response to the pandemic to look at how we can help identify and address possible surveillance issues around changes to food supply, distribution, consumption and business behaviour. We are already seeing various signals and issues come to the fore, e.g.

- Relaxation of food safety inspections by certain countries
- Disruption of food supply chain leading to substitution issues
- Increasing online sales of health supplements claiming to cure COVID-19 etc.

**EU Future Relationship**

We recognise that the FSA is also at the forefront of preparing for the UK's exit from the EU and a key contributor to the cross-government Future Borders programme. Cognizant, along with Deloitte and McKinsey, is a selected partner for the Future Borders programme and will bring this contribution to the FSA. Around a third of the food consumed in the UK is imported from the EU; current food safety regulation is largely EU-based and a significant number of officials carrying out controls on behalf of the FSA in approved food businesses are nationals of other EU member states. As the regulator for the food industry and the UK's Central Competent Authority for food safety regulation, the UK's departure from the EU will have a very significant impact on the FSA, including FSA Surveillance operations. Preparations for EU Exit will therefore be a major driver for this transformative data science-led service. Key areas of concern include:

- Access to data from EU systems such as RASFF Window, TRACES etc.
- Access to scientific papers and legislation maintained by EFSA or European Commission
- Reduced coordination of food and feed incidents, EU contact points and liaison with third countries
- Risky food and/or feed imported into the UK which may pose a significant risk to consumers' health

**Artificial Intelligence**

We also recognise that AI governance is of increasing interest to both public and private sector organisations. Leaders and advocates for AI have begun to develop frameworks that aim to establish ethical practices to monitor AI systems. In the public sector, these include the Alan Turing Institute (ATI), OECD and ICO, while in the private sector, Microsoft and Google have adopted a more holistic stance. The Centre for Data Ethics and Innovation (CDEI) acting as an independent body also plays an important role in providing best practices and recommendations to the government. As more opinion pieces and frameworks surface, however, the landscape will become increasingly complex and “public bodies may be uncertain over which to follow” [AI and Public Standards Feb 2020]. This could impede a progressive approach for new AI initiatives. To address this challenge for the FSA we have proposed an inclusive ethics framework methodology and an approach. We have invested in developing this in collaboration with FSA and have started to involve the key AI bodies. We will also help setup a data ethics forum consisting of key stakeholders that would help self-regulate the AI programme.

#### **Our Proposal in Summary**

Building on the success of the past two years, Cognizant will support the FSA in achieving your organisational goals and ensure work packages are implemented in a way that is aligned to the Strategic Surveillance Service vision (i.e. advancing the FSA's intelligence gathering and situational awareness in food and feed risk).

On the AI governance front, Cognizant has carefully analysed the various viewpoints and developed a uniform, all-encompassing framework that will allow the FSA to progress with robust and targeted AI initiatives in a fast-changing environment. We propose incorporating Cognizant's AI framework, which combines the work of the Alan Turing Institute (ATI) and Data Ethics Framework, as well as bolstering these viewpoints with the work of other leaders in the AI/ML space.

Cognizant will continue to refine the established 10-week sprint model for ML and AI use-cases, introducing other innovative approaches (including Blockchain) when appropriate. We will work with the departments within FSA, academia, other associated communities and professional service providers to establish AI opportunities to help FSA develop an AI roadmap.

In light of the changes to working environments brought about by the COVID-19 pandemic we will utilise our virtual pods-based delivery model that we have adopted during the current situation to ensure delivery velocity is maintained in periods where teams are remote and dispersed.

We will set up an ethics forum to self-regulate the development and application of an ethics framework for the ML and AI projects. To achieve all this, we will embed each of the points detailed in the 'Key requirements and provision of services considerations' section, ensuring we will achieve and exceed every aspect on helping you create a world-leading, future-fit, end-to-end integrated Surveillance process that is fully compliant, transparent and innovative.

### **Cultural Fit**

We recognise success is best achieved by working in partnership with our clients and other suppliers and that the hallmark of any successful partnership is a collaborative and transparent working relationship. During the period of our engagement with the FSA's Strategic Surveillance Service, we have focused on working with the FSA's teams, civil servants and other suppliers as efficiently and closely as possible to solve users' problems and create convenient, frictionless solutions and services at speed.

We have delivered value consistently through the disciplined implementation of Cognizant's Guiding Principles, which are aligned to the Civil Service code and compatible with the FSA's culture and environment. This approach governs behaviour, culture and quality management across our operations and continually measures and manages our ability to ensure your success.

We are co-located at the FSA's offices working as an extension to your ecosystem comprised of FSA staff, civil servants, Cognizant and other suppliers, all working towards a common goal. Our on-site presence ensures the team is always visible and accessible to FSA staff and stakeholders for both formal and informal communication.

We have established a 'partnering charter' with FSA from day one, building relationships and understanding between our two organisations, people, culture and processes to ensure successful long-term trust and collaboration.

	<p>Cognizant will continue to be a proactive and responsible partner, focused on improving outcomes and increasing value for the FSA. This includes being ready and able to identify areas where a change of approach or fresh innovation can drive improvements. This commitment to constructive challenge is engrained throughout our Standards of Business Conduct. Combined with our Core Values, these reflect the best practices and highest standards in our industry.</p> <p>We operate successfully in multi-team, multi-supplier environments. Open, transparent measuring and reporting is built into the way Cognizant's consultants work and, in a mixed-team environment, we encourage other teams to adopt the same collaborative, sharing-based approach. Adopting a 'One Team' culture – with shared goals, openness, no-blame game and a commitment to the success of the FSA's Strategic Surveillance Service – means that company badges and egos are left at the door. Diversity and difference is embraced and encouraged, recognising the strength that this brings to our teams, customers and communities. This can be seen in action in our work with the Home Office, the FCA, HMRC, HMCTS, and NHS Digital, amongst many other engagements.</p>
<b>Proposal</b>	<p>Say how you'll meet the buyer's requirements. Include how the approach or solution meets the buyer's organisation or policy goal and user needs. This should cover what you'll build or deliver and how it will continue to be managed.</p>
	<p>Having partnered with the FSA since June 2018, our delivery approach is fully aligned to the FSA's delivery principles of:</p> <ol style="list-style-type: none"> <li>1. Advancing intelligence gathering and situational awareness in food and feed risk</li> <li>2. Using modern delivery approaches.</li> </ol> <p>Our proposal and approach is designed to meet FSA's organisational policy goals and user needs.</p> <p>During our engagement to-date, we have designed and deployed several use cases and implemented machine-learning models to explore the art of the possible. Available, accessible and relevant data was used to deliver maximum value.</p> <p>Example projects include:</p>

- **Risk Likelihood Dashboard:** We developed knowledge on imported food and feed risks. Various data sources (e.g. RASFF, TRACES, FSA’s MEMEX, UKFSS and border rejections) were used to build data-handling expertise and derive meaningful insights through predictive models. The project’s success is highlighted by the breadth and number of active users of the dashboard: 64 different port health authorities, local authorities and internal FSA users. This dashboard won the FSA the ‘Highly Commended’ prize in the ‘Technical & Innovation’ category of the Office for Product Safety and Standards (BEIS) Regulatory Excellence Awards 2019.
- **Signal Prioritisation Dashboard:** 42 different data sources – describing food, feed and food-contact material issues – were integrated into a user-friendly tool for reporting purposes. Complex algorithms and models were developed to extract relevant tags (including commodity, country of origin, hazard etc.), implement language translation, categorise risk signals by risk severity and deliver probability predictions for alerts in the near future.

*“This dashboard has received very encouraging feedback ("I LOVE THIS WORK !") from Emily Miles, the Chief Executive of FSA”.*

- **FHRS AI Predictions:** This joint FSA and Cognizant initiative used the latest deep-learning techniques (on 235 demographic descriptors from the UK’s 2011 census) to deliver a national prediction model for establishments’ food-hygiene ratings. During delivery, a parallel ethical sprint was designed in an appropriate ‘right-size’ approach to maximize business value. This ensured the governance of the models was fully reproducible, traceable and verifiable under both the GDS and Alan Turing Institute frameworks for AI delivery. The models were continuously assessed via live updating of governance documents.

Cognizant will apply the previous experience and focus the efforts in evolving FSA data science capability towards creating an integrated model for predicting situational awareness in identifying food and feed risks. In order to meet FSA's organisation's policy goals and user needs, we will:

- a. Deliver innovative solutions in line with FSA's key strategic focus areas such as COVID-19, EU future relationship, Imported food etc.
- b. Validate further opportunities for ML, AI and other emerging technologies, and deliver measurable outcomes
- c. Build upon the success of ML within Strategic Surveillance to validate and establish further opportunities for ML and AI, establishing a roadmap for ongoing strategic planning
- d. Refine and improve the 10-week technical sprint cycle to deliver innovative solutions, and further situational awareness for food and feed risks
- e. Build capability to predict 'unknown' risks by increasing the complexity of the models delivered
- f. Engage with leading groups such as the Office of AI, Centre for Data Ethics & Innovation, other government and non-government departments to build working relationships
- g. Collaborate with the FSA to transition towards a Microsoft Azure based technical architecture to operationalise production grade solutions
- h. Support development of skills and experience of FSA in-house data scientists and analysts
- i. Develop playbook for setting up and running AI projects as per ethical governance framework

The key tenets of Cognizant's delivery model:

**1. Aligned to FSA vision:**

We understand Strategic Surveillance's focus is on using data, enabled by technology with human input, to proactively develop situational awareness before issues arise. We have successfully collaborated with Strategic Surveillance to deliver solutions in line with these priorities.

Our delivered products and tools range from identification of risks from EU Exit and unregistered food businesses to building stakeholder awareness of food/feed/FCM issues.

As active participants of the FSCSG, we will continue to monitor the rapidly changing global trade and business environments as countries and companies adapt to the demands of the COVID-19 pandemic. This includes evaluating tools such as the Signal Prioritisation Dashboard and the FSA-built Trade Routes and Volumes at Ports Dashboard in order to monitor signals, and analyse and predict impacts, both immediate and short-to-long term. Potential use cases are detailed in the Summary section.



**Figure: Outputs aligned to FSA vision**

## **2. Collaboration:**

Cognizant's data scientists, business analysts and change consultants have worked closely with FSA data scientists, research analysts and other FSA stakeholders and SMEs. This wider team has collaborated to build a centralised data and intelligence capability, providing a highly reliable source of data-driven intelligence.

## **3. Evidence-based approach:**

We drive insight by investigating a range of data sources, spotting and prioritising signals, and delivering evidence-based analytics. We leverage robust predictive methods to evaluate risk. This evidence-based approach ensures we measure, manage, and increase the value from our delivery. Regular inspection of evidence optimises this value.

**4. Roadmap implementation:**

Cognizant has worked with Strategic Surveillance to deliver prototypes, with some maturing into deployed tools for roadmap implementation and decision-making. The Signal Prioritisation tool, for example, is used by multiple departments within the FSA. We continue to work with Strategic Surveillance to develop a roadmap for implementation of prototypes for operationalisation and automation.

**5. Agile mindset and practice:**

We will continue to work on Agile-based methodologies for:

- Stakeholder engagement – Sprint-planning meetings, daily stand-up calls, weekly checkpoint meetings, periodic 'show and tell' sessions, sprint reviews.
- Transparency – Regular touchpoints with all stakeholders and FSA partners; encouraging transparency in requirements prioritisation, progress, constraints and roadblocks, while mitigating risks.
- Flexibility – Adapting to use-case owner reactions and requirements, and improving the end product.
- Efficiency – Continuously improving processes through sprint retrospectives.
- Higher team morale – Empowering self-managing teams, allowing team members to be innovative and celebrated for their expertise.
- Higher customer satisfaction – Keeping use-case owners closely involved with each sprint, aware of progress/challenges.

**6. Reusability:**

Our delivery methodology focuses on preparing 'toolboxes' of data sources, algorithms, data-science models and other resources that are extensible, reusable and transferable to other use cases. Throughout our engagement, our focus has been on 'doing more with less' and we have demonstrated the importance of 'building smart reusable code'. The most prominent example is the Aflatoxin model, which progressed from covering Turkish figs to commodities from other countries, before being applied to predict pesticide maximum residue levels in commodities.

**7. Simple by design:**

All the dashboards developed during our engagement have been intuitive and user-friendly. For each one, users have been supported with multiple demo sessions and user guides. New tools do not generate value unless people use them, so our dedicated, integrated organisational change adoption team focuses on the needs of FSA people, bringing industry best practice and tools to drive engagement, abilities and adoption. All our dashboards will meet the accessibility guidelines as defined under WCAG 2.1/AA.

Sample user feedback from FSA Digital Workplace on our tools:

*'It's really easy to use. You can customise the available data by source and time range. It really makes it much quicker and easier to identify historic food safety issues and compare similar hazards from different countries. Having all the data in one place saves lots of precious time and allow like-by-like comparisons.'*

*'The layout of the tool is intuitive and means that it is quick and easy to use. It's also helpful that it collates so much information from different sources in one place and the information can be sorted by different priorities'*

#### **8. Ethical approach:**

Our ethical AI strategy is summarised below:

1. Cognizant has analysed public sector AI data ethics approaches and created a framework to enable the FSA to progress with targeted AI initiatives.
2. We propose creating an 'AI Data Ethics Forum' to popularise this approach through peer review and acceptance.
3. Cognizant will develop the methodology and assets (including template) for the AI data ethics framework, and trial this on the FSA's next AI use case.
4. We would then provide input and findings back to the AI Data Ethics Forum and iterate this as the governance environment stabilises.

5. On an ongoing basis, we would run current best practices in full deployment, and scope for the future to support efficiency savings and FSA leadership in designing future government frameworks.
6. Cognizant would also introduce best practice through our leading UK and global AI and Analytics teams' experience.

Cognizant has already delivered to the FSA a practical and fully-operating methodology for a 'right-sized' approach to ethical AI. We have also delivered extensively on multiple GDPR and related programmes, within government, the UK private sector, the EU and in locations worldwide. Tenets 10 and 11 below detail the significant similarities between GDPR and ethical AI.

#### 9. Knowledge-sharing:

Over the course of our engagement, we have worked closely with FSA data scientists to ensure knowledge is shared and we work together as 'One Team'.

Measures that we will continue to build upon include:

- **Code-sharing and technical documentation:** We worked with FSA data scientists to develop the algorithm and logic for MVPs including Signal Prioritisation Dashboard, Trade Analysis tool, and Risk Prioritisation Dashboard. At the end of each sprint, we will continue to publish the code to Github and shinyapps.io for review by FSA data scientists.
- **Conducting peer-to-peer knowledge-sharing sessions:** Cognizant team members will regularly conduct brainstorming sessions on technical solutions/best practices in Python, R or SQL. Examples include best practices for GitHub repositories and end-to-end pipelines in Python on virtual machine servers. Knowledge-sharing sessions have been regularly conducted when new permanent staff join the Strategic Surveillance team.
- **Data stories:** We will continue to utilise the 'Data Story' formats we introduce during our current engagement. The long- and brief-format data stories have proved efficient in communicating our work to new team members/external stakeholders.

#### 10. Ensuring adherence with relevant legislation:

GDPR requires organisations to comply with all data protection principles (and to demonstrate compliance). We have brought our experience in GDPR assessments to our engagement with the FSA, spearheading Strategic Surveillance's engagement with FSA's Information Governance team and leading the effort on completing Privacy Impact Assessments for dashboards involving personal data.

Cognizant has deep experience in GDPR deployment, including NHS-Scotland's SPIRE programme, where we provide systems, applications and integration with EMIS and In Practice to support direct care of patients. In 2018, we implemented improved data protection compliance regimes within the operational environment, ensuring clinical data is secured, managed, maintained and shared in line with clinical and government standards. Based on our expertise in GDPR regulatory compliance we are able to draw up close parallels for Ethical Framework requirement our specialists can help design the ethical solutions, processes and policies addressing data-protection, integration, data-sharing and transparency.

#### **11. AI governance**

Cognizant, on the FSA's behalf, has practically demonstrated a 'right-sized' approach for deploying the Alan Turing Institute's (ATI) detailed framework.

Our findings drew clear parallels with the GDPR. Because the GDPR principles were a driving force in the development of four out of five of the AI ethics principles, some of the artefacts required under GDPR (e.g. Data Privacy Impact Assessments) can be used as accelerators to enable ethical AI.

Below, we identify common areas of existing public- and private-sector data ethics approaches. Our AI framework will allow the FSA to use these principles as you continue to incorporate more ML & AI based components within the service.

