FSA SAMPLING FRAMEWORK: OUR FUTURE APPROACH TO SAMPLING

Report by David Franklin and Elspeth Ransom

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1. Summary

1.1. The Board is asked to:

- Review the work to date on implementing the FSA's sampling strategy as outlined in the 2019 Board paper.
- Consider and comment on our plans for implementation of phase 2 of the sampling framework within the wider FSA approach to surveillance.
- Agree to the proposals on publication of brand names in FSA sampling surveys where relevant to the purpose.

2. Background

2.1. Sampling and subsequent analysis underpins the work of the FSA and others, such as Local Authorities (LAs), in maintaining the safety and authenticity of the food supply chain. It performs an essential function, providing intelligence and evidence on the safety and authenticity of food and feed on the UK market, supporting enforcement action to protect consumers, and enabling the FSA to meet its statutory obligations as a regulator.

2.2. Sampling is a valuable tool which cannot be viewed in isolation and needs to be considered as part of the FSA's regulatory approach and strategic surveillance system, providing additional intelligence and the ability to test hypotheses of potential risks in the food system. Generation of valuable outputs from sampling is dependent on a robust sampling framework, which considers sampling outcomes and uses, in addition to sampling numbers/distribution. Sampling can be expensive, resource intensive and so needs to be delivered in a coordinated and targeted manner in order to be effective and ensure value for money. The outputs and purpose of sampling activities need to be considered upfront to ensure that there are clear benefits and outcomes when undertaking it.

2.3. Sampling not only provides benefits through improved risk intervention and performance of regulatory duties, the insights provided by sampling generate wider secondary benefits to the FSA including enhanced consumer trust and reputation, as well as improved direction of policy and risk assessment and subsequent use of public money. Additionally, sampling contributes to maintaining capability and capacity within the UK's Official Control Laboratory (OCL) system, which plays a critical role in supporting the response to Food and Feed incidents.

2.4. As detailed in Annex 1, responsibility for official control sampling for food and feed is not solely held by the FSA and is split between various competent authorities. The amount of official control sampling undertaken in England, Wales and Northern Ireland (NI) by public bodies has steadily declined over recent years, decreasing by 3.2% in 2018/2019 on the previous year[1]. This is in part due to a reduction in funding of LA sampling by the FSA, with the ending of the FSA's National Coordinated Sampling Programme in 2016-17. As outlined previously in the 2019 Sampling Strategy paper[2], the closure of this programme was an informed decision to prioritise resource allocation and maximise value for money. However, the FSA recognises that sampling needs to be part of our approach to assurance of food safety.

2.5. This reduction in LA sampling was raised as a concern by the National Audit Office (NAO) Report on Ensuring Food Safety Standards[3] and the 2019 Public Accounts Committee inquiry on ensuring food safety and standards[4]. However, we must understand the wider context as official sampling is only one element of the system, with food business operators undertaking a significant amount of sampling as part of their assurance processes.

2.6. The 2014 Elliot Review[5] highlighted concerns around OCLs and challenges around the sustainability of the system, leading to the FSA's 2019 review of the official food and feed laboratory system[6], that considered the UK's OCLs in preparation for EU Transition.

2.7. Sampling acts as the primary income stream for OCLs and the reduction in official sampling has undoubtedly been a factor behind the decrease in the number of OCLs in Great Britain. OCLs also have no financial incentive to maintain sampling capability where they receive limited or no samples for individual food risks.

2.8. The official food and feed laboratory system review[6] indicated that there was sufficient capacity and capability within the national laboratory system. However, this system is coming under increasing stress, with Covid-19 adding to existing financial pressures. Since the review, the number of OCLs in the UK has continued to decrease and specific gaps in testing capability are starting to emerge, presenting the risk of market failure in the medium term, if action is not taken. Cross-government solutions are being sought, noting that OCLs provide testing for a range of government departments and any substantiable long-term model for OCLs will need to be jointly delivered. The FSA's overall approach to sampling needs to consider the interaction between the sampling system and sustainable laboratory system.

2.9. A paper was presented to the FSA Board in June 2019 on the FSA's future approach to sampling building upon knowledge gained from previous sampling programmes. It

[1] http://fsa.riams.org/connected/djVXvKGUjX
[2] https://www.food.gov.uk/sites/default/files/media/document/fsa-19-06-09-fsa-sampling-strategy_0.pdf
[3] https://www.nao.org.uk/report/ensuring-food-safety-and-standards/
[4] https://old.parliament.uk/business/committees/committees-a-z/commons-select/public-accounts-committee/inquiries/parliament-2019-20/inquiry1/
[5] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/350726/elliot-review-final-report-july2014.pdf
[6] https://www.food.gov.uk/research/research-projects/review-of-uk-official-food-and-feed-laboratory-system

provided an overview of how the FSA could support the challenges around sampling, demonstrating how the FSA, working with LAs and other competent authorities, can deliver an effective central sampling programme. It proposed a system that not only links to the wider surveillance activities of the FSA and others in the UK and internationally, but also delivers excellent outcomes and provides value for money.

2.10. Phase 1 of the implementation plan has been completed and the FSA is now implementing phase 2, which will be completed by December 2021.

3. Overview of the current sampling system

3.1. As outlined in the 2019 Board paper, there are three main types of sampling: sampling for official controls; sampling as a means of testing hypotheses; and sampling as a source of intelligence data.

3.2. These sampling activities are not solely delivered by any one organisation or body. While the majority of the official control sampling is undertaken by LAs, they also undertake hypothesis sampling to inform their approach. Similarly, the FSA and other government departments deliver a range of hypotheses and official sampling programmes.

3.3. Annex 1 provides background on the three types of sampling and how the FSA engages with and delivers them. Case studies of how the outcomes of FSA hypothesis sampling and how strategic surveillance has informed targeting of samples are provided in Annex 2.

