Determining the capabilities of food businesses to produce safe and legal food in a pandemic.

Authors

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Acknowledgements

Executive summary

The COVID-19 pandemic has brought into sharp focus the role of third party certification in determining how business capability is assessed. Public health controls implemented to prevent the spread of SARS-CoV-2 abruptly halted physical audits and regulatory inspection verification mechanisms. This left many brand owners and manufacturers being faced with a "no-visitor" policy from their suppliers. Concerns were expressed about the capability of food businesses to produce safe and legal food in a pandemic with its consequential disruption to supply chains, staffing, service provisions and the consequences of reduced surveillance and verification on food standards and food safety. As a result, the food industry had to reassess the processes used to ensure the production of safe and authentic food; and to reconsider whether alternate approaches to assuring food safety and legal compliance of food products could be used.

This article takes a look at the historical development of the third party audit and the role it plays in Food Safety and Quality Management Systems. It serves as a reminder of the principles that underpin a competent food business and highlights some options for monitoring and verification of a food business in the absence of 3rd party audits. Whilst these measures were introduced as a short term solution, it is likely that some elements will continue.

Background

The food and drink industry is the United Kingdom's (UK's) largest manufacturing sector, contributing £28.2billion to the economy annually and employing around 430,000 people. This manufacturing base forms a key part of the £110 billion per annum 'farm to fork' UK food chain[1]. In 2019, UK food and drink exports reached £23 billion across more than 220 countries[2]. The success of the industry relies on the adoption of appropriate food safety and quality management systems, ensuring consistent performance, and market and regulatory compliance. Over a 12 month period (1st October 2019 – 30th September 2020), there were 687 notifications on the European Union (EU)

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[1] THE FOOD AND DRINK INDUSTRY Economic contribution and growth opportunities, FDF
https://www.fdf.org.uk/publicgeneral/FDF-GT-Exec-Summary.pdf
[2] FDF Our Industry at a Glance https://www.fdf.org.uk/statsataglance.aspx

Rapid Alert System for Food and Feed (RASFF) database[3] associated with the UK and 150 food alerts and/or allergy alerts on the Food Standards Agency website, together averaging around 17 notifications a week, showing that non-compliance occurs and its impact can vary between minor to serious. It should be noted that these are the publicly available figures and additionally there will be product withdrawals and rejections within the supplier's control.

The current approach to demonstrate food is safe, legal and authentic is based on a system with written standards, designed to support a due diligence defence[4]. With the advent in the UK of the Food Safety Act in 1990, the due diligence defence arose as a change to the previous liability law associated with food products[5]. Over time, the assurance approach has drifted away from the original intentions and principles of the due diligence defence. The retailers' need to meet their due diligence requirements has driven the development of third party certification standards which have evolved over the last 30 years with increasing complexity and greater resource demands for production sites[6]. The UK food supply chain has now become operationally dependent upon these third party certification standards with their associated audits to drive and define enabling action and improvement planning at the individual food business operator (FBO) and wider supply chain level.

Public health controls implemented to prevent the spread of SARS-CoV-2 across the world halted physical audits and regulatory inspection verification mechanisms overnight. These were replaced swiftly with virtual audits as the food supply chain pivoted, but this left many brand owners and manufacturers being faced with a "no-visitor" policy being operated by their suppliers. The potential food safety risk if such alternative business capability assessment measures are not effective, is clear.

Verification activities provide on-going evidence of capability and compliance. Verification confirms that the food product and its packaging are consistently meeting the intended design specification and performance criteria, and that the processes that are required to be followed are being performed. Verification should also address other essential elements of food safety capability and compliance including whether the food risk management systems, pre-requisites, procedures and processes applied to protect product integrity and ensure safety are in place and being appropriately performed. This verification can be enacted by various food sector stakeholders in multiple different ways, with different focal points and for different purposes according to their specific needs. It would be expected that food businesses are able to evidence their food safety and regulatory compliance capability in ways that are accessible and able to meet these varying stakeholder needs, even during a pandemic.

Capability of food businesses to produce safe and legal food

The expectation that food is of the substance, nature and quality indicated should never be in doubt. Food manufacturers want to be able to rely upon the materials and services they are offered by their

[3] EU Rapid Alert Food and Feed Safety https://ec.europa.eu/food/safety/rasff_en

[4] Manning, L., Luning, P. A., & Wallace, C. A. (2019). The evolution and cultural framing of food safety management systems—Where from and where next? Comprehensive Reviews in Food Science and Food Safety, 18(6), 1770-1792.

[5] Caswell, J. A. (1998). Valuing the benefits and costs of improved food safety and nutrition. Australian Journal of Agricultural and Resource Economics, 42(4), 409-424.

[6] Manning, L., & Baines, R. N. (2004). Effective management of food safety and quality. British Food Journal. 106(8), 598-606. https://doi.org/10.1108/00070410553594

suppliers. Retailers want to be able to rely upon the products they source from their manufacturers. Consumers want to be able to trust and rely upon the food or any other products they purchase and subsequently consume. Food risk management and the systems and process associated with it should therefore be designed to effectively prevent failure in safety, authenticity and regulatory compliance – for an FBO's own operation and that of their suppliers. There are four key fundamentals that, if in balance, will provide a repeatable set of positive outcomes for food safety performance. These are **Strategic Intent, Performance, Organisation Capability, and Culture**. These need to be established, and assessed in an ongoing evaluation framework to objectively demonstrate a food operations capability and businesses need to develop verification systems to ensure they are in place. Each of these four elements are now considered in turn.