Organisations	Public Sector Specific	Principles									
Microsoft		Fairness	Accountability			Transparency	Privacy and Security	Reliability and Safety	Inclusiveness		
Google		Fairness	Accountability	Sustainability		Transparency	Privacy and Security				
Turing (FAST)	X	Fairness	Accountability	Sustainability		Transparency					
Turing (SUM)	X	Respect / Care					Protect				Connect
Dept. For Digital, Culture, Media and Sport	X		Accountability	Sustainability		Transparency	Privacy and Security				
OECD	X	Fairness	Accountability			Transparency	Privacy and Security		Inclusiveness		
ICO*		Fairness	Accountability	Sustainability		Transparency					Context
* The ICO Principles have been derived from consistencies in ethical principals across numerous						AI Ethics	GDPR & AI Ethics				

**Table: Commonality of frameworks analysed, demonstrating parallels drawn between AI ethics and GDPR**

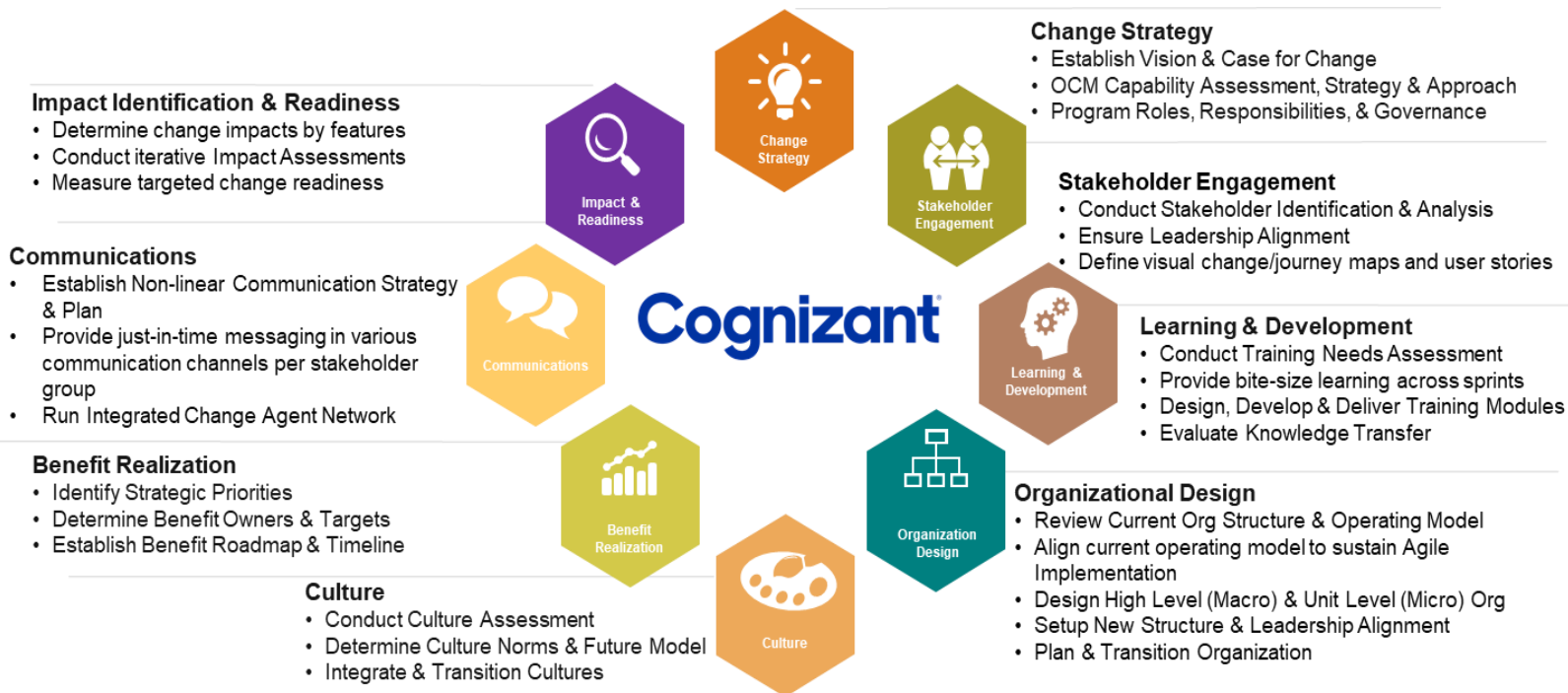
### Change management / user adoption:

The Change team will work in close harmony with the Sprint team to help users at every stage to help making the change journey positive by improving engagement, effective communication, taking care of skill gaps and introducing a network of Surveillance Champions.

We will build on the learnings and best practices from the successful implementations for the 'Risk Likelihood Dashboard' and 'Signal Prioritisation' and will enhance further as per plan below:

Activities	Action Plan
Identifying all impacted stakeholders early enough and assuring required levels of engagement	In the early sprint stages identify impacted processes, and engage process owners in a change forum. Assign clear stakeholder owners from across the FSA. Use collaborative platforms such as Yammer, Teams to crowd-source impacts
Capacity of Surveillance Champions to support change	Early engagement of Leadership to set adoption performance goals for identified champions and unblock capacity issues; also celebrate successes achieved by champions
Change resistance to adopt new tools and ways of working, such as relying more on data to inform priorities and actions	Early identification of benefits in sprint cycles and regular, visible involvement of Leadership to activate middle management layer. Ensure user friendliness of tool design, supported by easy to access training and support
Communications support and channel access	Bring key Communications stakeholders into a Change Management team, along with Process Owners and other Change Leaders to operate robust governance, focused on driving adoption
Availability of adoption data	Identify quantitative measures for adoption earlier in use case cycles and build into tool design where possible. Broader leverage of surveying tools and focus sessions

In addition, we will apply our comprehensive eight component framework and stakeholder engagement plan sections to address the people-side needs during the Agile programme delivery to help ensure adoption of the changes.



**Figure: Organisation Change Management framework**

### **Cognizant's Data Science Analytics practice capability:**

Cognizant is an industry-leading provider of data science practitioners, with a talent pool of 2,600+ advanced analytics consultants and data scientists, over two-thirds holding PhDs/master's degree from premium institutes. Our data science talent pool has rich experience from 300+ engagements. We will bring the best of that experience and capabilities to cater to FSA requirements. Selective list of Industry accreditation is detailed below:



Data Science Central

Cognizant rated 6th among data scientist recruiters globally

Gartner

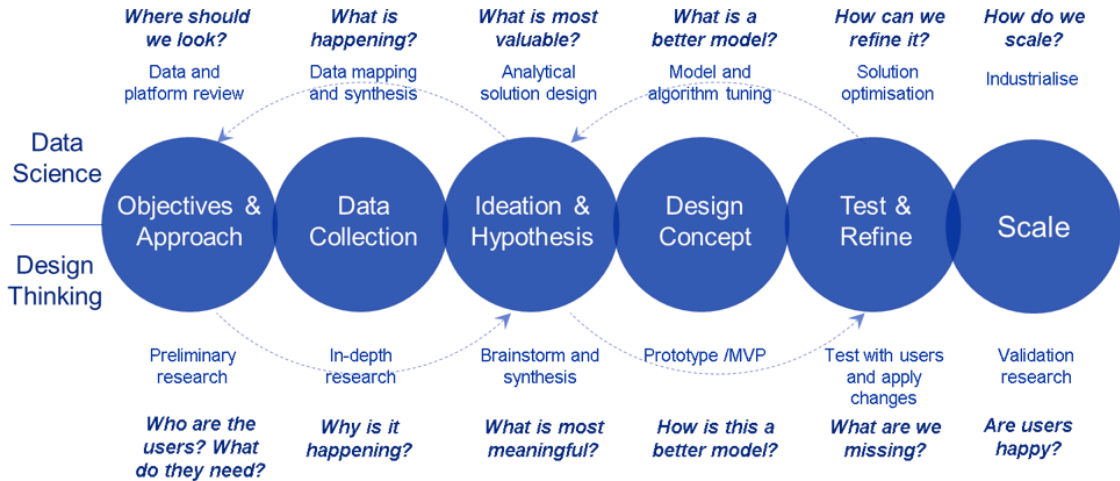
Rated 'Leader' in analytics



Rated 'Leader' in analytics

A snapshot of our data science analytics tools/platform expertise includes:

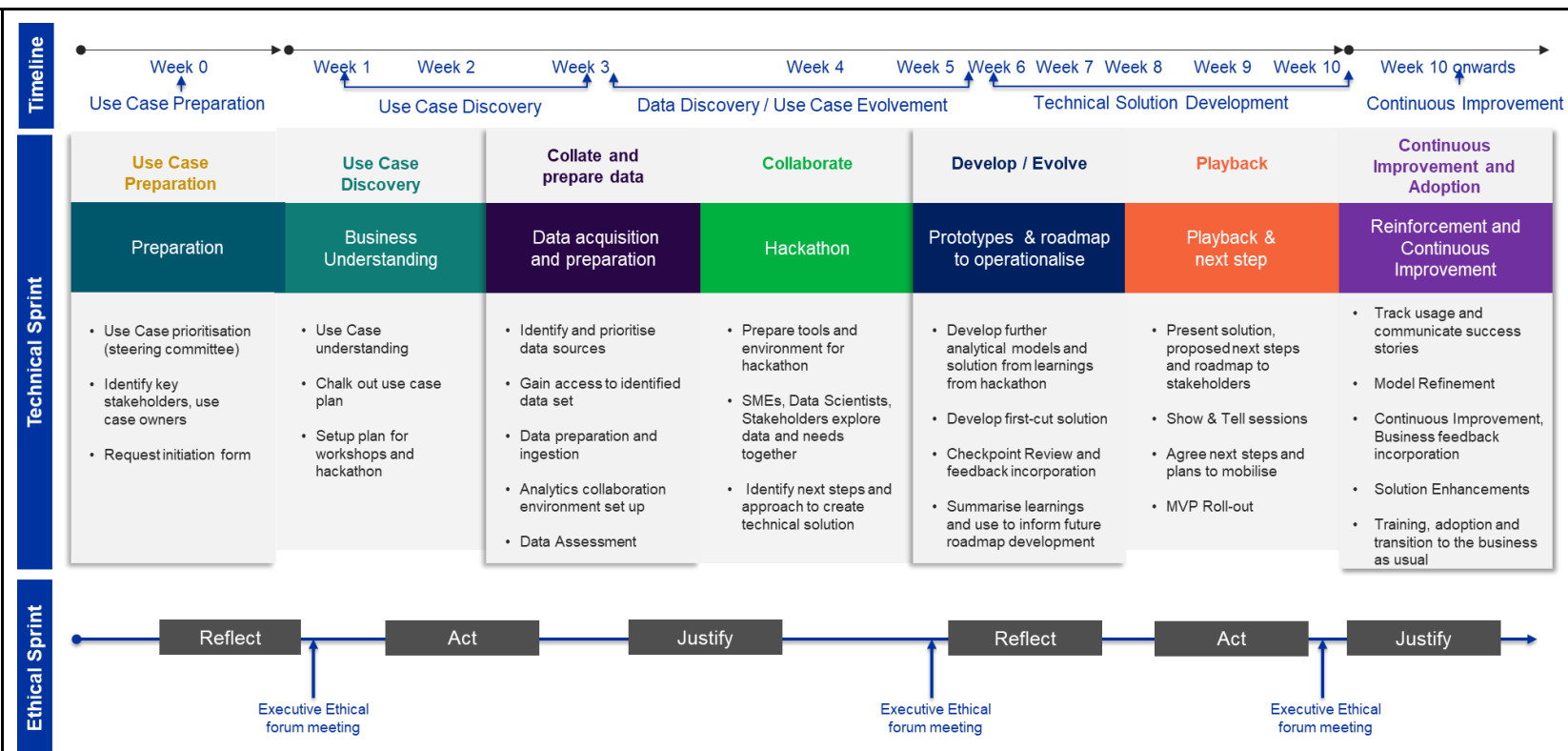


<b>Proposed approach</b>	Describe the approach or methodology you'll take to meet the buyer's requirements. Include how you'll manage the work and maintain quality.
	<p>Cognizant has a well-defined process for defining and eliciting user needs and generating user-driven analytical insight. We are currently using this approach at the FSA and other organisations such as Nike and Network Rail to define their data science visions and operating models. In our experience, true user-driven insight is obtained through collaboration between data scientists and anthropologists, working with different users and stakeholders to make sense of large amounts of data.</p> <p>The diagram below illustrates our proposed approach at a high level:</p>  <pre> graph LR     subgraph DesignThinking [Design Thinking]         direction TB         DS[Data Science]         DT[Design Thinking]     end      O[Objectives &amp; Approach] --&gt; DC[Data Collection]     DC --&gt; IH[Ideation &amp; Hypothesis]     IH --&gt; DC[Design Concept]     DC --&gt; TR[Test &amp; Refine]     TR --&gt; S[Scale]      O --- Q1[Where should we look?]     Q1 --- A1[Data and platform review]     DC --- Q2[What is happening?]     Q2 --- A2[Data mapping and synthesis]     IH --- Q3[What is most valuable?]     Q3 --- A3[Analytical solution design]     DC --- Q4[What is a better model?]     Q4 --- A4[Model and algorithm tuning]     TR --- Q5[How can we refine it?]     Q5 --- A5[Solution optimisation]     S --- Q6[How do we scale?]     Q6 --- A6[Industrialise]      O --- Q7[Who are the users? What do they need?]     Q7 --- A7[Preliminary research]     DC --- Q8[Why is it happening?]     Q8 --- A8[In-depth research]     IH --- Q9[What is most meaningful?]     Q9 --- A9[Brainstorm and synthesis]     DC --- Q10[How is this a better model?]     Q10 --- A10[Prototype /MVP]     TR --- Q11[What are we missing?]     Q11 --- A11[Test with users and apply changes]     S --- Q12[Are users happy?]     Q12 --- A12[Validation research] </pre> <p>We will follow an agile sprint-based delivery methodology to fulfil the FSA's business outcomes. Each 10-week technical sprint (MVP) will be complemented by an ethical sprint that we propose to run concurrently to ensure data and outcomes delivered by the data science/AI models are in line with government-published data ethics guidelines. Following successful development of an MVP, our team will look to operationalise the model so it can be implemented and supported in a production environment.</p>

### The 10-week technical sprint

We have been delivering 10-week technical sprints successfully following an agile sprint-based delivery methodology over the past two years at the FSA. Over this period, we have continually refined our delivery methodology process based on our experience at the FSA and best practice in delivering similar programmes across our client base. Where applicable and as demonstrated over the last two years, we will bring in innovation (e.g. LEAF pilot) to showcase advances in data science in order to ensure that the Strategic Surveillance team delivers relevant business outcomes while being at the forefront of technology across government. We have also established a core-flex team which creates a pool of specialists outside of the core team with the relevant domain knowledge that we can use, should the need arise, to diversify or scale-up.

For the FSA Surveillance team, the approach illustrated in the figure below has been successfully applied to deliver 12 MVPs in the last 24 months. Using a customer-centric, data-based approach and applying appropriate data science techniques, we have demonstrated that we could successfully validate and predict both known and unknown food risks. During this process, we have also successfully identified internal and external data sources most likely to be relevant to food safety.



**Figure: 10-week sprint (and beyond) approach for delivering MVP**

Each 10-week technical sprint will consist of five phases:

### 1. Phase 0 – Use-case preparation

	<p><u>Objective:</u> To work with key stakeholders (both internal/external) and the Strategic Surveillance Steering Committee to identify and prioritise potential use cases, identify use-case owners and set-up workshops for the sprint's first week.</p> <p>The use-case scouting exercise will be an ongoing process, where we will continue to engage with FSA stakeholders, other government departments (such as DEFRA and the Met Office), academia (such as University of Belfast) and industry (such as Pret a Manger) to build a forward pipeline of use cases and areas for collaboration.</p> <p>We will continue to leverage the Service Request Initiation Form that we devised as part of the Strategic Surveillance team's transition (from Programme to Service) deliverables to systematically elicit requirements details from use-case owners. This will help draw out details of the problems/gaps to be addressed, known data sources, and known RAIDs (Risks, Assumptions, Issues and Dependencies), as well as provoke thinking on how benefits will be realised and measured.</p> <p>As is the process now, all open use cases will be presented to Steering Committee members for them to prioritise use cases for the sprint teams to investigate.</p> <p><b>2. Phase 1 – Use-case discovery</b></p> <p><u>Objective:</u> To gain understanding of the use-case, business rationale for the requirement, potential stakeholders, data sources and benefits.</p> <p>The sprint team will spend the first three weeks gaining access to relevant data sources and evaluating them. Through our engagement with the FSA, we have built a strong expertise in working with varied types of data related to food risks, supply chain, FBOs etc. We will continue to leverage our experience and industry best practices to prepare for the next phase of the sprint cycle.</p>
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During this time, we will regularly communicate with use-case owners, learning from their subject matter expertise in order to build the sprint team's knowledge of the problem area. Weekly checkpoint sessions will be set up with the use-case owners and key stakeholders to ensure:

- close collaboration between all parties
- regular feedback and refinement
- that the solution is fit for purpose.