3.4. The FSA is one of the competent authorities responsible for ensuring that there is a minimum level of capacity and capability within the OCL system to undertake sampling to respond to major incidents (Annex 1). The reduction in OCLs has led to concerns around the capacity and capability within the system to do this. Annex 3 provides a summary of how sampling was used in previous major food and feed incidents and concerns, if any, for laboratory capacity now and at the time. This shows that accreditation and capability, rather than capacity, to undertake testing are often the limiting factors for responding to sampling during incidents, with expertise located within specific laboratories. It also shows how we have drawn upon our National Reference Laboratories (NRLs) and international laboratories, to support testing during previous incidents.

3.5. Additional FSA workstreams are currently considering the full resilience of the OCL system, including current gaps and capability to respond to sampling in new and emerging food and feed areas.

3.6. Sampling data management, standardisation and sharing varies widely across users, with no consistent approach, leading to data quality issues and an incomplete understanding of testing being undertaken. An effective sampling system will require a robust data sharing system, both at a cross-government and local level.

4. Integrating sampling into the wider surveillance system

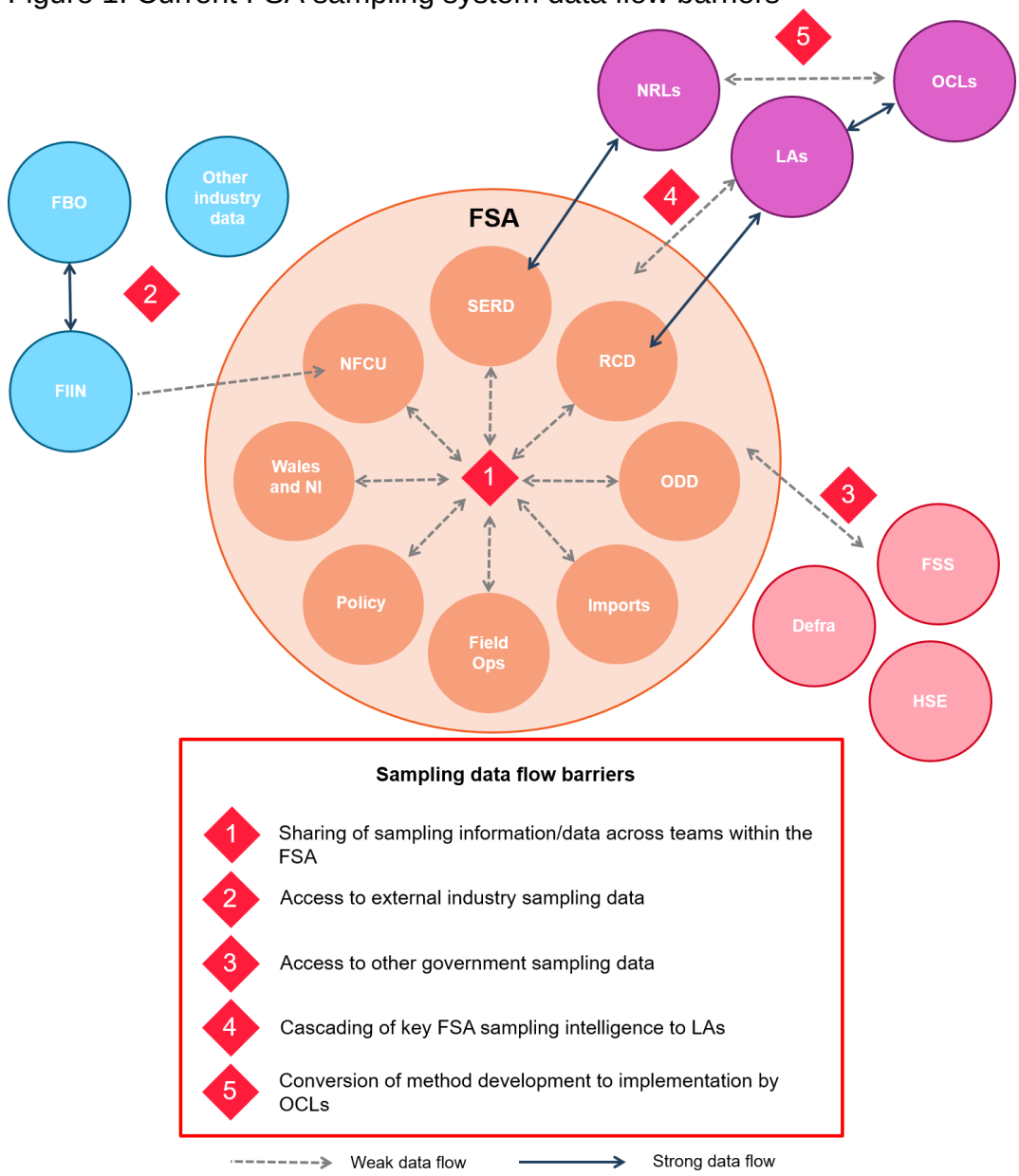
4.1. The development of a coordinated sampling strategy, which links to wider surveillance activities and is informed by intelligence, is essential to ensure the FSA can deliver effective outcomes and value for money. While the current sampling system creates and uses a range of different sampling data sources it lacks harmonisation and effective data flow, creating significant barriers to the effective collective use of this information (Figure 1). Improved collation and sharing of data sharing will lead to improved efficiency and effectiveness of sampling.

4.2. At the core of the proposed solutions is the effective collection and sharing of sampling data (Figure 2), in line with the guiding principles for sampling set out in the 2019 Board paper.

4.3. The FSA will develop internal standards and best practice for sampling data and explore sampling data solutions, through engaging with the internal and external users and providers of sampling. This will enable the creation of a coherent data system in the FSA, to inform and deliver future targeted sampling programmes, in line with the recommendations of the Science Council Working Group 4 on data usage and digital technology.

4.4. A strong focus will be on creating a collaborative system, engaging with sampling experts within government and industry whilst building strong relationships with LAs, public analysts and OCL, to ensure an approach that works for all.