### **3. Phase 2 – Data discovery/use-case evolution**

Objective: To source key data sources and gain access to prioritised datasets, progress data preparation, prepare tools and environment for the hackathon, and identify best-fit approach/approaches for the technical solution.

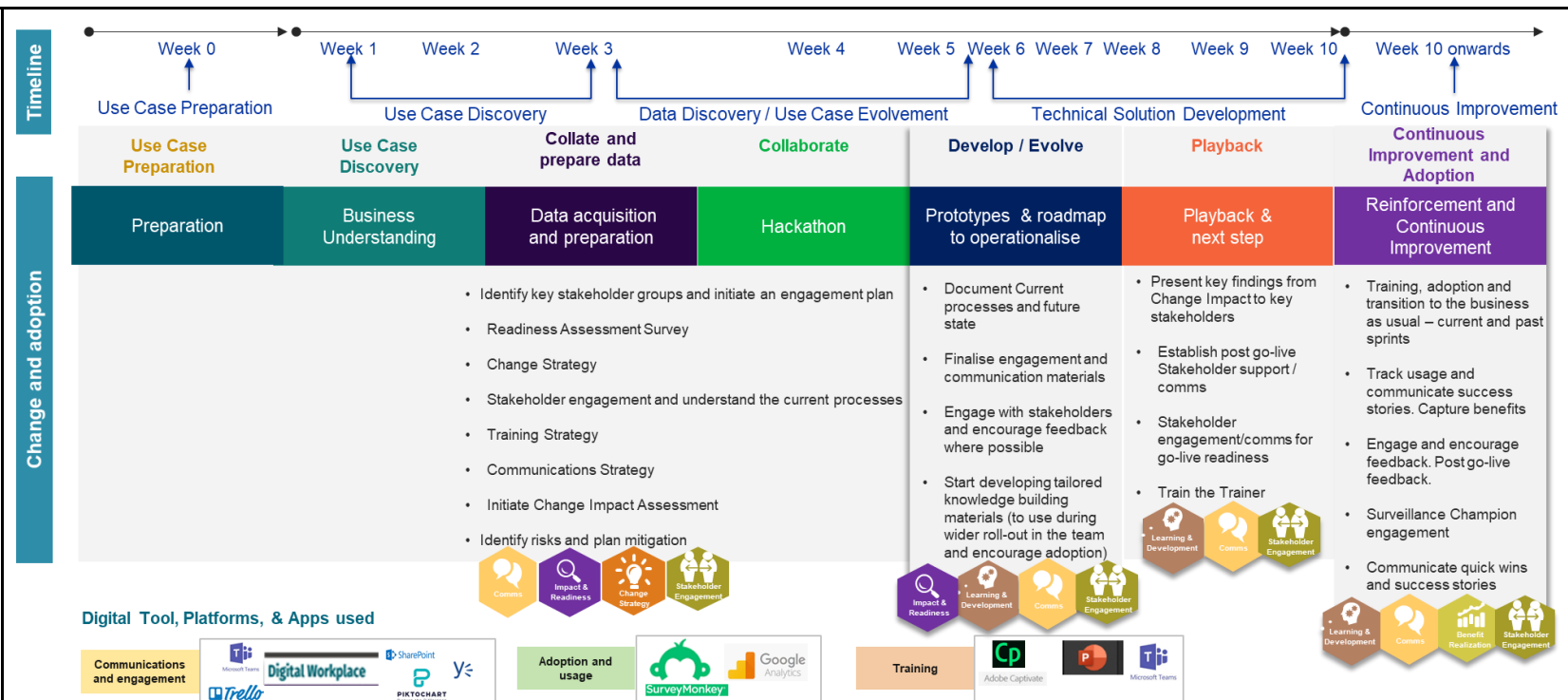
During this phase, we will access as many relevant data sources as possible and start to conduct detailed analysis of prioritised datasets to prepare the foundation for our models. An important consideration during data collection will be the Terms & Conditions (T&Cs) of individual sources (e.g. T&Cs of websites from which we need to scrape data) where we will follow advice from the FSA's Information Governance and Legal teams. The data will then be prepared for the hackathon.

Promoting innovative thinking through hackathons: Through our engagement with Strategic Surveillance, we have gained deeper understanding of FSA's business needs by involving different stakeholders from various FSA teams, experts from OGDs, industry and industry bodies. We will continue to follow this methodology.

From our previous experience, conducting the hackathon at an offsite location has proven beneficial, where the participants can move away from their usual work environment, minimise distractions and wholly commit to the workshop. This helps promote innovative, out-of-the-box thinking. Cognizant will happily continue to offer the use of its premises as the offsite location for hackathons.

### **4. Phase 3 – Solution development**

	<p><u>Objective:</u> To complete data preparation, analytical modelling and visualisation based on the identified approach.</p> <p>During the remaining weeks of the sprint, we will complete the development of the MVP technical solution. Collaborating closely with FSA data scientists and data engineers, we will continue to leverage best practice (this will also support the FSA's development of in-house skills and experience). Regular 'Show &amp; Tell' sessions will be conducted during this phase to keep our stakeholders informed of development progress and seek their continuous feedback.</p> <p><b>5. Phase 4 – Continuous improvement</b></p> <p><u>Objective:</u> To assist stakeholders with the adoption of the technical solution, operationalisation, and recording of benefits realisation.</p> <p>The continuous improvement phase includes the two key components of facilitating user adoption and implementing various other aspects of operationalisation/productionising the AI/data-science models. We will continue to assist our users through demo sessions, equipping them with user guides and offering one-to-one support where needed.</p> <p>A key area of focus after the delivery of the MVP is 'Benefits Realisation'. We will continue to engage closely with the different user groups to understand and document how the MVP has helped them. We will refer to the benefits and success criteria listed by the use-case owners at the outset of the sprint in the Service Request Initiation Form and record the benefits, both qualitative and quantitative (e.g. % of time saved, £ saved etc.).</p> <p>This framework is applied at every phase of a sprint to meet desired levels of awareness, stakeholder engagement and adoption (see figure below).</p>
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**Figure: Planned change interventions during the Sprint and as part of Continuous improvement**  
 (Note: Above listed activities may vary or delivered at different time during lifecycle of a Sprint, depending on the scale of change and stakeholders' needs)

## Moving from 'known knowns' to 'unknown unknowns'

While working on development of new MVPs, it is also imperative that we continuously refine our models to handle greater complexity – progressing from 'Known Knowns' to 'Know Unknowns'/ 'Unknown Unknowns'.

As an example, we started predicting Aflatoxin risk in figs from Turkey as a prototype/MVP, before iteratively developing that model, constantly testing/refining to look at other regulated commodities before finally operationalising the model to predict the likelihood of Aflatoxins in unregulated commodities (see figure below). Predicting not only 'known', but also 'unknown' risks is key to ensuring we derive maximum benefits from the use of data science.

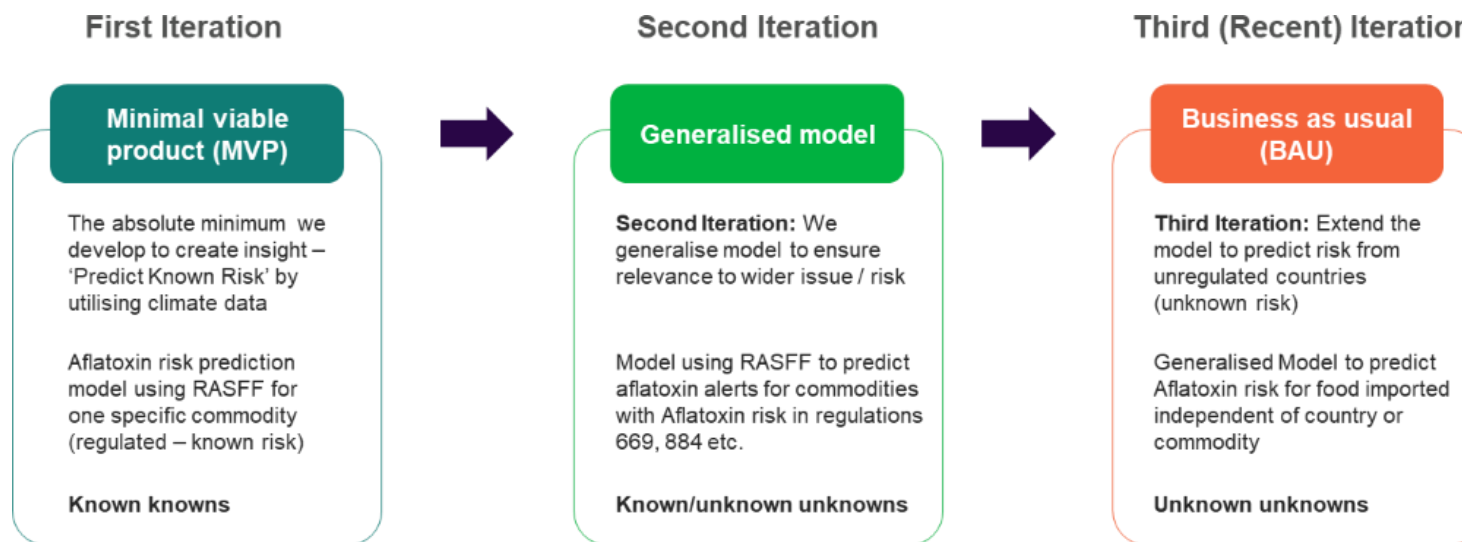


Figure: Moving from known knowns to unknown unknowns for the Aflatoxin model

## Operationalising 10-week sprints

On the successful completion of a technical sprint, our proposed approach would be to operationalise the MVP so that it could run in a production environment at scale. Details on operationalising are provided in the next section (Technical Solution).

### Parallel ethical sprints

To shape our ethical AI strategy, we will employ the guiding principles from Alan Turing Institute (ATI) stewarding practices for responsible and explainable AI: Reflect, Act, Justify. This stewarding and safeguarding of consumers encompasses the practical end-to-end lifecycle approach to continuously monitor the technical workflow. This sprint cycle will run in parallel with the 10-week technical sprint.

The Executive Forum meetings that we will set up are checkpoint discussions where the technical team invites broader-based independent experts to comment and scrutinise current techniques in order to judge and identify potential biases and discriminations. Three forums for each sprint delivery will be designed around the stewarding practice:

#### 1. Reflect forum

At this stage, the technical team will have spent time understanding the Use Case provided by FSA stakeholders. The technical team will summarise business-user needs and invite the forum to reflect on the potential pitfalls of discriminatory behaviour or biases that might occur in that scenario. This includes providing insights into bottlenecks from different projects with similar themes so that the technical team can avoid dead ends.

#### 2. Act forum

At this stage, the technical team, will have completed a hackathon workshop, defined potential data sources and technical approaches and prioritised the highest delivery value-add to the FSA stakeholder. The forum is invited to update its opinions on the appropriateness of the likely solution that the technical team will act upon in the coming weeks. The focus will be on the discriminatory behaviour or biases that might occur prior to the team creating the technical solution.

#### 3. Justify forum

	<p>At this stage, the technical team, will have completed the delivery workshop, finalised the technical solution and received feedback on the product increment from the stakeholder. The forum is invited to feedback justification and appropriateness for the technical solution. For each technical solution, the forum will discuss best practices for openness and reproducibility in disseminating information about the solution.</p> <p>The data ethicist will internally coordinate the 'Reflect, Act, Justify' practice by being directly embedded with the technical team. This will occur in two cycles within each sprint, as technical justification decisions are made after both the hackathon and final delivery. However, for external purposes, the data ethicist will coordinate and report to the ethical forum on a single 'Reflect, Act, Justify' cycle. In addition, the ethicist will maintain consolidated ethical reports that cover all the appropriate ethical frameworks. As such, the ethicist will be the single point of contact for any queries on AI ethics for all sprints. During this time, the ethicist will also liaise with an appointed FSA ethicist in order to support in-house training.</p>
<b>Technical solution</b>	Describe the specific technical approach or solution you're proposing.
	<p>Cognizant fully understands the key delivery principles for Strategic Surveillance (i.e. to further intelligence gathering and situational awareness in food and feed risk and the use of modern approaches in its delivery). Analysis of historical data, rapid ingestion of new data, identification of anomalies and patterns to indicate risks, and prescription of appropriate, evidenced actions whose impacts are clear and measurable are the key components to ensure Strategic Surveillance objectives are met.</p> <p><b><u>Modern approaches to delivery – use of predictive modelling, including machine learning, neural networks and deep learning</u></b></p> <p>Over the past 24 months, we have demonstrated how the use of data and technology can enable the delivery of insights and the prediction of risks. We have gained an understanding of various areas within the sector, such as key food and feed hazards</p>

(including co-design of dictionaries), trade patterns, early food-signal prioritisation, food and feed sampling, imported food regulations, climate factors affecting food risk, FBO-related data, and meat establishment data. We have delivered several solutions based on these data sources to provide insights and measurable outcomes using AI predictive modelling, including machine learning and deep learning using disparate API/linked data sources.

For the MVPs, prototypes and dashboards, the following cutting-edge data analysis, AI and machine-learning techniques have been utilised as the backend engine:

**Supervised techniques:**

Classification techniques	Regression techniques	Natural language processing
<ul style="list-style-type: none"> <li>Decision trees</li> <li>Random forest</li> <li>Neural networks</li> <li>Multi-model classification</li> <li>Support vector machine</li> <li>XGBoost</li> <li>Etc.</li> </ul>	<ul style="list-style-type: none"> <li>Linear regression (plus OLS regression)</li> <li>Logistic regression</li> <li>Stepwise regression</li> <li>Etc.</li> </ul>	<ul style="list-style-type: none"> <li>Tokenization</li> <li>Word embeddings</li> <li>Text classification</li> <li>Entity extraction: DAN, Spacy, BERT, CNN</li> <li>Text mining</li> <li>Etc.</li> </ul>

Time series analysis/Forecasting	Bayesian techniques	Feature engineering
<ul style="list-style-type: none"> <li>ANOVA</li> <li>Random forest</li> <li>ARIMA</li> <li>Etc.</li> </ul>	<ul style="list-style-type: none"> <li>Bayesian networks</li> <li>Naïve Bayes</li> <li>Etc.</li> </ul>	<ul style="list-style-type: none"> <li>Principal component analysis</li> <li>Correlation analysis</li> <li>Etc.</li> </ul>

**Unsupervised techniques:**

Unsupervised techniques
<ul style="list-style-type: none"> <li>▪ K-means clustering</li> <li>▪ Outlier (anomaly) detection models</li> <li>▪ Hierarchical clustering</li> <li>▪ Pattern recognition</li> <li>▪ Segmentation</li> <li>▪ Etc.</li> </ul>

#### AI/Innovation:

Evolutionary AI techniques
<ul style="list-style-type: none"> <li>▪ LEAF ESP</li> <li>▪ LEAF RIO.</li> </ul>

We have worked with the FSA Strategic Surveillance, IT and Data teams and established expertise on machine-learning techniques used to satisfy use cases and create front-end presentations/dashboards.