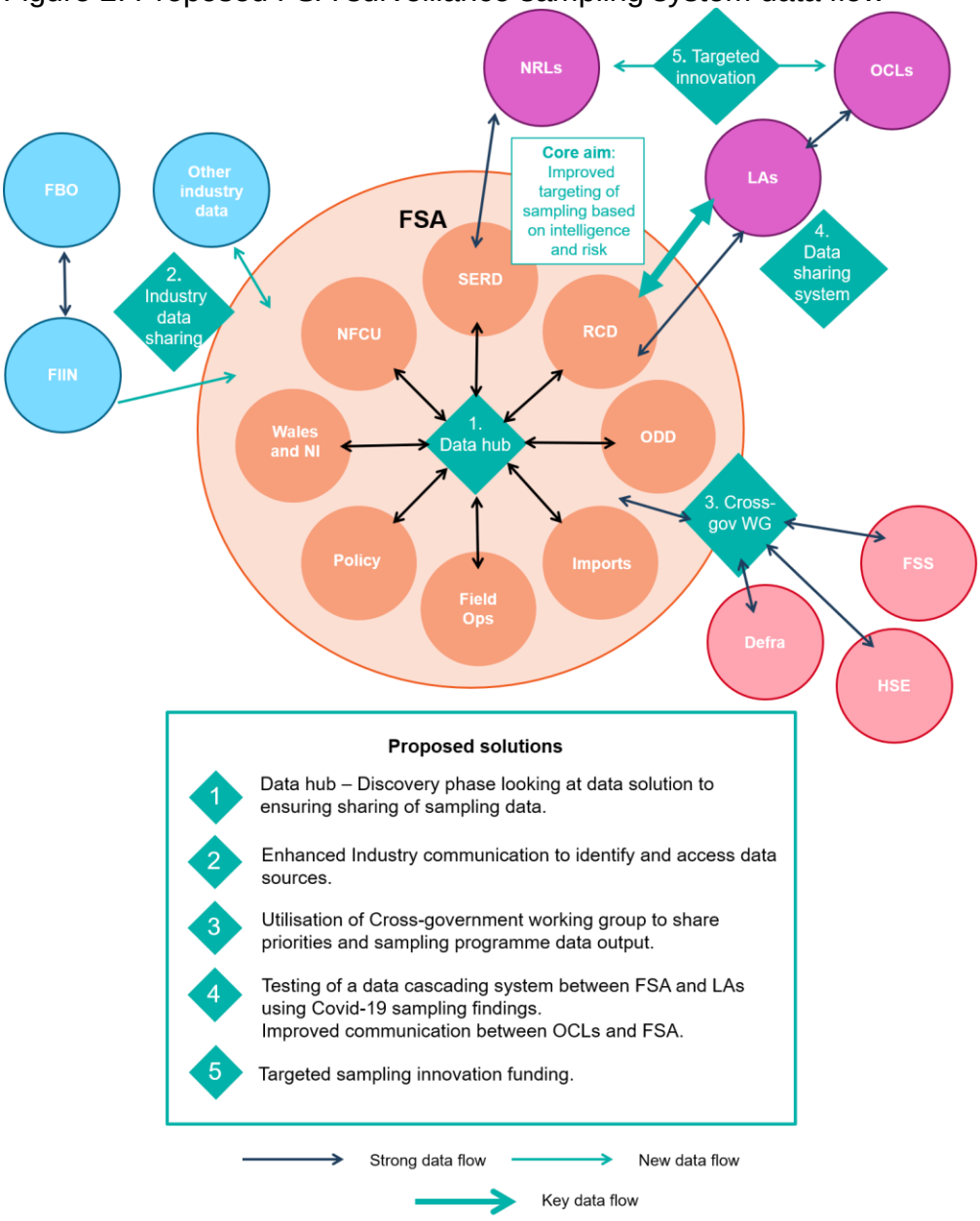
Figure 1: Current FSA sampling system data flow barriers



Acronyms

FBO: Food Business Operator
SERD: Science Evidence and Research Division
RCD: Regulatory Compliance Division
ODD: Openness, Data and Digital
NFCU: National Food Crime Unit
FIIN: Food Industry Intelligence Network
Defra: Department for Environment and Rural Affairs
HSE: Health and Safety Executive
FSS: Food Standards Scotland
NRLs: National Reference Laboratories
OCLs: Official Control Laboratories
Ops: Operations
LAs: Local Authorities
NI: Northern Ireland

Figure 2: Proposed FSA surveillance sampling system data flow



5. Implementation of our Sampling Framework

5.1. To achieve our future vision for sampling, we are undertaking a two phased approach, with phase 1, now complete, developing understanding of the current system and governance, and phase 2 implementing the sampling framework.

5.2. Phase 1 has been completed and consisted of the following key benefits and outcomes:

- Mapping and identifying the key users and stakeholders of FSA stakeholders and the level and types of sampling we centrally fund.
- Creation of a cross-government sampling group, to coordinate surveillance sampling, comprised of key FSA, Defra and Food Standards Scotland (FSS) officials. This group develops sampling priorities, facilitates intelligence sharing and enables joint delivery and alignment of sampling programmes. This group was key in developing the Covid-19 surveillance programme launched in July 2020.
- Creating sampling guidance and data standards to ensure a consistent approach to developing and delivering sampling programmes across the FSA. These guidelines will be used as basis for best practice across government.
- Improving our understanding and intelligence of sampling undertaken by private sector labs and industry.
- A key output of phase 1 is the development of the proposed phase 2 sampling framework presented below.

5.3. Building on the resources and intelligence gathered within phase 1, phase 2 focusses on the implementation of the FSA's future sampling framework in 2020-2021. The proposed approach is driven by ensuring that food and feed sampling undertaken by the FSA is informed by intelligence and integrates with the wider strategic surveillance and official sampling systems. It has been developed to align with key intelligence requirements outlined in the National Food Strategy, National Food Crime Unit (NFCU) Control Strategy and operations transformation programme, by filling intelligence gaps and identifying vulnerabilities through the effective cascading of the results of intelligence and hypothesis sampling.