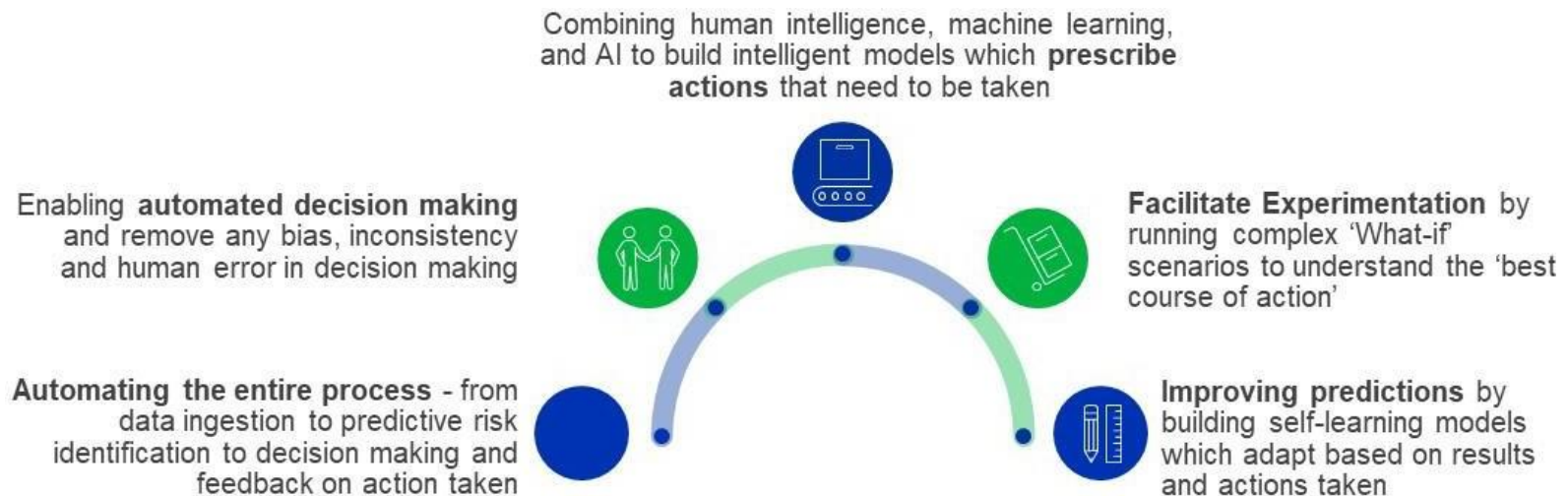
In our work at the FSA, we have demonstrated our expertise in:

Area	Technologies
Programming languages	Python, R, SQL
Data science and deep-learning libraries	TensorFlow, Keras, Pandas, SKLearn, Scikit-Learn, Spacy, Gensim, NLTK, beautifulsoup, Numpy, Neural Net
Platforms	Microsoft Azure

Visualisation tools	R Shiny, Power BI
Version control	GitHub
Database	Microsoft SQL Server, PostgreSQL
Collaboration platforms	TEAMS, SharePoint, Trello, Slack, Skype
Other	JavaScript, Docker, Selenium

**Building upon the success of ML at Strategic Surveillance and exploring AI beyond ML**

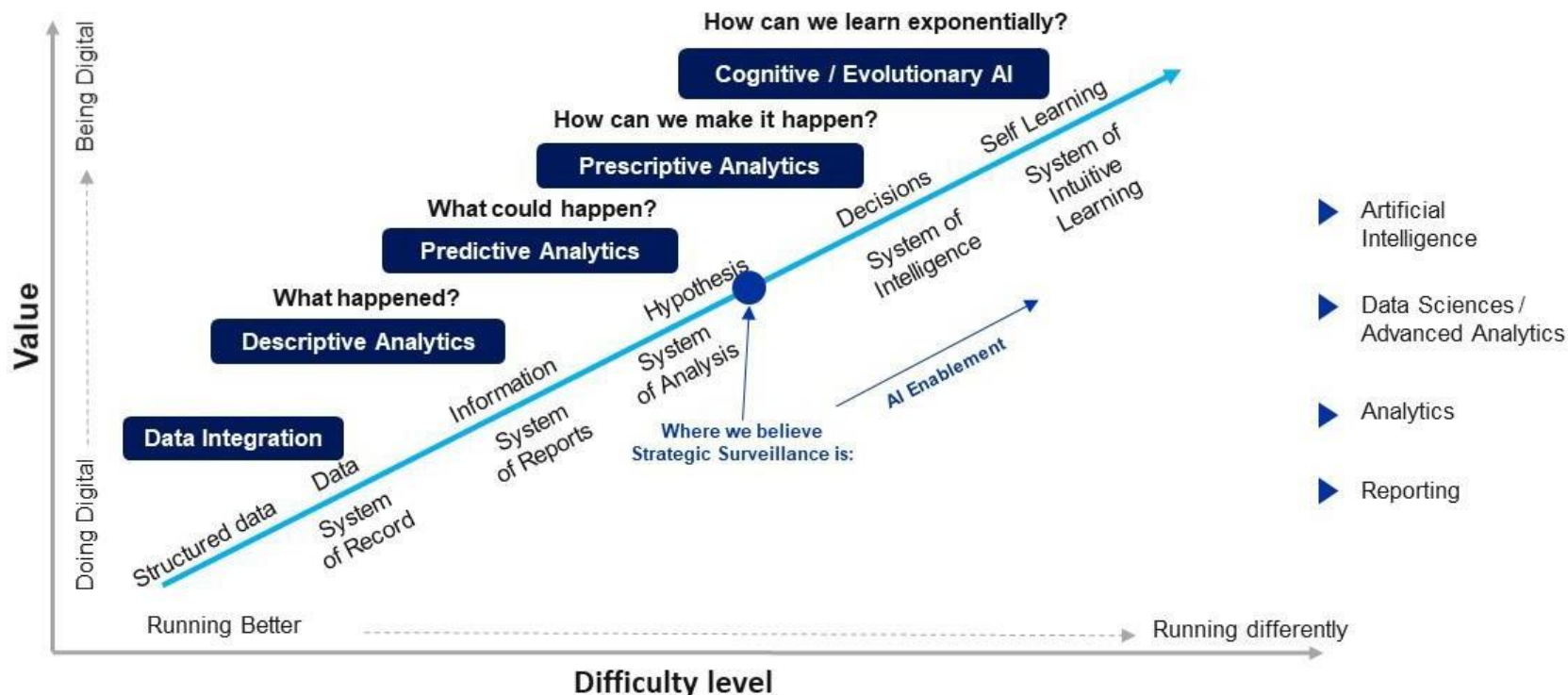
The FSA has made substantial progress with the application of ML and has empowered multiple FSA teams with key insights and outputs. Recognising the FSA's ambition to do even more, join up more, and make material impact with greater insight than provided for by existing tools, we propose to build upon the success of Strategic Surveillance and venture further into AI's prescriptive analytics and self-learning decision-making. The figure below demonstrates some of the aspects of AI which will be utilised to build upon the success of ML at Strategic Surveillance:



**Figure: Aspects of AI which builds upon ML success**

The first big step has already been taken in this direction with the successful completion of the AI-based FHRS prediction model (a national AI model to predict the food hygiene rating for any food establishment taken from FHRS using Cognizant's proprietary LEAF framework). During delivery, a parallel ethical sprint was designed in an appropriate 'right-size' approach in order to maximize business value. This approach ensured the governance of the models was fully reproducible, traceable and verifiable under both the GDS and Alan Turing Institute frameworks for AI delivery.

To remain at the forefront of the use of data analytics techniques we will help Strategic Surveillance move towards more advanced predictive analytics and prescriptive analytics as the next step (as demonstrated in the figure below).



**Figure: Analytics maturity journey towards cognitive/evolutionary AI**

Consistently challenging historical models and algorithms will be key to improving current risk-prediction capabilities through enhancement of existing prediction models and application of innovative techniques to new predictive models. For this reason, Cognizant proposes a continuous improvement team to work with the core team and FSA data scientists. We also propose that

	<p>an AI/deep learning expert should work with the sprint lead and Head of Strategic Surveillance to develop a strategy and roadmap in this direction. Detailed responsibilities for these roles are provided in the 'Team Structure' section.</p>
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**Technical landscape – current state**

Through our engagement with the FSA, we have established deep knowledge of the technical landscape (summarised in the diagram below):

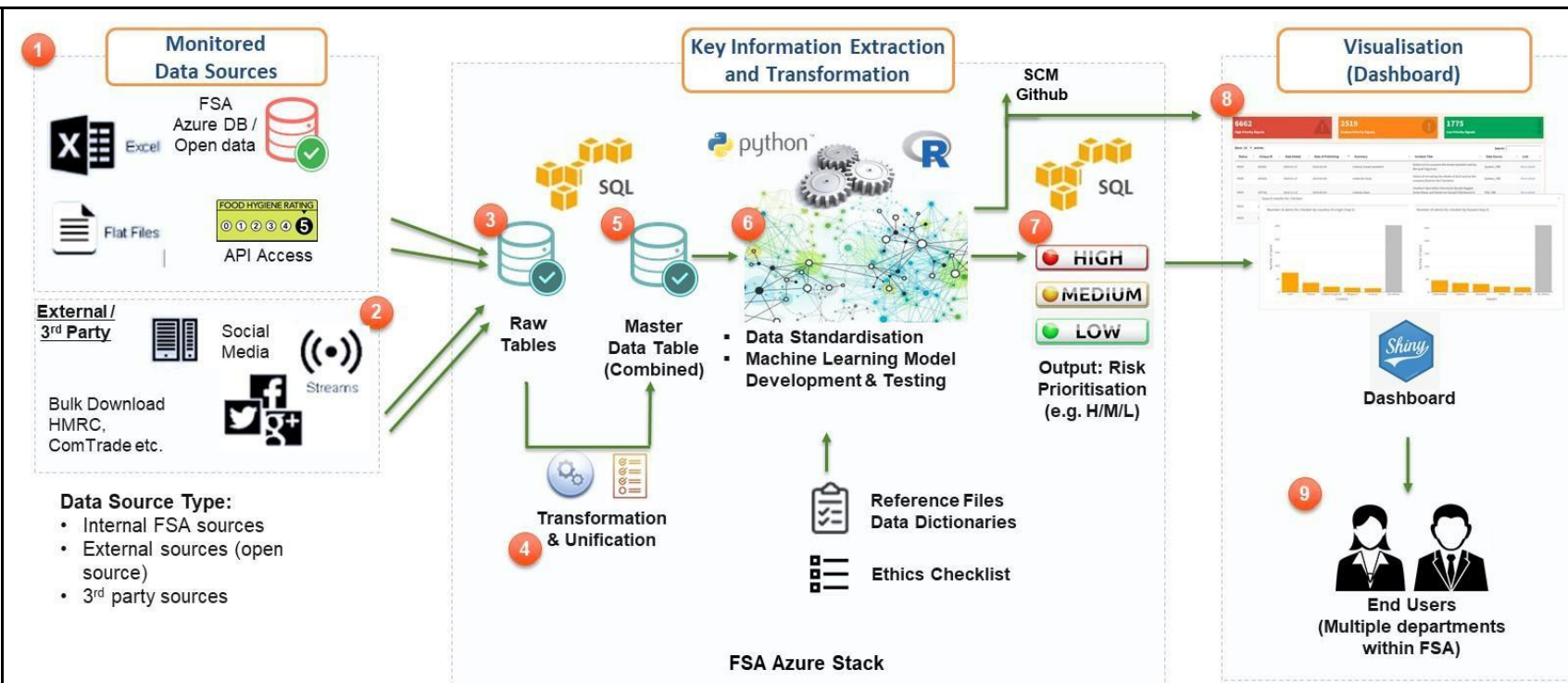


Figure: Data/process flow in a typical sprint at the FSA

Cognizant has worked with the Strategic Surveillance team and FSA IT team to establish a process to support all the activities of experimental data exploration, developmental data science and automated end-to-end pipeline for updating developed models to publish surveillance insights to stakeholders and consumers. The FSA Information Governance and Security teams have approved this process as the short- to medium-term solution.

Cognizant will continue to work with the Strategic Surveillance as 'One Team' to follow best practices and transfer skills during the development of the technical solutions:

- State-of-the-art predictive/machine-learning expertise using Python and R
- Version-controlling production and source code as separate branches in the GitHub repository
- Using virtual machine to automate end-to-end pipeline by setting up ETL, data preparation and data-modelling steps
- One platform for all activity with single instance of the platform allowing users to interact with all resources and access all data sources
- 'One Team' culture between the Cognizant and FSA data scientists
- Ability and flexibility to ingest and analyse multiple data sources simultaneously
- Set up BAU processes to execute the models on the latest data to generate insights for sharing with multiple consumers.

#### **Technical landscape – transition towards Microsoft Azure cloud platform**

We also believe that the technical process flow/platform is a short- to medium-term fix, giving breathing space before the next stage of development, which will see more datasets being brought under management, and models built from more sophisticated data structures. For instance, there might be a need to begin working with unstructured media data, and develop previous work on trade-route network analysis, which will be best done using a graph database such as Neo4j. Future projects might work with supply chain data from DLT sources and satellite images.

In this context, a cloud-based technical platform becomes necessary and we understand that Microsoft Azure is the best-fit solution in this case, as:

- Azure strongly supports multiple tools already used or preferred by the FSA, specifically SQL Server plus non-Microsoft tools Python, R etc.
- Azure provides strong support for DataFactory and DataBricks, which can be leveraged for data engineering and ML DevOps
- FSA's data scientists and data team have accumulated experience using Azure and Microsoft SQL Server

- Azure platform offers high flexibility and instantly scalable GPUs processing to support intensive ML/AI training operations.

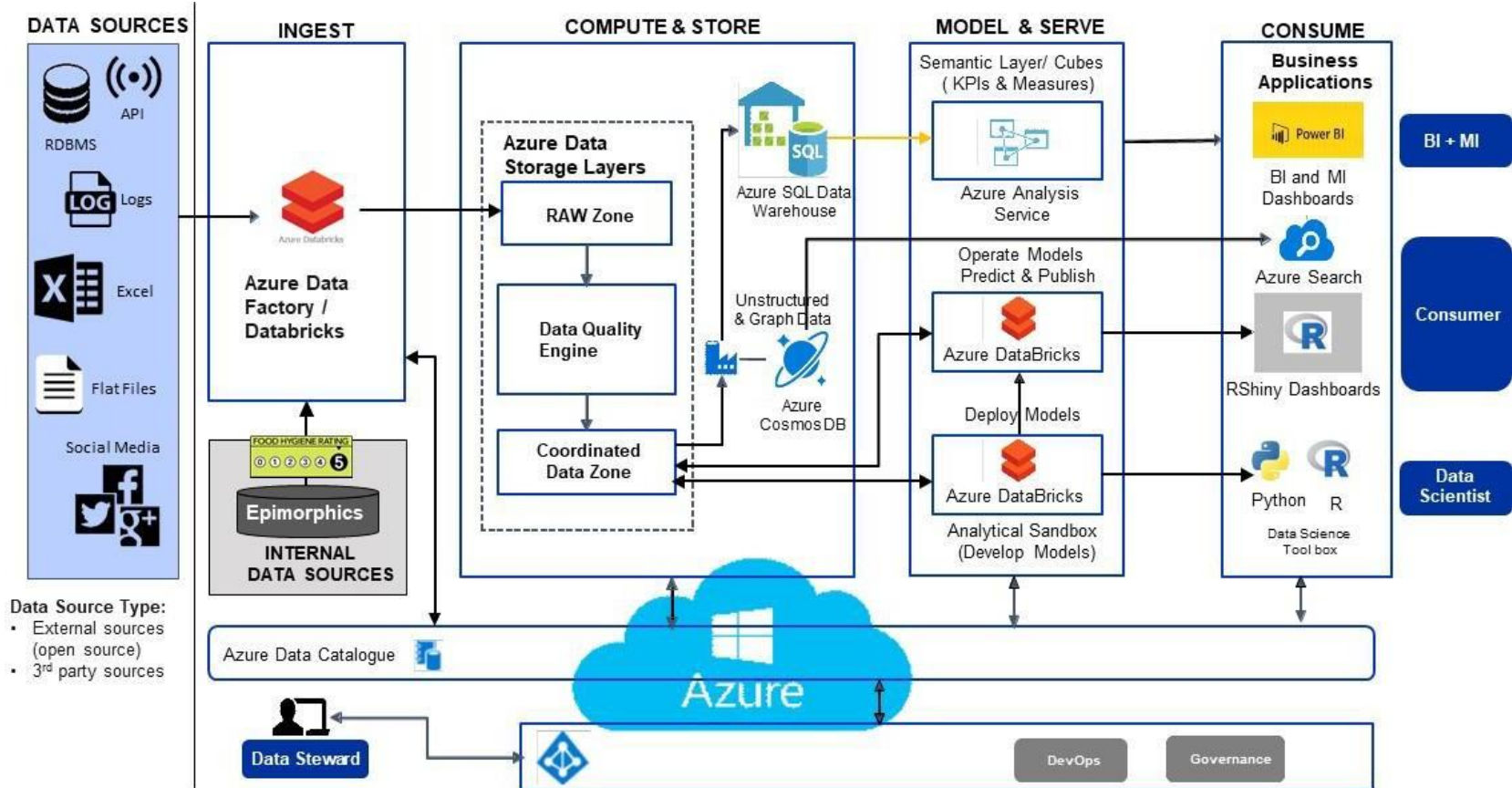


Figure: Example of a Microsoft Azure-based technical architecture

We recommend a technical architecture similar to the one shown in the diagram above will be the natural extension to the current landscape on which end-to-end pipelines for development and operationalisation of use cases can be implemented.