5.4. Phase 2 is composed of four workstreams and will deliver the following benefits:

- Increased value for money from sampling projects as a result of increased coordination, efficient sampling delivery, joint priorities and data sharing.
- Improved targeting of interventions linked to risk, through ensuring that sampling priorities are informed by surveillance and intelligence.
- Enhanced identification and development of new technologies and approaches for testing to improve effectiveness, accuracy and efficiency, supporting the UK's OCL network.

5.5. This will be achieved through the following four workstreams, and the key deliverables and timelines are set out in Annexes 4 and 5:

- *Strengthening internal sampling coordination:* Ensuring targeted sampling and effective sharing of data internally, through development and dissemination of guidance on good practice and internal engagement workshops. FSA best practice will be linked to international approaches, being developed by the Codex Committee on Methods of Analysis (CCMAS), which the FSA is represented on.[7]
- *Building effective cross-government and external engagement:* Sharing and utilisation of joint resources, ensuring sampling alignment and sharing intelligence across departments.
- *Supporting sampling implementation:* Creation, collation and cascading of sampling intelligence to LAs and Port Health Authorities (PHAs) through the Controls Coordination Group.
- *Delivering a robust and innovative future UK sampling system:* Developing innovative approaches to sampling in the UK through collaborating with industry, drawing on international best practice and building an intelligence driven sampling system. Targeted surveillance surveys provide statistical assurance that products are compliant enabling resource to be targeted elsewhere.

5.6. Metrics to assure the effectiveness of these deliverables are being developed. Examples of measures being considered include but are not limited to: yearly increases in access to other government department and industry sampling data; increased cross-FSA and cross-government coordination of sampling programmes; and effective surveillance sampling leading to increased proportions of identification of non-compliance in previously non-targeted areas.

5.7. The FSA will work closely with LAs and other bodies to facilitate and direct national sampling, to create a coordinated intelligence led sampling system. This will reduce duplication in samples taken and enable the targeting of priority risks, which will be informed by a range of FSA intelligence sources.

5.8. As part of our future sampling programmes, the FSA will identify alternative approaches for sampling to create a more effective cost-effective approach, for instance through the implementation of pooled sampling for low prevalence risks, which will enable the screening of multiple samples in a single analysis.

5.9. We will review the role and use of sampling in the event of food and feed incidents. Making clear the role and function of the FSA as a central competent authority for sampling during incidents and providing clear guidance on how sampling should be used to respond to them. This will enable assurance that there is the required baseline minimum level of capacity and capability within the UK's OCLs to respond to incidents. The FSA will designate OCLs for specialist areas functions in order to support the wider OCL network on specific gaps in capability.

[7] http://www.fao.org/fao-who-codexalimentarius/committees/committee/en/?committee=CCMAS

6. Publication of Brand Names

6.1. The FSA's current internal sampling guidance states that brand names should be published when publishing the outcomes of FSA sampling surveys. Requirements for the naming of brands, are only applicable for FSA funded and delivered surveillance and official control sampling programmes. This is not a requirement for official control sampling performed by LAs.

6.2. In line with the FSA's core principals of openness and transparency, it is important that brand names are published where possible; however, it should be recognised that there are challenges when doing this, which create barriers to delivering sampling programmes (see Annex 6). The FSA Executive can authorise an exception to the publishing of brand names. This issue was last discussed by the Board in 2006/2007[8] as part of discussions on the FSA's policy on openness.

6.3. Brand names should continue to be published where it is relevant to the purpose of the sampling survey in question. However, there are many cases, especially hypothesis activities, where the aim is to look at specific food risks or commodities rather than brands. The publication of brand names in these circumstances could result in misleading communication, implying that there is a risk within a specific brand, rather than wider commodity type or lead to a negative impact on consumer confidence, when significant issues do not exist.

6.4. We recommend that the FSA should continue to publish brand names where relevant to the purpose of the sampling, while moving towards being optional for surveys where they are not relevant to the context of the sampling programme.

7. Conclusions

7.1. The Board is asked to:

- Review the work to date on implementing the 2019 sampling Board paper.
- Consider and comment on our plans for implementation of phase 2 of the sampling framework within the wider FSA approach to surveillance.
- Agree to the proposals on publication of brand names in FSA sampling surveys where relevant to the purpose.

[8]Links to Board papers provided in Annex 6

Annex 1: Background on the three main types of sampling

Official control sampling

- The responsibility and delivery of sampling and maintenance of Official Control Laboratory capability is split across government departments and is linked to the division of responsibility for Official Food and Feed Controls (Table 1).
- The majority of sampling for official controls in food is undertaken by Local Authorities (LAs). In 2018/19 a total of 43,768 official samples were taken by LAs for food were reported to be taken in England, Northern Ireland and Wales by, a decrease in 3.2% from 2017/18 (Table 2).

Table 1: Overview of Official Control Responsibilities

<table>
<tr><td></td><td colspan="3">Competent authority</td></tr>
<tr><td></td><td>England</td><td>Wales</td><td>Northern Ireland</td></tr>
<tr><td>Food safety and Hygiene
Animal food safety, hygiene and labelling
Food labelling (safety, allergy)</td><td colspan="3">FSA
(The majority of official food sampling is undertaken by Local Authorities and Port Health Authorities)</td></tr>
<tr><td>Nutrition standards
Nutrition food labelling</td><td>Department of Health and Social Care</td><td>Welsh Government</td><td rowspan="2">FSA in NI</td></tr>
<tr><td>Other food labelling

Includes: Food composition, standards and country of origin</td><td>Defra</td><td>FSA in Wales</td></tr>
<tr><td>Veterinary medicine and drug residue</td><td colspan="3">Veterinary Medicines Directorate (VMD)
(on behalf of Defra)</td></tr>
<tr><td>Pesticide residue monitoring and enforcement</td><td colspan="3">Health and Safety Executive (HSE)
(on behalf of Defra)</td></tr>
</table>

These responsibilities and the corresponding legislations are detailed further in the Multi-Annual National Control Plan for the United Kingdom April 2019 to March 2023[9].