For Centrica we created a similar analytical data hub on the Microsoft Azure platform. We developed a fully automated, metadata/configuration-driven end-to-end validation and processing data pipeline to onboard 80+ data sources, creating various dimensional models to support PowerBI/Qlik-based MI reporting/dashboarding and visualisation. The platform was also used by data scientists to deliver several use cases using AI/ML (e.g. data from smart-metering, call centres (Data/Voice/Image) was used to create AI/ML models for predictive analytics, text analytics and sentiment analysis).

### Operationalising and running AI/data science models at scale

“Operationalising MVPs” is the crucial next step for Strategic Surveillance. This refers to embedding MVPs delivered in each 10-week technical sprint cycle into a production-ready environment to support business users. To achieve this, a systematic approach will be applied to automate tasks and orchestrate operational processes in a way that it meets measurable, defined goals aligned to FSA’s business priorities and is also secure and meets pre-agreed governance standards and SLAs.

The operationalising process includes:

1. Building models with repeatable, reliable results that do not depend on any single person or working environment to operate.
2. Making model results available to end-users in a timely and useable manner.
3. Monitoring model performance on an ongoing basis to ensure quality and alert analysts to any degradation over time.

Listed below are the key considerations that we will continue to focus on during the operationalising of MVPs:

- |  |  |
|--|--|
|  | <ul style="list-style-type: none"> <li>• <b>Automated data ingestion</b> based on new data made available by source by using a virtual machine to refresh the output periodically using a windows scheduler</li> <li>• <b>Development of self-learning models</b> by taking into consideration differences between predicted and actual values to update future predictions</li> <li>• <b>Sharing of transferable data and insight</b> from other government departments and across industry</li> <li>• <b>Monitoring and enhancing</b> performance of existing models frequently</li> <li>• Assisting users through <b>live support, demos and user training</b></li> <li>• Designing and implementing a <b>change control process</b> to fix UAT (User Acceptance Test) defects</li> <li>• <b>Knowledge management</b> through documentation of all project BAU materials, as well as version controlling</li> <li>• <b>Controlling source code</b> by cataloguing, utilising GitHub for version controlling as separate production and development branches</li> <li>• <b>Data and information governance</b> including data cataloguing, metadata management, user access control, security/privacy restrictions etc.</li> <li>• <b>Compliance</b> with all relevant legislation and ethics frameworks, code-of-practice regulation, and guidance related to the use of ML/AI, including codes of practice, data ethics, GDPR, digital standards, ICO guidance etc.</li> </ul> |
|--|--|

- |  |  |
|--|--|
|  | <ul style="list-style-type: none"><li>• <b>Quality assurance</b> in terms of data standards, accuracy, completeness, relevancy, timeliness and consistency when selecting a source. Disciplined governance activities, rigorous management of incremental data, accurate requirements gathering and careful design of end-to-end pipeline.</li></ul> |
|--|--|

**Ethical AI technical framework and solution**

Below describes the framework in which the ethical AI advisory and reporting structure will behave relative to the technical 10-week sprint process from design to deployment. The five pillars of the ethical evaluation display the details highlighting the solution in which the 'Reflect, Act, Justify' system is performed.

# Applying AI Data Ethics to Future AI Systems

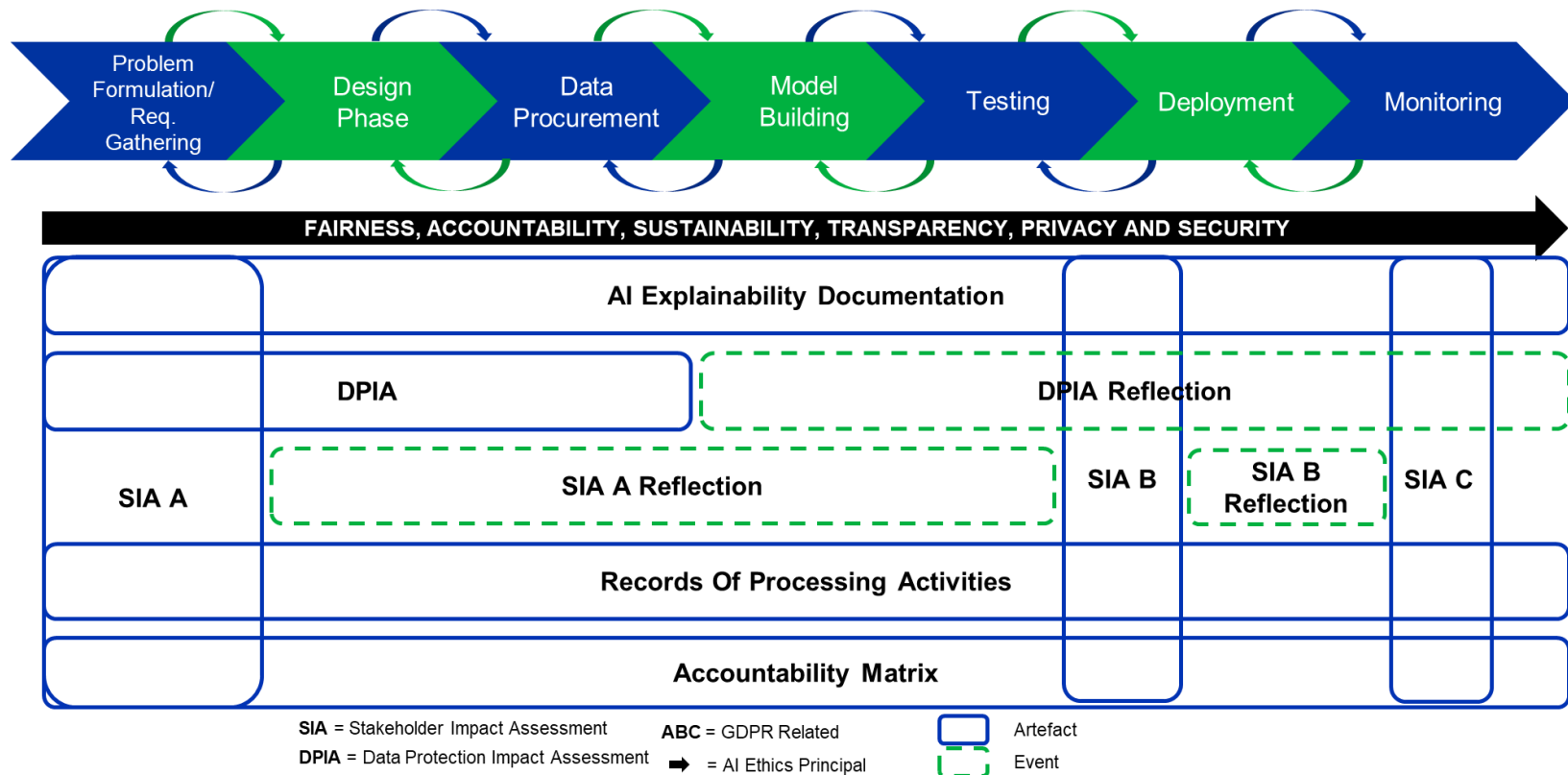


Figure: Ethical AI technical framework

## Collaboration as a natural way of working:

For the FSA, we have and will continue to collaborate to establish an environment that:

	<ul style="list-style-type: none"> <li>• Invites all differing perspectives: Inviting differing perspectives from within the extended FSA ecosystem will often unearth valuable, fresh points-of-view. Our goal is to get the people who are affected by specific decisions in the room and solicit their insights, irrespective of organisational boundaries or seniority. Hackathons are great vehicles for generating this positive environment where ideas can be shared and explored.</li> <li>• Encourages questions and ideas from everyone: When our team or customers have an issue with the current status quo we take this opportunity to get curious with them and ask questions about why it is not working, and what they will do to fix it. Maybe a major overhaul is not in order, and only a simple adjustment is needed to make everyone more engaged. These one-on-one opportunities are great ways to, little by little, shift away from the current state of affairs towards something more meaningful.</li> <li>• Follows-through to make the change: If a decision is taken not to take ideas forward, we take the time to communicate and explain this to our team in a way that does not close down future ideas. However, for ideas and suggestions that are taken forward, it is important that these should be recognised, and improvements measured. This encourages the commitment to continuous refinement and improvement through challenging the status quo.</li> </ul>
<b>Team structure</b>	Describe the team who'll be doing the work and how they'll work together. List the roles, their responsibilities and the number of people you need in each role for each stage of the work.
	<p><u><b>Team structure:</b></u></p> <p>We will provide continuity to the FSA with the core team, collaborating with the FSA to refresh the team with new talent and thinking where appropriate.</p> <p>As explained briefly in the approach section, we believe the team that would carry on the work at the FSA needs to be composed as follows:</p>

We propose a four-member team consisting of one analytics consulting manager (sprint lead), one analytics data science lead, one mid-level data scientist and one junior data scientist as the core sprint team to work on development of new MVPs. The rate card in the commercial template reflects this assumption.

Sprint Team (Roles)	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Data Science Consulting Manager	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Data Science Lead * 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mid Level Data Scientist * 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Junior Data Scientist * 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FSA Data Scientists	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

✓ Working for that week

**Figure: Core team would work together with FSA data scientists on 10-week sprints**

Along with the core team, Cognizant proposes a Continuous Improvement (CI) team to support the MVP delivered at the end of the sprint. This team will support the delivered MVP and operationalised tools such as Signal Prioritisation Dashboard, Risk Likelihood Dashboard, Aflatoxin analysis etc., and ensure underlying models (and assumptions) are revisited regularly. For consistency and flexible movement between the Core Sprint and Continuous Improvement teams, the Continuous Improvement team will also follow the 10-week cycle.

CI Team (Roles)	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Senior Data Scientist * 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Data Scientist * 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Junior Data Scientist * 1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FSA Data Scientists	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

\*CI - Continuous Improvement Team

✓ Working for that week

**Figure: CI team would also work together with FSA data scientists**

Based on the scale and the scope of the work Cognizant envisages, we recommend augmenting the data science team with the following expert skills / roles, along with the core ML / AI team:

- **Business analyst**

The business analyst will work closely with the Head of Data, Head of Strategic Surveillance, Sprint team lead and larger Strategic Surveillance team to identify potential opportunities where Strategic Surveillance can add value, whether within the FSA or externally. For each sprint, the business analyst will clearly articulate the objective and requirements upfront, work closely with the sprint team throughout the 10-week period to help ensure successful delivery and support user adoption.

- **Business Change lead**

The Business Change lead will work closely with the Head of Strategic Surveillance and Sprint team to develop a strong change strategy, manage key stakeholders and run thorough Change Impact Assessment to ensure new and past MVPs are adopted by the key stakeholders. They would also mobilise a surveillance champion network, effect Service & Sprint-specific communication and develop tailored engagement and training materials. They would also track benefits and adoption in a structured manner.

- **AI / Deep Learning Expert**

An AI / deep-learning expert will bring leadership experience and manage a team in advanced predictive modelling and deployment of models using open AI toolkits. They will work with the Sprint lead for identifying new use-case opportunities to implement AI / deep learning solutions using innovative methods and technologies and implement best practices for explainable AI. They would also be responsible for building the overall approach to AI ethical governance to ensure models and their delivery process can generate results that are reproducible and verifiable.

- **Ethicist**

The Data Ethicist will work alongside the Data Science team and will provide AI ethical expertise. They will be responsible for developing and reporting on all ethical-related queries relating to data management by the technical Sprint team, including on frameworks like GDS and Alan Turing. This work will be performed on behalf of the FSA for internal and external purposes as directed by the stakeholders. They would also be responsible for supporting and training in-house ethical AI expertise.

These roles are detailed below along with the R&R of the core team.

### **Roles & Responsibilities**

(NOTE – Some roles may overlap between the team members. For ease of reading, they may have been demonstrated at just one place to avoid repetition)

- **Analytics Consulting Manager / Sprint Lead**

- Communicate and clarify business requirements and expectations with FSA stakeholders
- Utilise strong technical know-how of various AI & machine learning platforms, tools, and algorithms to determine a best-fit solution (technical) approach
- Knowledge of the Data Ethics Framework and supporting guidance from The Alan Turing Institute including SUM and Fast-Track Principles
- Delivery and implementation experience using data science and analytical tools - R, Python etc. on client architecture
- Hands-on experience of multiple Microsoft Azure components including development of end-to-end pipelines
- Bring thought leadership into the outline approach and roadmap of the surveillance capability development
- Help FSA build a robust and financially viable business case for their investments in future data science initiatives
- Prepare presentations and status reports for key meetings: show and tells, checkpoints, steering committee, other internal and external workshops
- Ensure project outcomes are in alignment with the FSA's strategic objectives

- **Data Science Technical Lead / Senior Data Scientist / Mid-Level Data Scientist**
  - Bring leadership to the outline approach of data science best practices in predictive risk insight
  - Expertise of data cataloguing, utilising GitHub for version controlling and deployment of dashboards
  - Lead the team of predictive modellers in formulating and developing solutions for the use cases using best practices
  - Identify the appropriate delivery model to help FSA acquire a 'toolbox' of analytical and data science models
  - Conduct detailed analysis of datasets available for implementing the use case(s)
  - Expertise in multiple data science and analytical tools - R, Python and SQL
  - Hands-on experience of multiple Microsoft Azure components including development of end-to-end pipelines, and machine learning components using Microsoft Azure Machine Learning
  - Determine the data science tools required to build the prototype dashboard by understanding the complexity, scalability and other key aspects
  - Quality Assurance for data sources
  
- **Junior data Scientist**
  - Responsible for development of models and prototype dashboard using a combination of R and Python.
  - Jointly working with the team to identify potentially useful data sources required for the hackathon and/ or prototyping
  - Perform data assessment and other data-related preparations needed for the hackathon
  - Collate key learnings from the hackathons to help choose best course of action to pursue
  - Develop the visualisation screens on R shiny (or other visualisation tools) as per requirements
  - Develop end-to-end ETL and unit testing process
  
- **Business Analyst**
  - Engaging with stakeholders (within FSA, other government departments, industry etc.) to explore business needs and identify potential areas for collaboration
  - Proactive desk research (through online materials and research papers) and engagement with subject matter experts (SMEs) on emerging and current issues impacting the food sector

- Eliciting requirements from use-case owners and cataloguing them systematically
  - Working with FSA's Information Governance and Legal teams on Data Privacy, Data Sharing and Privacy Impact Assessments
  - Facilitating steering committee meetings, hackathons and workshops
  - Facilitating or participating in other meetings such as senior management team meetings, weekly review meetings, Sprint Checkpoints, sprint show and tell sessions, sprint review meetings
  - Creating content for the various presentations and papers that Strategic Surveillance leads on or contributes to
  - Creating user guides and data stories
  - Supporting in-house testing of prototypes and continuous development
- **Business Change Lead**
    - Develop a change strategy
    - Management of the key stakeholders by working with Head of Surveillance on a day-to-day basis, leadership engagement and broader engagement activities across the Service
    - Support post go-live engagement activities including demos, one to one and train the trainer sessions
    - Run Change Impact Assessment exercise for every impacted user group, identify gaps and propose mitigation steps
    - Develop a training plan and create knowledge building materials for end users
    - Design a process for capturing business benefits and feedback
    - Mobilise a strong Surveillance Champion network, representing teams across the agency
    - Develop a service communication plan and sprint-specific communications. Collaborate with the FSA's internal comms team
- **AI / Deep Learning Expert**
    - Extensive leadership experience in technical sprint management for a team and communication skills (as mentioned for Analytics Consulting Manager)

- Provide expertise in advanced statistics to create data products such as: regression curves, bootstrapping, ensemble modelling, Bayesian Networks
- Provide hands-on expertise in advanced predictive and operational forecasting models using Random Forest, Neural Networks and solution techniques like PCA, SVM, Kmeans clustering
- Experience in best practices for deploying models using open AI toolkits: TensorFlow, Keras, Theano, Spacy
- Strong leadership in ethical delivery evaluations for methodologies from a perspective of regulation, AI bias performance through to internal and external governance
- Experience in AI ethics frameworks delivery at Government and Corporate level
- Collaborative contributions with academic institutions within ethical AI

▪ **AI Data Ethicist**

- Shape, develop and manage the AI code of ethics approach tailored for the FSA based on a good understanding of public safety codes of conduct, legal regulations and government policies
- Experience of close working relationships with technical science teams, with a good grasp of the deep learning techniques of common AI toolkits like Neural Networks and Random Forests
- Prepare communication materials and presentations to be used in stakeholder meetings including the AI Data Ethics Forum
- Continually develop and maintain the FSA's ethical framework with academic rigour, ensuring that its principles evolve with new technologies. This will involve internal and external stakeholder engagement to develop a data ethics culture
- Collaborate with other AI data ethicists within FSA and across government to deliver transparency and social benefit
- Support in-house training within the FSA

**Cognizant's Commitment to put forward the best in class capability for FSA**

Cognizant's commitment to challenging the status quo has been at the heart of many of the digital transformation programmes where we've helped our customers reinvent products, experiences and business models to create new value and differentiation in the digital economy.

We begin with data science, human-centric design thinking and knowledge of our customers' most important processes. We then collaborate with business users to inspire intelligent products, disruptive strategies and new ways of engaging across every channel. Transformation may be enabled by technology, but it is really driven by users. That's why our teams are experts at providing a bridge of communication and understanding between technical and non-technical communities




Cognizant has been executing large engagements using Agile for over a decade. It is our default delivery model, successfully adopted across numerous projects (4000+ in last 3 years). We have 200+ agile coaches and 40,000+ agile trained personnel. We are experienced in working alongside customers in co-located and integrated teams using various agile methods such as SCRUM, SAFE, and Kanban etc. We will bring our best in class associates with such experience for delivering FSA's business outcomes. Our relevant experience includes:

1. Home Office - Scaled Agile Framework for Digital Technology and Big data services
2. Heathrow Airport – Scrum Framework for Digital Transformation programme
3. Large British Energy and Utilities Company – Scrum framework for multiple digital programmes in the areas of smart payment, smart channel, retail market and services sales programme.

Cognizant trains all of our Agile teams extensively in behavioural skills. Our structured role play-based program, ABEL (Agile Behavioural Learning), introduces and emphasizes the importance of collaboration in Agile teams.

Our approach and delivery model is fully aligned to the GDS guidance on agile projects and phasing laid out in the Service Manual. This has been successfully applied, and well received, during our engagement with the FSA's Strategic Surveillance services.

Cognizant will continue to take our experiences of the best Agile working practices, culture and tooling to help build and maintain the dynamic fast-moving environment modern digital teams need to coordinate their activities, share knowledge and check understanding, communicate progress and collaborate.

Estimated timeframes for the work	Say when you can deliver the work. Break down the work into phases and say when each phase will be done.																																																																																																																																																																																	
	<p>In line with the current approach followed by the sprint team at the FSA, Cognizant proposes the following timeframes / plan for implementing a sprint within a 10-week period:</p> <table><tr><th>S.No.</th><th>Activity - Work Package Approach</th><th>Category</th><th>Week 0</th><th>Week 1</th><th>Week 2</th><th>Week 3</th><th>Week 4</th><th>Week 5</th><th>Week 6</th><th>Week 7</th><th>Week 8</th><th>Week 9</th><th>Week 10</th></tr><tr><td>0</td><td>Use Case Preparation</td><td>Use Case Preparation</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td>Use Case Understanding</td><td rowspan="2">Use Case Discovery</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td>Data Review and Acquisition</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td>Hackathon Preparation</td><td rowspan="3">Approach Discovery / Use Case Evolvement</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td>Hackathon Facilitation / Participation</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td>Use Case Refinement / Evolvement</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td>Data Preparation for Modelling</td><td rowspan="3">Solution Development</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td>Algorithm / Model Development</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td>Results Validation &amp; Presentation</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>9</td><td>Feedback Incorporation</td><td>Playback and Improvement</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>10</td><td>MVP Release &amp; Roll-out</td><td>Release &amp; Roll-out</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> <table><tr><td></td><td>Business Change Strategy</td><td>Drive Change &amp; Adoption</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> <div><div> Workshops/ Hackathon</div><div> Checkpoints with stakeholders</div><div> Show &amp; Tells</div></div> <p><b>0. Use case Preparation (Week 0)</b></p> <p>Before the sprint begins, Cognizant will work with Strategic Surveillance and FSA stakeholders to identify which of the various departments’ needs could be the candidates for potential use cases for the next sprint. All sprint related documents will be uploaded to the Strategic Surveillance ‘SharePoint’.</p>	S.No.	Activity - Work Package Approach	Category	Week 0	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	0	Use Case Preparation	Use Case Preparation												1	Use Case Understanding	Use Case Discovery												2	Data Review and Acquisition												3	Hackathon Preparation	Approach Discovery / Use Case Evolvement												4	Hackathon Facilitation / Participation												5	Use Case Refinement / Evolvement												6	Data Preparation for Modelling	Solution Development												7	Algorithm / Model Development												8	Results Validation & Presentation												9	Feedback Incorporation	Playback and Improvement												10	MVP Release & Roll-out	Release & Roll-out													Business Change Strategy	Drive Change & Adoption											
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Key activities:	Key deliverables:
<ul style="list-style-type: none"> <li>• Work with multiple stakeholders to identify candidates for next sprint</li> <li>• Organise workshops such as internal networking sessions to identify needs of various FSA departments</li> <li>• Assist Strategic Surveillance with facilitation of Steering committee meeting</li> </ul>	<ul style="list-style-type: none"> <li>• Completion of 'Service Request Initiation Form'</li> <li>• Presentation / Content for Steering Committee on ongoing work</li> <li>• Maintaining 'Request backlog' for candidate use cases</li> </ul>

### 1. Use case understanding and review (Weeks 1 - 2)

For the first two weeks of the sprint, the Cognizant sprint team, Business Analyst and Change lead will work with the use-case owners and SMEs to understand the business need and review the selected use case topic.

Key activities:	Key deliverables:
<ul style="list-style-type: none"> <li>• Use case kick-off and sprint team on-boarding</li> <li>• Gain high level business understanding and business process landscape</li> <li>• Review the use-case and the proposed datasets</li> <li>• Schedule meetings / workshops with SMEs, data scientists and business stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Detailed project plan for the sprint</li> <li>• Hackathon schedule finalisation</li> <li>• Stakeholder calendar booking</li> <li>• Preliminary communications about hackathon</li> </ul>

### 2. Data review and acquisition (Week 1 – Week 3)

For the first three weeks of the sprint, Cognizant sprint team will also work with FSA stakeholders to review the datasets available for the use case topic(s) selected. Data scientists within the team will identify and acquire the open source datasets available and host these on the FSA's Azure SQL platform.

Key activities:	Key deliverables:
<ul style="list-style-type: none"> <li>• Identify and prepare available data sources for analysis</li> <li>• Clean and refine the available datasets for consumption</li> <li>• Perform preliminary data assessment and use case analysis</li> <li>• Host all sprint-related data on FSA SQL database</li> <li>• Identify challenges / limitations for each data source</li> <li>• Maintain data catalogue for the sprint</li> <li>• Initiate change strategy</li> </ul>	<ul style="list-style-type: none"> <li>• List of selected datasets available – their veracity, suitability and completeness</li> <li>• Report on data sets quality (even if not usable)</li> <li>• Commercial data sources available on the market</li> <li>• Initial data assessment report and updated sprint data catalogue</li> </ul>

### 3. Hackathon preparation (Week 3)

During weeks 2 and 3, Cognizant will make the preparations required to organise the hackathon. We will work with the FSA to understand the key aspects and build on lessons from previous hackathons to improve the proposed hackathon.

Key activities:	Key deliverables:
<ul style="list-style-type: none"> <li>• Send necessary hackathon communications</li> <li>• Prepare necessary presentation / content for facilitating the hackathon</li> <li>• Prepare the necessary collateral for expectation setting</li> <li>• Provide data science backgrounds to stakeholders with no data science background</li> </ul>	<ul style="list-style-type: none"> <li>• Book Cognizant Collab for the hackathon (or alternative platform in case of online workshops)</li> <li>• Environment setup for conducting hackathon (Azure)</li> <li>• Tools setup for conducting hackathon e.g. Python / R etc</li> </ul>

#### 4. Hackathon facilitation / Organisation (Week 4)

Cognizant's experience suggests (subject to change based on further discussions with the FSA and in light of specific use-case needs) conducting the hackathon during week 4 of the sprint. Considering the criticality and complexity of the use case, and the availability of key stakeholders, changing the length and time of the hackathon could be considered following discussions with FSA.

Key activities:	Key deliverables:
<ul style="list-style-type: none"><li>• Facilitate the hackathon</li><li>• Work with FSA SMEs, business stakeholders and data scientists to explore various analysis and approaches to tackle use case</li><li>• Utilise Day 2 of the hackathon to provide users with some sample analysis</li><li>• Identify stakeholders as known at this point</li><li>• Initiate discussions with key use case owners on the current way of doing things to enable envisage the future state and benefits.</li><li>• Readiness Assessment Survey</li></ul>	<ul style="list-style-type: none"><li>• Best fit approach(es) finalised by the group as technical solution for the output</li><li>• Notes from the hackathon group discussions and presentations</li><li>• Stakeholder metrics updated to start maintaining list of primary users</li><li>• 'AS-IS' &amp; 'TO-BE' process (What's changing) documentation started</li><li>• Roll out Readiness Assessment Report</li></ul>

#### 5. Use-case refinement / evolution (Weeks 4 and 5)

For weeks 4 and 5, Cognizant will work on 'refinement' or 'evolution' of the hackathon outputs, building on the approach and data sources prioritised in the hackathon and validating the findings. The business change team would identify key stakeholders and change champions to drive adoption of the tool within their respective teams.

Key activities:	Key deliverables:
<ul style="list-style-type: none"> <li>• Kick-off stakeholder engagement</li> <li>• Discuss hackathon findings</li> <li>• Gather results and insights gained</li> <li>• Selection of appropriate analysis, data sources and techniques for use case(s) for further analysis</li> <li>• Replay hackathon results and findings (through show and tell or similar session)</li> <li>• Conduct weekly checkpoints with use-case owners and experts</li> <li>• Identify preferred communication channels and set-up communications plan. Identify upcoming key events to leverage for promoting the benefits of new change</li> <li>• Establish high-level stakeholder engagement plan</li> <li>• Engage with use case owners and identify Surveillance Champions (if possible)</li> </ul>	<ul style="list-style-type: none"> <li>• Hackathon findings – use cases assessment report</li> <li>• Selection of data sources and techniques for prototyping</li> <li>• Engagement Plan</li> <li>• Change Impact Assessment initiated</li> <li>• Communications plan</li> </ul>

#### 6. Data preparation for modelling (Weeks 5 and 6)

Based on the data sources (and approaches) prioritised in the hackathon by the subject matter experts, the Cognizant sprint team will make the data ready: data standardisation, cleaning, transformation and merging.

Key activities:	Key deliverables:
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<ul style="list-style-type: none"> <li>• Data standardisation: follow best practices for standardisation using FSA data standards</li> <li>• Data cleaning: replacing missing values, imputation techniques</li> <li>• Data transformation: exploratory data analysis to extract key insights</li> <li>• Data merging: creation of master data by merging all individual data sources</li> <li>• Keep stakeholders regularly informed and engaged</li> </ul>	<ul style="list-style-type: none"> <li>• Standardised data for modelling (as per FSA best practices and data standards)</li> <li>• ETL output uploaded onto FSAAzure SQL server</li> <li>• Training plan</li> </ul>
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## 7. Algorithm / model development (Weeks 6 to 8)

From week 6 to week 8, Cognizant will work with SMEs, business stakeholders and data scientists to further develop an initial version of the analytical model and prototype(s) using appropriate / innovative data science techniques. The team will also develop a user-friendly, interactive interface using R Shiny (or any other FSA recommended tool) for users to access the model results and outputs.

Key activities:	Key deliverables:
<ul style="list-style-type: none"> <li>• Develop initial analytical models and prototypes on agreed analysis</li> <li>• Demonstrate modelling results to key stakeholders and SMEs</li> <li>• Summarise results and learnings from prototyping process</li> <li>• Identify blockers / risks and discuss steps to mitigate them</li> <li>• Conduct weekly checkpoints with use case owners and experts</li> </ul>	<ul style="list-style-type: none"> <li>• Initial modelling results/ prototyping tool</li> <li>• Summary of results and learnings</li> <li>• Demo of the draft / work in progress version</li> <li>• Change Impact Assessment and mitigation through change management</li> </ul>

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#### 8. Results validation and presentation (Week 8)

Although results validation and presentation will be ongoing throughout the model development cycle, it has been included as a specific item on the plan to reinforce its importance to ensure the technical solution's success.

Key activities:	Key deliverables:
<ul style="list-style-type: none"> <li>• Evaluate modelling results and findings</li> <li>• Show and tell session to wider FSA (and external) audience</li> <li>• Collate business and technical feedback of results</li> <li>• Develop tailored training material, quick start guides etc.</li> <li>• Develop tailored communication and engagement materials for wider roll-out to the team and to encourage adoption</li> </ul>	<ul style="list-style-type: none"> <li>• Test dashboard for testing</li> <li>• Documentation: modelling approach and validation results</li> <li>• Training materials</li> <li>• Communication and engagement materials</li> </ul>

#### 9. Feedback incorporation (Weeks 8 and 9)

During week 8 and week 9, the sprint team will incorporate the feedback from checkpoint review workshops and Show and Tell sessions to update / enhance the prototype dashboard with modelling changes, visualisation changes and any other logic / business rule-related changes.

Key activities:	Key deliverables:
<ul style="list-style-type: none"> <li>• Update modelling results and findings based on user feedback</li> <li>• Prepare presentation of initial modelling results</li> <li>• Finalise engagement and communication materials</li> <li>• Engage with stakeholders and encourage feedback where possible</li> </ul>	<ul style="list-style-type: none"> <li>• Updated prototype dashboard / tool</li> <li>• Source code pushed to GitHub</li> </ul>

#### 10. MVP release and rollout (Week 10)

After incorporating the feedback, Cognizant will work on the completion of data science models, prototype dashboard, and would propose next steps and the future roadmap for FSA stakeholders.

Key activities:	Key deliverables:
<ul style="list-style-type: none"> <li>• Refine and finalise back-end model and visualisation</li> <li>• Document learning and identify any blockers</li> <li>• Present final modelling / prototyping results</li> <li>• Prepare a draft of roadmap for use case(s) implementation</li> </ul>	<ul style="list-style-type: none"> <li>• Mobilisation / roadmap for operationalisation</li> <li>• Share URL for MVP dashboard</li> <li>• Version control source code in Github branch</li> <li>• Documentation: model document, user guide, validation results on FSA SharePoint</li> </ul>

- Conduct a final show and tell for key stakeholders and wider FSA audience
- Present key findings from Change Impact to key stakeholders
- Establish post go-live stakeholder support / communications, Stakeholder engagement/communications for go-live readiness
- Train the Trainer

In line with the FSA's sprint cycle, the core sprint team will move to a new use case (or enhancement of the existing use case) after completing a 10-week sprint. Cognizant envisages that some activities will need to be continued in order to ensure tools delivered by the Strategic Surveillance team achieve expected business benefits. These will be performed by a continuous improvement / operationalisation team that would also maintain / support existing solutions developed by the strategic surveillance team in the last few years.

To maintain consistency and to enable flexible movement between core and support teams, the continuous improvement team would, as much as possible, follow the sprint team's 10-week cycle. The business change team will support users in reaching adoption for the current and past sprints.

#### **Continuous improvement / supporting data scientists:**

The continuous improvement team's key activities / deliverables would be:

##### **Key activities:**

- Deploy all codes to FSA's Virtual Machine (VM) and set up an automated end-to-end pipeline for data ingestion
- Develop scripts to run data science models on incremental data through the ETL process
- Update the SQL tables utilised by the dashboard for users to be able to see the latest data
- Support business as usual (BAU) processes which might require talking to the FSA Data and IT teams and other vendors / providers
- Incorporate change requests received for the MVP i.e. requests for enhancements or new functionalities
- Bug fixes
- Documentation of all project BAU materials (including code), along with version controlling
- Roadshows to demonstrate the benefits of the new change
- Training / demo sessions for key stakeholders and end users. Offer one-to-one training where necessary
- Re-training the models after a certain period by consistently monitoring the accuracy of outputs from the model
- Maintain best practices for source code version control, with a separate production and development repository / branch on Github

#### **Business change:**

The business change team's key activities / deliverables would be:

#### **Key activities:**

- Continue engaging with the Surveillance Champion Network and leverage their support to achieve the key objectives set out in the communication and engagement plan
- Gather quick wins and success stories for communication to the wider FSA
- Encourage a feedback loop and capture benefits. Document the benefits realised.
- Develop further engagement and knowledge-building materials to ensure users develop the capability they need

	<ul style="list-style-type: none"> <li>• Keep engaging via preferred channels of communication for every stakeholder group as identified during earlier phases of the sprint. Deliver the message of change and continue to support until adoption is reached. Participate in key events/ meetings to promote the benefits in alignment with strategic objectives of each group and user community expectations.</li> <li>• Track adoption and plan further engagement activities to understand why the change is not adopted and offer additional support until the desired level of adoption is achieved. Seek leadership advocacy where required. As part of change adoption measurement, the team will use readiness / post go-live surveys, capability heat maps, Google Analytics leveraged to evaluate usage, users' perceptions, track engagement, readiness across the FSA stakeholder.</li> <li>• Send recurrent knowledge building materials such as 'Hints &amp; Tips' to help users understand the tool and its capabilities better</li> </ul>
<b>Price</b>	<b>Please complete the Strategic Surveillance Commercial Template found in Bravo and attach to the Commercial Envelope.</b>
<b>Value for money</b>	Describe how your proposal will optimise costs and generate savings.
	<p><b>Optimise costs and generate savings:</b></p> <p>As part of Cognizant's ongoing commitment to the FSA as a strategic Client, we are proposing a discounted commercial offer that would deliver savings of up to £79K per annum on a like for like basis for the current team. Cognizant recognises that a key measure of success for strategic partners is their ability to increase value for clients through consistently delivering effective</p>

innovation and improvements. At Cognizant, our continuous innovation and improvement aims to ensure our customers are receiving better value for money throughout the engagement.