- While overall responsibility for feed and food law is held centrally, day-to-day responsibility for monitoring and enforcement is divided between central and local government through Official Controls. Official Controls ensure the safety

[9] https://www.food.gov.uk/sites/default/files/media/document/uk-mancp-2019-2023-final_0.pdf

and integrity of food and verify business compliance with legislative requirements and hygiene standards. An Official Control can include undertaking an audit, inspection and, sampling and analysis (referenced here as Official Sampling) of food establishments, foods and goods.

Hypothesis sampling

- Hypothesis, often referred to as surveillance, sampling is undertaken to test hypotheses identified through the collation of intelligence from the FSA's surveillance programme, or to provide sampling evidence where we have a lack of knowledge around a specific risk or food product.

- The results of surveillance sampling can be used to direct and inform the delivery of Official Sampling, through the identification of which areas are at risk within the food chain.

- The FSA delivers a range of surveillance programmes, including:

    - Surveillance sampling of imported food and feed, both at the border and inland, launched in December 2019 and will continue in 2020/21, see Annex 2.
    - The Covid-19 sampling programme to provide additional intelligence of food safety and authenticity risks during Covid-19 (outlined in this paper), see Annex 2.
    - The FSA also funds and delivers surveillance surveys on an annual basis that both provide valuable intelligence and/or are mandated by legislation, for instance the AMR survey.[10]

Intelligence sampling

- A significant amount of sampling and testing is also undertaken by organisations beyond central and local government, for instance by industry. This information can be used to inform the product areas that the FSA targets in its sampling programmes and provide additional sampling data sources.
- One key source of intelligence sampling data that supports the FSA is the Food Industry Intelligence Network (FIIN)[11], which was set up in 2015 to help to ensure the integrity of the food supply chain and protect consumer interest. FIIN disseminates intelligence and sampling outcomes arising from industry test. FIIN has a memorandum of understanding (MoU) with the NFCU who use this information and intelligence to support its identification and response to food crime.

[10] https://www.food.gov.uk/research/foodborne-diseases/eu-harmonised-survey-of-antimicrobial-resistance-amr-on-retail-meats-pork-and-beefchicken-0
[11] https://www.fiin.co.uk/

- FIIN only covers a segment of the testing done by industry and there is potential to build relationships with wider industry and external organisations in order to further improve our access to other sources of intelligence data, to optimise the use of scarce resources and taxpayers' money.

Table 2: Official Samples taken in 2018/2019 for food

	England	Northern Ireland	Wales	Totals
Microbiological contamination	24,855	6,419	4,125	35,399
Other contamination	659	26	113	5,636
Composition	3,316	1,902	418	5,636
Labelling and presentation	1,680	1,300	188	3,168
Other	517	279	0	796
Totals	31,027	9,926	4,844	45,797
Total samples	29,998	9,072	4,698	43,786

Data taken from the Annual report on local authority food law enforcement for England, Northern Ireland and Wales 1 April 2018 to 31 March 2019. (Note that LAEMS data does not include samples taken at border control posts (BCPs) taken as part of imported food official controls.)

- The total number of analyses/examinations fell by 5.5% (45,797 in 2018/19 compared with 48,454 in 2017/18). While for 2018/19, there was a 2.2% increase in the number of microbiological analyses (35,399 in 2018/19 compared with 34,627 in 2017/18), sampling levels have decreased for food standards, with a reduction of 21% in compositional sampling and 33.2% for labelling and presentation in 2018/2019 compared to 2017/2018.

Annex 2: Surveillance sampling case studies

Imported food surveillance programme

In 2019 the FSA Imports Team funded £460k worth of surveillance sampling to identify emerging risks for imported food, particularly risks that may be increased after the EU Exit Transition Period. The aim was to improve and increase capability for the FSA, Port Health Authorities (PHAs) and LAs to conduct imported food surveillance sampling in preparation for post transition period, to assist identifying emerging risks and making import control policy decisions through science and data driven methods.

The project was composed of two parts. The first was a sampling survey of currently uncontrolled commodity/country/hazard combinations identified in collaboration with FSA teams and conducted by an external supplier. The second part allowed PHAs and LAs to bid for funding to undertake sampling of imported food products.

Conducting a sampling survey through a service provider allowed the FSA to test intelligence management systems (such as the monthly Early Warning System and annual National Monitoring Plan), tools developed by the Strategic Surveillance Team to spot emerging trends and to collaborate with other teams across the FSA as well as other government departments to identify sampling targets. The foods for sampling were prioritised based on trade volumes and hazard risk.

Phasing the work meant we could engage with LAs/PHAs to better understand the way they carry out surveillance sampling, highlight FSA tools and training available, improve and form relationships and to help LAs/PHAs thinking about how and what to sample as their activities may change after the transition period.
Outcomes

2437 samples were carried out across the two surveys and 170 (7%) were not compliant. Some results of the project have been affected by Covid-19 as samples have not been able to be located or the results of sampling delayed.

Where non compliances were found they were either: further investigated by the Local Authority (4); referred to Trading Standards (2); withdrawn from sale/recalled (35); followed up with the importer to highlight labelling issues (2); investigated by NFCU (5); referred to HSE (9); referred to FSA Incidents (106); or referred to FSA Novel Foods (2). Five Rapid Alerts for Food and Feed (RASFFs) were raised from the sampling.

The results showed that the information and expertise used to identify sampling areas were able to accurately predict areas of non-compliance, enabling targeted sampling. Local knowledge from PHAs and LAs also supported the prediction of areas where there were issues with imported food.

2020/21 imported food and feed surveillance project
The ‘Imported Food and Feed Sampling Project 20/21’ builds upon the 2019/2020 project conducted during the last financial year and aims to encourage further intelligence led sampling across the country while assisting the process of creating a joined-up,

collaborative approach between the FSA and authorities. This project provides authorities the funding, support and the tools to strengthen their capability to deliver their sampling obligations. Increasing the level of imported food and feed surveillance sampling is deemed vital for the UK to identify, monitor and mitigate potential risks associated with those products post Transition Period.