**A stable, optimised team with refreshed, new skills**

Cognizant will work with the FSA to look for opportunities to refresh and bring in new members to complement and strengthen the team while optimising budget spend. The core sprint team of four that will develop the MVPs will be augmented by a support team consisting of data scientists, a business analyst, change consultant(s) and ethicist(s). Ethics is embedded as a standard methodology for how all future models are designed, developed and deployed. Cognizant will maintain the majority of the current team at the FSA, while also looking to refresh and bring in new members to complement and strengthen the team while optimising budget spend.

We will make flexible use of teams for ML and AI use cases by upskilling and cross-skilling Cognizant and FSA teams delivering efficiency savings. We will modularise the support team, enabling the FSA to procure services on-demand and leverage the business analyst, change consultant(s) and ethicist(s), across the ML and AI epics and any new epic such as Blockchain.

**Hosted hackathons**

We propose hosting hackathons free of charge in our dedicated Collaboratory in Paddington. For hackathons during the COVID-19 remote working period, we will aim to introduce additional collaboration features from Cognizant's virtual collaboration methodology. This enhances the aspects of remote working collaboration, communication and reporting and gamification that incentivises and motivates the teams.

**Ethics framework**

Cognizant has already invested in ethicists to develop the AI ethics framework playbook for the FSA. We propose continuing investment in a senior ethicist who will be supported by the AI Lead for to set up and run the FSA's Ethical Framework Forum that will act as internal moderator and regulator. The Forum is expected to make use of the Office of AI's instruments such as the Turing Institute.

The ethics framework for the AI programme will be developed on an evolutionary pathway starting small and scaling up using a right size approach collaboratively with FSA and the ethics forum. Cognizant's ethics forum approach generates a tailored solution created from the ground up; specifically designed to maximize benefit to the FSA and showcase their leadership across wider government.

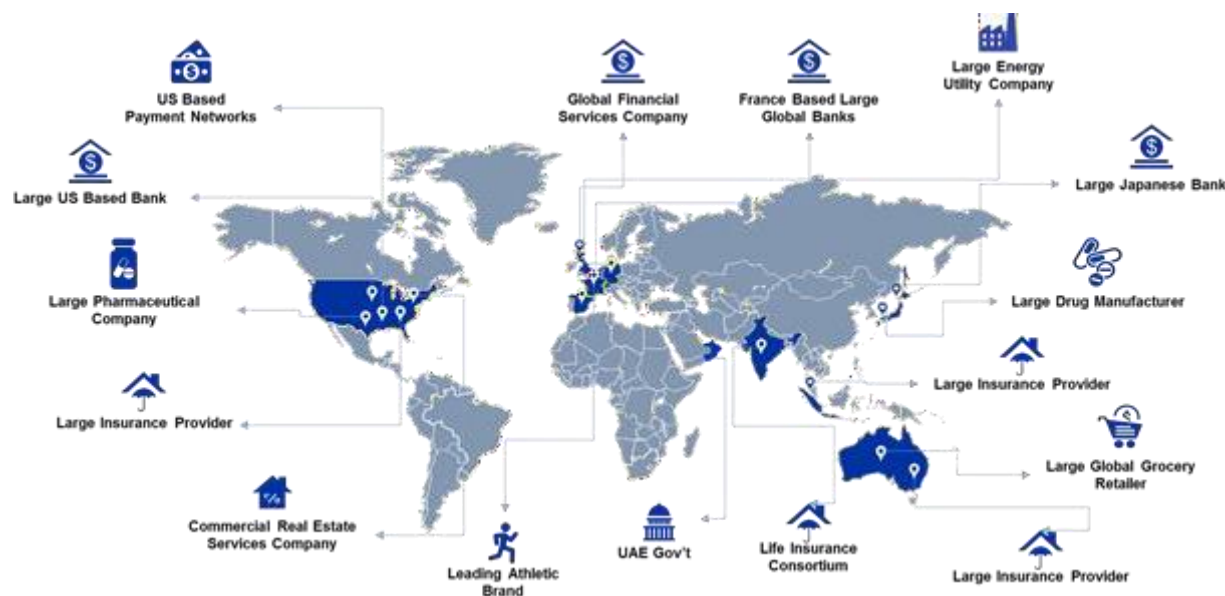
This will be performed and driven, free of cost, by Graham Thomas (Global Head of Data Privacy) and Neel Savani. They will design and create the forum with national leaders within the UK, with continuous discussion and workshops at the FSA. Our approach will create a strong foundation within FSA for the fast-evolving area of AI ethics in government, which will remain robust for many years to come. These strong foundations reduce the risk of the ethical approach becoming obsolete.

### **Blockchain CoE**

As part of the FSA's objectives to continuing innovation, we recommend the pursuit and ongoing evaluation of other emerging technologies such as Blockchain. Cognizant will co-invest in a Blockchain PoC and work closely with the FSA to generate, develop and deploy new ideas.

Blockchain, sometimes referred to as distributed ledger technology (DLT), has shown promise in bringing greater transparency of data throughout the supply chain to improve claims of sustainability and efficiency and make responses to food safety issues swifter and more targeted.

Cognizant's cross-industry Blockchain Practice is recognised by Everest as a 'Leader' in its annual PEAK Matrix and by HFS as a top-10 service provider. Taking a partner-centric, vendor-agnostic approach, the Blockchain Practice has undertaken more than 60 projects with 40 clients and 7 industries.



In particular, Cognizant's Blockchain Practice has invested in and developed a specialty in supply chain applications, with two market solutions (a farm-to-fork provenance tracking application and, Be-Verify, a luxury goods counterfeit tracking application). The practice also works across different supply chain perspectives. In grocery retail, it worked with a leading Australian grocer to build a supply chain tracking solution for improved transparency in its fish supply chain. Elsewhere, it has worked with pharmaceutical clients to track recalls of prescription drugs, insurance clients to improve automated supply chain claims and with retail clients to manage inventory within a micro-region.

### **Innovation and acceleration**

Cognizant will invite the FSA to participate in Cognizant's seminars, roundtables, and communities to help you keep abreast of the latest thinking in data science and learn from our customers' experiences in other industries and sectors. We will work collaboratively with the FSA to create an environment where teams seamlessly work together and hone their technical capabilities to deliver innovation to the FSA. We will enable this through:

- **Innovation board / transformation office** - Cognizant will set up an innovation board with the FSA. The board will include a committee of experts and thought leaders who engage and collaborate on a regular basis to drive a transformation agenda in building systems for the future and provide guidance to wider teams on the ground.  
We will offer our Head of Data Sciences and Analytics in an advisory role at key parts of the engagement (at no additional cost to the FSA).
- **Innovation forum**  
During the engagement with FSA, we will continuously look for and create opportunities to innovate and improve by establishing a quarterly innovation forum for the FSA. The forum will agree an agenda for innovation and the dissemination of best practice.
- **Innovation events** – We will run events such as an innovation day/week, innovation fair, hackathons etc. where technical teams will develop ideas and solutions based on the latest technology trends and experiences from delivering digital transformation for other leading UK institutions.
- **Innovation labs and accelerator** - The Collaboratory is home to the UK node of the Cognizant global **Innovation Labs and Accelerator**. We offer our Digital Innovation Lab network as a way to incubate and develop new ideas and solutions in support of the FSA’s digital transformation strategy.
- **Immersion workshops** - To raise awareness and understanding, we will offer to conduct immersion workshops for Cognizant and FSA leadership teams on targeted topics such as cloud migration, cloud computing, automation, continuous development and integration, DevSecOps, segmentation, and risk-led-frameworks from outside sectors like banking and insurance.
- **Segmentation:** We appreciate segmentation is thematic across the Strategic Surveillance use cases. We can organise focused learning sessions from our Banking CoE on proven risk models such as Severity-Occurrence-Detection Rate (SOD), graph technologies for fraud identification, and customise these for FSA use cases. Our team composition would reflect such cross-sectoral experience.

**Access to our broader service portfolio**

In addition, we can offer access to Cognizant's portfolio of related services such as testing, cloud migration and application management to provide additional value from enhanced quality and uninterrupted services to the business. We have a wide range of tools to help in the transition and steady-state phases, which will help accelerate solution adoption.

### **Scaling and flexing**

We recognise that the FSA's priorities and budgets may change over the course of the engagement. Cognizant is an industry leading provider of data science practitioners with a talent pool of 2600 data analytics professionals, 800+ certified data scientists including 60% holding PhDs/Master degrees. We can scale up teams to run SOW's in parallel to accelerate delivery. This will allow the FSA to realise the benefits of Strategic Surveillance Service earlier and increase its effectiveness while reducing the cost of surveillance activities. We can also scale teams down to meet budgetary or FSA-bandwidth constraints. This will help manage any peaks in demand as we move closer to EU Exit and during COVID-19 type scenarios.

### **AI & analytics principles: best practices**

We will collaborate with the FSA team and provide assurance to ensure that we follow ML / AI delivery best practices for the key service and design principles mentioned below to ensure we:

- Fulfill business value
- Maximise benefits realisation
- Drive innovative thinking
- Optimise cost
- Ensure reusability by design

Topic	Design principle	Rationale
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	Business alignment	All projects must have an approved business case and named business sponsor	Each project must be business driven and have an explicit business case. This will avoid spending time and resources on a solution which won't benefit stakeholders
	AI & analytics governance	The service must be formally governed to: <ul style="list-style-type: none"> <li>– Ensure strategic direction</li> <li>– Drive the AI &amp; analytics roadmap and prioritisation</li> <li>– Overcome roadblocks and</li> <li>– Provide an escalation path</li> </ul>	The governance body needs to be formally established and chartered. It needs to be active and knowledgeable about the AI service. The business sponsor should be a key member
	Data Governance	Data ingestion and usage must adhere to FSA IT and information governance policies	Alignment to FSA policies are mandatory
	Reusability	ML / AI solutions must reuse the existing technologies (including physical infrastructure, learning, data and code), wherever possible unless there is a mandate for platform change e.g. on premise to cloud	This avoids extending the existing technology base and associated training and support costs
	Data Ingestion	The AI & analytics solution must support a range of data extract and load mechanisms (to include flat files, XML files, API, DB or manual data files).	Provides flexibility in how data is extracted and loaded

	Data standards	<p>FSA data standards should be followed. Data must be standardised and cleansed during the transition from staging area</p> <p>Where data standards do not exist, they should be adopted in the following order:</p> <ol style="list-style-type: none"> <li>1) International standards (e.g. ISO)</li> <li>2) Industry standards</li> </ol>	<p>The original values of the data must be retained as the historical data.</p> <p>Solution should use data standards that have the widest scope first, before considering more localised options</p>
	Database design	The ML / AI solution must include a “semantic layer” that hides the underlying complexity from the user community, keeping simplicity as a design principle	The semantic layer provides a user-friendly, fully explained, definition of the tables in the raw and aggregated data
	Metadata	All metadata needed to support the data definition, ELT routines, database design, operations and DQ Measures must be retained and made accessible to the end user.	The metadata is critical to provide business understanding of a) what has been loaded, b) what has been done to transform the data, c) the business meaning of the data and d) where the data came from
	Technical architecture	Solution design must provide a reliable, scalable performant, and extensible foundation for business reporting and analysis	An AI & analytics solution must be designed to perform adequately, to be scalable and easily extensible
	AI & analytics presentation layer	The solution must provide the user community with a portal to access an easy-to-use / friendly user interface providing useful insights	A single AI & analytics portal will simplify user access to AI reports and analytics.

	<table><tr><td>AI ethics</td><td>The solution must provide stakeholders with a tailored 'right-sized' approach to the evaluation of every technical sprint</td><td>The focus of effort must remain on delivery and value add on the technical data science. Any given sprint may focus on different stages of production from R&amp;D to deployment. Therefore, ethical reporting and frameworks will be adapted pertaining to those stages only</td></tr></table>	AI ethics	The solution must provide stakeholders with a tailored 'right-sized' approach to the evaluation of every technical sprint	The focus of effort must remain on delivery and value add on the technical data science. Any given sprint may focus on different stages of production from R&D to deployment. Therefore, ethical reporting and frameworks will be adapted pertaining to those stages only					
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Risks and dependencies	Describe any risks and dependencies and how you'll manage them.								
	<table><tr><th colspan="4"></th></tr><tr><td>1</td><td>COVID-19 (or similar emergencies) impact on delivery plan and milestones</td><td>Limitations in remote working, particularly where in-person meetings have been the norm, will impact on the speed of delivery</td><td>In addition to remote access, team collaboration and communication tools, Cognizant will stand up newer ways of working and approaches towards virtualisation of delivery. Cognizant's Future of Work CoE has rolled out virtual pod-type models to cope with COVID-19's impact on regular delivery models. This will be particularly relevant in areas such as hackathon, use-case formulation, progress updates, Show &amp; Tells and demos.</td></tr></table>					1	COVID-19 (or similar emergencies) impact on delivery plan and milestones	Limitations in remote working, particularly where in-person meetings have been the norm, will impact on the speed of delivery	In addition to remote access, team collaboration and communication tools, Cognizant will stand up newer ways of working and approaches towards virtualisation of delivery. Cognizant's Future of Work CoE has rolled out virtual pod-type models to cope with COVID-19's impact on regular delivery models. This will be particularly relevant in areas such as hackathon, use-case formulation, progress updates, Show & Tells and demos.
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	2	Use case(s) have been identified and finalised before week 1 of the new sprint	Delay in use case(s) identification and finalisation will delay the overall implementation timeline and lead to increase in project costing	Cognizant's Sprint Lead, Business Analyst and Change Lead will work with FSA surveillance team & SMEs to identify and prioritise use case(s).
	3	Use case owners and business SMEs are finalised for initial rounds of workshops, discuss requirements including scope, hackathon & prototype refinement	Lack of stakeholder participation will lead to poor / incomplete understanding of use case(s) and expectations; possibility of use case(s) not achieving the expected outcomes	Cognizant will liaise with the FSA to identify use-case owners and key stakeholders. Expectations will be set by beginning of Week 1 to finalise time needed from the SME for the next 10 weeks (including hackathon)
	4	Potential for significant changes in priorities and direction as a result of EU Exit negotiations	Possibility of changes to current food standards and regulation as a result of non-EU trade deals resulting in frequent change of priorities	Experience in agile delivery models with 10-week work packages allow for changes in direction and flexing teams up and down
	5	Maintenance and refinement of existing use cases (e.g. Risk Likelihood Dashboard) while developing new use cases	As more use cases are developed and refined, maintaining these may slow down the work on new use cases	Introduce DevOps & split work streams across separate teams. Formalise Knowledge Transfer throughout the Programme.
	6	Access to data sources such as RASFF, TRACES etc. which are EU maintained	Current FSA intelligence gained from data sources such as RASFF & TRACES might be affected	Gather intelligence with open data sources as much as possible e.g. RASFF portal. Integrate IPAFFS (TRACES replacement) as soon as it's available

	7	Dependency on other projects, processes, ongoing infrastructural changes and replacement	Delay in operationalising the tool among the impacted team, delay in adoption	Cognizant will work with Strategic Surveillance, IT, Data and other teams to support the operationalisation plan
	8	Necessary access and approvals (system, data, workplace) are in place for the project team	Lack of infrastructure and access readiness for the project team will adversely affect the implementation plan	Infrastructure and access readiness will be validated before project start. Cognizant will operate flexibly using FSA-provided laptops or Cognizant's own.
	9	Data for the UK market are unavailable as open source for the use case(s) in consideration	Data unavailability can adversely affect the outcome of the use case(s)	Surrogate data from other geographies / 3 <sup>rd</sup> party data will be tested for analysis after discussions with the FSA
	10	Timely requirement clarifications and dependencies closure	Risk of delay to implementation plan	Ensure stakeholder obligations from business and other program teams as per dates indicated in project plan to ensure critical activities are completed on time
	11	Selected MVPs which have achieved business buy-in will be operationalised	Lack of operationalisation will adversely affect benefits realisation and value of strategic surveillance tools will be limited	Cognizant recommends a "one team" approach where Cognizant and FSA data scientists work together in delivery of sprint MVP and then to operationalise the MVP into decision-making process. This could be done essentially as a follow on 10-week sprint or in parallel to the new sprint