As before, this will allow the imported food team to test their intelligence management systems tools developed by the Strategic Surveillance Team and to collaborate with other teams across the FSA as well as other government departments to identify sampling targets. It is anticipated that the first round of sampling will commence in October 2021.

Covid-19 Surveillance programme

As a result of the Covid-19, LAs have followed FSA advice to minimise regulatory footfall in food and feed business establishments and focus their diminished resources to urgent reactive work. At the same time there has been a relaxation in UK regulations in order to maintain food stocks and changes to exports and trade flows from exporter countries worldwide.

To ensure continued surveillance and intelligence of the food system the FSA initiated a 6-month targeted surveillance sampling programme that commenced in July 2020. This is being delivered by a partnership of the three English LA OCLs and two private OCLs in England and Wales, to deliver surveillance sampling of targeted commodities across England and Wales. We have engaged closely with the OCLs to access their capability, and the allocation of sampling and testing will be achieved based upon the capacity and capabilities of different labs. We worked across the FSA, Defra and FSS in the development of this sampling programme to ensure cross-government benefits and coordination.

A range of tools were used to identify commodities for sampling, including FSA Surveillance Tools, Horizon Scanning and policy and scientific expertise. High priority was given to commodities and hazards where intelligence suggested that Covid-19 could impact product safety or authenticity. Upon the detection of any non-compliant samples the FSA would be notified immediately, to enable effective action. Sampling will continue until December 2020 and outcomes will be prioritised and subsequently shared with LAs and PHAs to inform future enforcement action and prioritise the targeting of official controls.

Annex 3: Lab capability during incidents

	Dioxin - Irish Pig meat	Dioxin - Eggs	Horsemeat - speciation	Horsemeat - Bute	Fipronil in eggs
Time/dates	Dec-08	Jan 2011	February 2013 - March 2013.	February 2013 - March 2013.	Early August to end September 2017
Sampling actions/rec	No samples were taken by the FSA; however, we funded milk analysis and recommended testing of beef fat. All of the analyses ordered were done at Fera.	No testing was done during the egg incidents in 2011 affecting EU countries as the UK was not involved.	FSA conducted a three-phased UK-wide enforcement survey of beef products. A Project Steering Group set up to develop the sampling plan and analytical protocol which included APA representatives. 514 enforcement samples taken by 51 LAs, chosen from active users of UKFSS.	514 samples of beef products were taken during a three-phase UK-wide survey. A sampling protocol was developed for LAs and an analytical protocol was developed laboratories. All samples that tested positive for horsemeat had to undergo further testing for phenyl butanone.	Veterinary Medicines Directorate (VMD) instructed Fera to check whether their fipronil analytical method for pesticides in fruit and vegetables could be adapted to cover eggs. Fera confirmed rapidly that it could be validated and added to their methods under the veterinary medicines National Residues Control Plan (NRCP) programme. Animal and Plant Health Agency and Scottish Government accelerated the collection of the remaining NRCP egg samples (around 200) within four weeks (rather than four months). A similar process to the was carried out in NI by DAERA

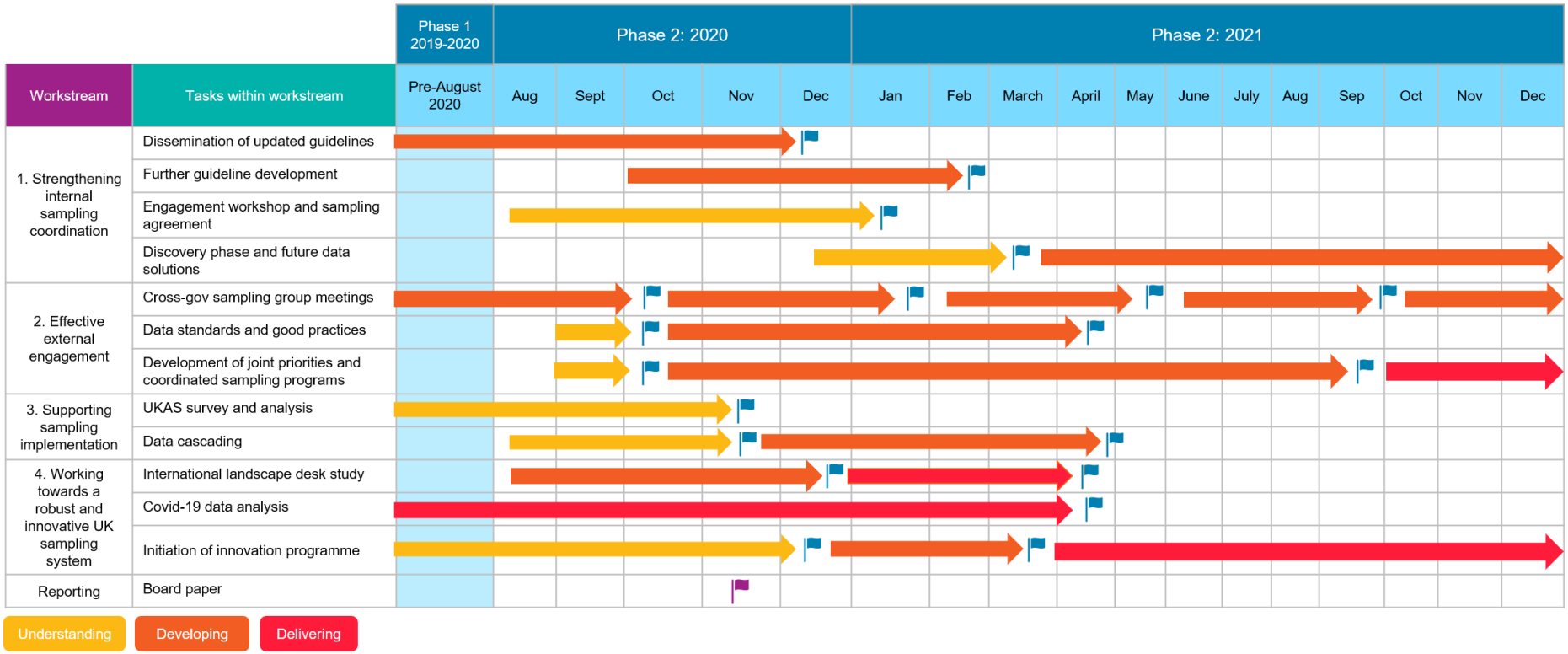
					and the Agri-Food and BioSciences Institute (AFBI) laboratory, with about 50 samples of eggs taken.
Which labs	Fera	PA labs	PASS (Euofins) tested more than 60% of the samples (quantitative and confirmatory). Other PA labs did the majority of the screening and some undertook quantitation testing; however, only Eurofins could do confirmatory testing.	Fera conducted the testing for phenyl butanone.	Fera and AFBI
Any issues raised at the time, including capacity	Public analysts were not asked to do any analysis. Number of samples taken	We funded analysis of free range and organic eggs through the coordinated monitoring	Although PA labs were accredited for qualitative (screening) analysis, not all were accredited for quantification and	No issues were raised for the Bute testing as Fera undertook all testing.	None, owing to the fact that fipronil could be added to an existing NRCP vet meds method. Good engagement with Fera also helped the labs with their scheduling.