	12	Ethical AI reporting changes	Ethical frameworks required to be reported for UK government change during the project. This potentially includes the technical code and data.	The Cognizant solution has been tailored to remain applicable to any framework that may be chosen. However, the AI Ethics forum will be used to discuss and then define the most appropriate method to adapt the reporting methodology. FSA policy is already to promote openness and trust to the consumer; thus, Cognizant will support discussions and evaluations of governance and GDPR related issues with the FSA if data is to be provided openly.
	13	Appropriate timeframes provided for ad-hoc / additional requests if critical and needed to be completed within the current approach or after delivery of the MVP	Risk of delay of implementation plan / Stakeholder dis-satisfaction	Cognizant will work with the FSA for prioritisation of tasks / activities and recommend a continuous improvement team to add new functionalities to the output after MVP delivery

### **Schedule 3 - Statement of Work (SOW), including pricing arrangements and Key Staff**

There is currently no first SOW in place. Once the initial SOW is identified, the FSA will request Cognizant to draw up an SOW for the FSA to review and approve. This SOW will include the details below, as well as the details required in schedule 3.1 to schedule 3.6:

- Call Off contract reference and name
- A detailed methodology of how they will deliver the requirement.
- Clear timescales – Final delivery date, any milestones etc.
- Any equipment, network access, staff access that the supplier requires from the FSA to carry out the work.
- Any assumptions the supplier has made in their response.
- Any risks identified and how these will be managed.
- Clear detailed costings of the proposal, including a breakdown of the roles, day rates and number of days roles will work, any expected expenses (in line with FSA's policies) and any other costs, such as licenses. It should also include the charging method (fixed, capped time and material etc.) and where applicable milestone payments should be attributed to deliverables.
- GDPR schedule indicating how any personal data will be processed, nature of why it is being processed, how long it will be processed for, plan for return/destruction of data etc (as per Schedule 9 of this contract).
- Overall Call-Off Contract value and the remainder of value under overall Call-Off Contract charge (where Remainder of value under overall Call-Off Contract Charge = overall Call-Off Contract value - sum of total value of all WP's/SOWs invoiced)

The work package should include all the information required and not refer to linked documents, attachments, slides etc. As part of the Government transparency Work Packages will need to be published on Contracts Finder so must contain all the required information (suppliers will be offered the opportunity to make limited redactions in line with exemptions set out by the Freedom of Information Act).

### Sch 3.1 SOW Details

<b>Date of SOW:</b>	<i>Please enter the first date (on site)</i>
<b>SOW Reference:</b>	<i>FSA715.</i>
<b>Buyer:</b>	<i>Buyer Full Name</i>
<b>Supplier:</b>	<i>Supplier Full Name</i>
<b>Release Type(s):</b>	<i>Please enter here (Release Type(s) can be Adhoc, Inception, Calibration or Delivery)</i>
<b>Phase(s) of Development:</b>	<i>Choose an item (Phase(s) can be Discovery, Alpha, Beta or Live)</i>
<b>Release Completion Date:</b>	<i>Please enter the Release Completion Date</i>
<b>Duration of SOW</b>	<i>Please enter the number of days here</i>
<b>Charging Method(s) for this Release:</b>	<i>Choose an item</i> <ul style="list-style-type: none"> <li>┆ <i>Capped time and materials (CTM)</i></li> <li>┆ <i>Price per story</i></li> <li>┆ <i>Time and materials (T&amp;M)</i></li> <li>┆ <i>Fixed price</i></li> <li>┆ <i>Other pricing method or a combination of pricing methods agreed by the Parties</i></li> </ul>

3.1.1 The Parties will execute a SOW for each Release. Note that any ad-hoc Service requirements are to be treated as individual Releases in their own right (in addition to the Releases at the delivery stage); and the Parties should execute a separate SOW in respect of each.

3.1.2 The rights, obligations and details agreed by the Parties and set out in this SOW apply only in relation to the Services that are to be delivered under this SOW and will not apply to any other SOW's executed or to be executed under this Call-Off Contract unless otherwise agreed by the Parties.

### **Sch 3.2 Key Staff**

3.2.1 The Parties agree that the Key Staff in respect of this Project are detailed in the table below.

3.2.2 Table of Key Staff:

Name	Role	Details

### **Sch 3.3 Deliverables**

3.3.1 To be added in agreement between the Buyer and Supplier

### **Sch 3.4 Call-Off Contract Charges**

3.4.1. For each individual Statement of Work (SOW), the applicable Call-Off Contract Charges (in accordance with the charging method in the Order Form) will be calculated using all of the following:

- the agreed relevant rates for Supplier staff or facilities, which are inclusive of any applicable expenses and exclusive of VAT and which were submitted to the Buyer during the Further Competition that resulted in the award of this Call-Off Contract.
- the number of days, or pro rata for every part of a day, that Supplier staff or facilities will be actively providing the Services during the term of the SOW.
- a contingency margin of up to 20% applied to the sum calculated on the basis of the above two points, to accommodate any changes to the SOW Deliverables during the term of the SOW. The Supplier must obtain prior written approval from the Buyer before applying any contingency margin.

3.4.2 The Supplier will provide a detailed breakdown of rates based on time and materials Charges, inclusive of expenses and exclusive of VAT, with sufficient detail to enable the Buyer to verify the accuracy of the time and material Call-Off Contract Charges incurred.

The detailed breakdown for the provision of Services during the term of the SOW will include (but will not be limited to):

- a role description per Supplier Staff;
- a facilities description;
- the agreed relevant rate per day;
- any expenses charged per day, which are in line with the Buyer's expenses policy (if applicable);
- the number of days, or pro rata for every part day, they will be actively providing the Services during the term of the SOW; and
- the total cost per role/facility

The Supplier will also provide a summary which is to include:

- Total value of this SOW
- Overall Call-Off Contract value

- Remainder of value under overall Call-Off Contract Charge

Where:

Remainder of value under overall Call-Off Contract Charge = overall Call-Off Contract value - sum of total value of all SOWs invoiced

- Whether there is any risk of exceeding Overall Call-Off Contract value (and thereby requiring a Contract Change Note (CCN) to continue delivery of Services)

3.4.3 If a capped or fixed price has been agreed for a SOW:

- The Supplier will continue at its own cost and expense to provide the Services even where the agreed price has been exceeded; and
- The Buyer will have no obligation or liability to pay for the cost of any Services delivered relating to this order after the agreed price has been exceeded.

3.4.4 Risks or contingencies will be included in the Charges. The Parties agree that the following assumptions, representations, risks and contingencies will apply in relation to the Charges. [Insert full details of any assumptions, representations, risks and contingencies which the Parties are relying on in relation to the Charges - for example in fixed price, if expenses are either to be charged separate and at cost or included within the fixed price].

3.4.5 Any changes to the Supplier Staff (not applicable to Lot 3 Services) should be agreed with the Buyer and covered by a separate SOW where it cannot be accommodated within an existing SOW.

3.4.6 Multiple SOWs can operate concurrently.

3.4.7 The Supplier will keep accurate records of the time spent by the Supplier staff in providing the services and will provide records to the Buyer for inspection on request (not applicable to Lot 3 Services)

### **Sch 3.5. Call-Off Contract Extension Period**

Where the Buyer has specified an Extension Period in the Order Form, the Parties agree that an Extension Period of up to 25% of the initial Call-Off Contract Period can be added to the term of the Call-Off Contract, to accommodate any changes to the Deliverables, or delay in meeting the Buyer's requirements. The Buyer must give the Supplier the minimum notice specified in the Order Form that an Extension Period is required, set out how long the Extension Period is to be, and obtain prior written approval from the Supplier before applying any Extension Period to the Call-Off Contract period.

### **Sch 3.6. Agreement of statement of works**

BY SIGNING this SOW, the Parties agree to be bound by the terms and conditions set out herein:

**For and on behalf of the Supplier:**

Name and title	
Signature and date	<u>X</u>

**For and on behalf of the departmental Buyer:**

Name and title	
Signature and date	<u>X</u>

Please note that this is the first SOW. If the value of the first SOW is lower than the overall Call-Off Contract value, and subsequent SOW(s) are required to ensure the Services are delivered, they must be raised and signed by the Buyer and the Supplier, with a copy sent to CCS for its records.

If you exceed the overall Call-Off Contract value and Supplier Staff are still required to deliver the services, then a contract change note (CCN) must be raised, explaining the reason(s) for the extension.

## Schedule 4 - Contract Change Notice (CCN)

Order Form reference for the Call-Off Contract being varied:

BETWEEN:

**Buyer Full Name ("the Buyer")**

and

**Supplier Full Name ("the Supplier")**

1. The Call-Off Contract is varied as follows and shall take effect on the date signed by both Parties:

***Guidance Note: Insert full details of the change including:***

***Reason for the change;***

***Full Details of the proposed change;***

***Likely impact, if any, of the change on other aspects of the Call-Off Contract;***

2. Words and expressions in this Contract Change Notice shall have the meanings given to them in the Call-Off Contract.
3. The Call-Off Contract, including any previous changes shall remain effective and unaltered except as amended by this change.

### Signed by an authorised signatory for and on behalf of the Buyer

Signature:	<u>  X  </u>
Date:	Click here to enter a date.
Name:	Click here to enter text.
Address:	Click here to enter text.

### Signed by an authorised signatory to sign for and on behalf of the Supplier

Signature:	<u>  X  </u>
Date:	Click here to enter a date.
Name:	Click here to enter text.

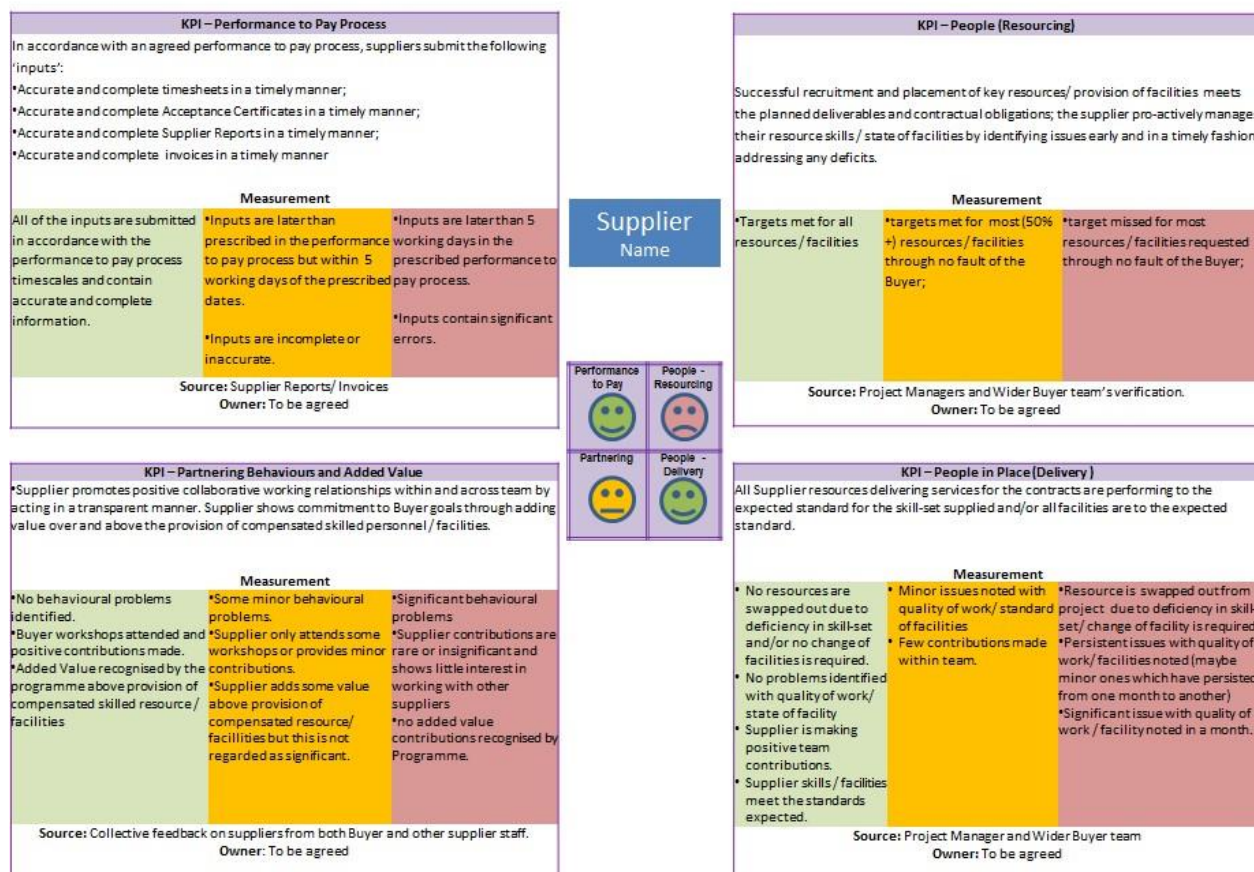
Address:

Click here to enter text.

## Schedule 5 - Balanced Scorecard

In addition to the Supplier's performance management obligations set out in the Framework Agreement, the Parties may agree to the following Balanced Scorecard & KPIs for this Call-Off Contract (see Balanced Scorecard Model below):

# Balanced Scorecard



The purpose of the Balanced Scorecard is to promote contract management activity, through measurement of a Supplier's performance against Key Performance Indicators, which the Buyer and Supplier should agree at the beginning of a Call-Off Contract. The targets and measures listed in the example scorecard (above) are for guidance and should be changed to meet the agreed needs of the Buyer and Supplier.

The recommended process for using the Balanced Scorecard is as follows:

1. The Buyer and Supplier agree a templated Balanced Scorecard together with a performance management plan, which clearly outlines the responsibilities and actions that will be taken if agreed performance levels are not achieved.
2. On a pre-agreed schedule (e.g. monthly), both the Buyer and the Supplier provide a rating on the Supplier's performance
3. Following the initial rating, both Parties meet to review the scores and agree an overall final score for each Key Performance Indicator

4. Following agreement of final scores, the process is repeated as per the agreed schedule

CCS encourages Buyers to share final scores with CCS, so that performance of the Framework Agreement can be monitored. This may be done by emailing scores to: [cloud\\_digital@crowncommercial.gov.uk](mailto:cloud_digital@crowncommercial.gov.uk).

## **Schedule 6 - Optional Buyer terms and conditions**

### **Sch 6.1 Buyer's agent**

**Not Applicable**

## **Schedule 7 - How Services are bought (Further Competition process)**

Services are bought under this Call-Off Contract using the Further Competition process set out in Section 3 of the Framework Agreement (How Services will be bought).

## **Schedule 8 - Deed of guarantee**

Not Applicable

## **Schedule 9 - Processing, Personal Data and Data Subjects**

**This will be completed and included as part of each individual Statement of Work, when the data being processed for each SOW has been identified.**

### **Subject matter of the processing:**

[This should be a high level, short description of what the processing is about ie its subject matter]

### **Duration of the processing:**

[Clearly set out the duration of the processing including dates]

### **Nature and purposes of the processing:**

[Please be as specific as possible, but make sure that you cover all intended purposes.

The nature of the processing means any operation such as collection, recording, organisation, structuring, storage, adaptation or alteration, retrieval, consultation, use, disclosure by transmission, dissemination or otherwise making available, alignment or combination, restriction, erasure or destruction of data (whether or not by automated means) etc]

The purpose might include eg: employment processing, statutory obligation, recruitment assessment etc]

### **Type of Personal Data:**

[Examples here include: name, address, date of birth, NI number, telephone number, pay, images, biometric data etc]

### **Categories of Data Subject:**

[Examples include: Staff (including volunteers, agents and temporary workers), customers/clients, suppliers, patients, students/pupils, members of the public, users of a particular website etc]

**Plan for return or destruction of the data once the processing is complete UNLESS requirement under union or member state law to preserve that type of data:**

[Describe how long the data will be retained for, how it will be returned or destroyed]

## **Schedule 10 – Alternative Clauses**

### **Part 1: Alternative Jurisdictions**

Not Applicable