	were small and it was enforcement sampling check for food chain contamination.	programme and these were tested by the Public Analysts for the relevant LAs which were usually PASS labs (Eurofins labs with dioxin test labs being based in Germany).	none could do confirmatory testing. Therefore, most of the samples went to PASS (Eurofins) lab where the full testing was carried out by their lab in Hamburg. Increased funding was provided to PAs for rapid turnaround of samples. PAs worked at full capacity to ensure throughput of samples. All results were recorded on UKFSS which was the main source of live information on test results. Capacity seemed to be adequate as most of the samples were sent to PASS. However, the subsequent Elliott Review raised concerns about the lab capacity.	Increased funding was provided for a rapid turn-around of samples. PAs sent samples to Fera for Bute testing. Results of testing were recorded on UKFSS by the PAs	

Capacity concerns now?	Fera still offer this type of analysis	Eurofins can undertake this testing within international labs; however, limited UK capability	Investment in this area following the horsemeat incident has increased capability in PA labs with regards to quantification tests by RT PCR. However, the overall number of PA labs has decreased since 2013.	None, as there are labs in UK that are accredited to undertake Bute testing.	No capacity issues

Annex 4: Sampling Framework Phase 2 Workstreams Timeline

Key refers to whether the task is supporting the understanding, developing or delivering of sampling activities.



Annex 5: Sampling workstreams

<table>
<tr><td colspan="3">Workstream 1: Strengthening internal sampling coordination</td></tr>
<tr><td colspan="3">Issue
Sampling coordination and consistency within the FSA could be improved to allow for better data sharing between teams and improved efficiency.
Aim
This workstream aims to promote consistency and data sharing through dissemination of guidelines and good practices for sampling surveys and sampling data collection internally via FSA sampling leads.
Benefits
Increased value for money and improved targeting of FSA sampling and risk-based interventions. Sharing of data will increase the amount of use provided from each sampling programme benefiting multiple team’s intelligence and subsequent safety actions.</td></tr>
<tr><td colspan="3">Key outputs and benefits</td></tr>
<tr><td rowspan="2">Phase 1 outputs</td><td>FSA sampling mapping document</td><td>This has provided a full understanding of the FSAs sampling landscape including key types of sampling being performed across the agency, and teams involved.
Benefits to the organisation through informed change management.</td></tr>
<tr><td>Updated sampling guidelines</td><td>Updated sampling guidelines to assist all FSA staff in the planning, commissioning, conducting and publication of all food and feed sampling surveys, ensuring a consistent approach.
Benefits to the organisation through ensuring that surveys satisfy legislative requirements, deliver improved quality products and cost benefits.</td></tr>
<tr><td rowspan="3">Phase 2 outputs</td><td>Engagement workshop</td><td>Dissemination and sharing of key sampling resources (e.g. sampling guidelines), along with agreement to best practices across all FSA teams.
Improved strategic coordination and efficient use of resources.</td></tr>
<tr><td>Data collection guidelines</td><td>Development and sharing of further guidelines on data collection standardisation and data sharing practices across the agency.
This will allow more rigorous data analysis to detect trends and direct risk intervention.</td></tr>
<tr><td>Sampling agreement</td><td>Agreement with key FSA sampling stakeholders on coordinated engagement of sampling programmes and sharing of sampling programme resources.
Cost benefits to the FSA through reduction in sampling costs, as a result of effective use and sharing of resources, and improved strategic coordination allowing benefits to other initiatives.</td></tr>
</table>

	Discovery phase	Discovery Phase report detailing recommendations of how to address current sampling data flow barriers using data solutions. Benefits to the organisation through process improvement solutions to improve sampling data flow and ensure that the FSA captures safety and standards concerns more rapidly, enabling swift action and preventing consumers from being impacted.

Workstream 2: Effective cross-government engagement		
Issue • Multiple government agencies perform sampling surveys of food, often producing results which are of value to others. Sharing of resources could be improved to prevent functional redundancy and increase value for public money Aim • This workstream will improve the FSA's cross-government engagement to ensure sampling surveys provide optimal value for money when initiating surveys/programmes and align outputs with wider government priorities. It will establish cross-government sampling data standards and good practices to allow efficient exchange of sampling data and joint priorities for sampling to enable coordination of sampling programs. Benefits • Development of a more robust and cost-effective system with consumer benefits through improved risk action. Ensuring a coordinated approach to reduce functional redundancy (multiple sampling of the same products) and best use of FSA resources when sampling for food and feed risks. Improved coordination will lead to better use of central government funds allowing for more sampling to be performed and inform policy and incident management in risk areas.		
Key outputs and benefits		
Phase 1 outputs	Cross-government sampling working group	Initiation of a cross-government sampling working group bringing together FSA, FSS and Defra. This has acted as a tool for data sharing and enabled a coordinated approach to the Covid-19 sampling programme, improving the FSAs and Defra's current intelligence on the current safety of the food system during Covid-19.
Phase 2 outputs	Cross-government data standards, best practices and joint priorities	Cross-government sampling working group agreement on sampling data standard and best practices, sharing of key sampling resources and development and delivery of joint priorities. Benefits to the organisation as a result of process improvement from increased coordination of intelligence with no additional costs and improved cost benefit of government food sampling programmes.

Workstream 3: Supporting sampling implementation
Issue • Efficient sampling data collection, reporting and sharing is key for providing reliable evidence for policy and official control direction. Hypothesis driven and surveillance data gathering could be improved and used more widely to inform subsequent official control sampling priorities, preventing non-directed sampling. Aim • This workstream aims to clarify the sampling landscape across OCLs and independent laboratories in order to identify areas where sampling support is required/areas for hypothesis led sampling. Additionally, it aims to develop a mechanism for cascading intelligence and sampling priorities across the agency and to LAs. Benefits • Improved targeting of interventions linked to food safety risk, as a result of identification of new methods to ensure that sampling priorities are informed by surveillance and intelligence. Enhanced FSA reputation through targeted intervention leading to improved safety as well as improved use of public money. Improved performance of LA official control sampling, benefiting LA resource allocation.

Key outputs and benefits		
Phase 1 outputs	Covid-19 Sampling Programme	To ensure continued surveillance and intelligence on the food system during Covid-19 the FSA initiated a 6-month targeted surveillance sampling programme with sampling commencing in July 2020. Benefits to the FSA include improved consumer protection through targeting of official controls and interventions to high risk areas based on intelligence.
Phase 2 outputs	UKAS survey	Survey of the current food sampling statistics across OCLs and independent laboratories.
	Data cascading	Sharing and cascading of Covid19 sampling programme outputs to LAs and FSA. Benefits to the organisation as a result of improved data flow ensuring official control sampling is value for money based on risk reduction.

<table>
<tr><td colspan="3">Workstream 4: Working towards a robust and innovative UK sampling system</td></tr>
<tr><td colspan="3">Issue
Development of new and innovative sampling processes is essential for a robust system. Horizon scanning and technology foresights should be used to identify and drive innovation in our approach to improve efficacy and efficiency. At present new methods and technologies are not being fully utilised within the sampling system.
Aim
This workstream aims to identify innovative sampling solutions, new methods and technologies and improve the flow of innovation from horizon scanning to implementation. It will also assess the barriers and routes to implementing new approaches.
Benefit
Improved performance of FSA core regulatory duties in a more cost-effective manner as a result of increased analysis accuracy and more directed sampling. Greater sampling system value in ensuring food safety and authenticity i.e. sampling is producing directly relevant information to feed into policy considerations and enforcement actions. This will give consumer benefits through quicker and increased identification of areas requiring interventions.</td></tr>
<tr><td colspan="3">Key outputs and benefits</td></tr>
<tr><td>Phase 1 outputs</td><td>New technology identification</td><td>FSA and Defra have jointly funded new technologies that can be used to deliver efficient sampling, such as multi-spectral imaging with LGC, which could be adapted into a point of use method for direct sampling.</td></tr>
<tr><td rowspan="3">Phase 2 outputs</td><td>International sampling landscape desk study</td><td>Report detailing the sampling approaches and practices employed by other countries and identifying effective models for consideration within a UK system. Benefits to the FSA through developing tools for a more robust and cost-effective system, detecting more safety concerns which may impact consumers.</td></tr>
<tr><td>Covid-19 sampling programme analysis</td><td>Data and programme analysis of the results produced from the Covid-19 study to identify priorities areas for future hypothesis driven and official control sampling.</td></tr>
<tr><td>Innovation programme</td><td>Initiation of an innovation programme linked into official control and horizon scanning workstreams. This will utilise NRLs to develop and deliver new sampling tools and techniques for OCLs.</td></tr>
</table>

Annex 6: Brand names

- Brand names were last discussed by the Board in 2006/2007 as part of discussions around the FSAs full policy on openness. Full details of the meeting minutes can be found here:
    - https://webarchive.nationalarchives.gov.uk/20130221093936/http://www.food.gov.uk/about-us/how-we-work/our-board/board-meetings/boardmeetings2006/boardmeeting60612/boardmins15jun06
    - https://webarchive.nationalarchives.gov.uk/20130221093932/http://www.food.gov.uk/about-us/how-we-work/our-board/board-meetings/boardmeetings2006/boardmeeting130706/boardmins13jul06
    - https://webarchive.nationalarchives.gov.uk/20130221093927/http://www.food.gov.uk/about-us/how-we-work/our-board/board-meetings/boardmeetings2006/boardmeeting210906/boardmeet21sept06
    - https://webarchive.nationalarchives.gov.uk/20130221093902/http://www.food.gov.uk/about-us/how-we-work/our-board/board-meetings/boardmeetings2007/boardmeeting150107/boardmins0207
- In September 2007 the Board agreed that a task force would consider the criteria for naming companies and food products, however a final decision was not made on whether to continue to use or update this policy. Therefore, the default position has been to publish brand names since.

Issues

- Publication of brand names can slow down the development, delivery and implementation of sampling surveys due to the requirements in engaging with brand owners and businesses when undertaking the sampling programme. Naming brands can also lead to a reluctance in sharing valuable intelligence and working co-operatively to deliver.
- Other noted issues on the publication of brand names include: low sample sizes preventing statistically significant results on individual brand names, sampling focussing on risk rather than enforcement, and long-term sampling programmes leading to brand names being irrelevant by the time of publishing. Additionally, the embedding of sampling surveys into research programmes means that publishing of brand names often requires agreement with external parties, which can be difficult to achieve.