Strategic Intent

An FBO should have strategic intent to consistently produce safe and legal food and be clear how it will be delivered in practice. This should include the setting of values and policies; deciding who to do business with; what risk profile is acceptable and how to resource the business against its commitments. The FBO's strategic intent and purpose will be framed by its risk profile in terms of the foods it produces and it needs to be articulated as an intent statement through clear policy with appropriate resources that are committed to deliver the purpose, and that such delivery is underwritten by the head of the business (CEO). From that position, all other standards can then become established; namely the rules, processes, practices to be followed, the need to comply with third party standards, and how the management system will be structured to consistently deliver the purpose.

Organisation Capability

An organisation structure is needed that supports the FBO's strategic commitments to safe and legal food across all parts of the organisation, together with competent individuals who own the responsibility for food safety and are given authority to act accordingly. Food safety competency should be embedded into the critical roles and functions necessary to ensure that responsibility for food safety is not simply 'functional' but strategic. Food safety needs to be implicit in the role profile of the procurement, development and operational teams. Specifications defining safe and legal requirements for food products, packaging and processes will provide the performance criteria standard needed for all people within the organisation to work to and they provide the foundation upon which to collect evidence of producing foods that is 'safe by design'. The communication structure of the business should allow for, and promote, both the strategy and the objectives for food safety. The business must actively encourage and target behaviours that drive positive outcomes across all functions. An effective organisational structure is therefore dependent upon an appropriate environment and culture in which the strategic intent with respect to food safety and legality is promoted and encouraged at every opportunity.

Culture

Culture is the coming together of everyday behaviours and interactions, relationships, business and personal values, and positive motivation. Food safety must be promoted as a virtue, and the organisation needs to encourage and promote its business and financial value by supporting and rewarding behaviours. Food safety must be given the level of credibility and importance, with respect to access to resources, seniority of roles and strategic input, appropriate to its relevance. Lastly, discussion and decision-making related to food safety must be open, transparent and internally communicated.

Performance

An FBO should be able to identify how it will demonstrate its commitment to its strategic intent. The business should have an integrated structure for capturing data against proven performance criteria including food safety criteria, converting that data into information and using trends to drive both immediate and improving decision making. Critical indicators with focussed targets to identify failure events, support timely responses and drive continuous improvement to both correct and prevent recurrence are key to supporting consistent performance. Quality, cost, delivery and morale should be considered across an equal and balanced scorecard. Reporting on performance with interpretation and recommendation for continuous improvement and risk prevention through established communication routes up to and including the CEO and Executive Board will influence decisions at a strategic level. If performance measurement suggests this is required, reporting may facilitate, redirection of resources and capital. A positive attitude to assessment and feedback with internal processes that independently challenge current practices will create a positive performance culture across the whole organisation. Being able to demonstrate change and improvement against internal and external assessment will provide evidence of this culture.

Evidencing Food Safety Capability

How can these four elements be evidenced in the absence of face to face physical audits? Here are some options:

- **Assessment of internal audit results and non-conformance management** through data provided on request to demonstrate the ongoing level of compliance with specifications and contractual requirements
- **Assessment of management commitment and competency** through catch-up video meetings across the organisation to determine particular attitudes, intentions and involvement of senior management, together with meetings to determine the professional status of the technical team and its role in food safety and quality management.
- **Evaluating performance against key indicators** taking into account customer complaint data and trends, finished product microbiological data and trends, environmental screening data and trends, and results of critical control point (CCP) verification tests and corrective action responses.
- **On-going "real-time" data evaluation through data collection using digital technology** as this allows for the opportunity for continuous assessment against targeted performance indicators. This data source addresses some of the challenges of on-site physical audits only providing a snap-shot of the scope able to be addressed at that time, offering real-time intelligence to enable preventive actions and support continuous improvement.
- **Monitoring remotely using technology** is a fast-growing approach which offers the opportunity through CCTV, use of drones and wearable technology to access sites across the world more frequently and to more easily engage specific experts pertinent to the food category or site operations. This also supports on-going intelligence gathering and an ability to work with a site operation more rapidly when issues arise.

Evidence of business food safety and compliance capability is essential during the pandemic lockdowns around the world, but also can form an evidence base to support existing processes around third party certification. These approaches will ensure that the industry specifies desired food safety and quality outcomes as well as the need to embed food safety and quality management processes and procedures within existing formal management systems. Evolution of third-party certification standards and their application could facilitate the use of these emergent approaches to validate, as well as verify, food safety management systems. This will involve consideration of competence, culture and organisational maturity assessment as well as wider assessment of ethical

business practise. From an FBO's viewpoint, using multiple sources of evidence both real-time and historic to ensure and demonstrate business capability would reduce the cost of failures, recalls, waste and the impact on working capital; better balance the cost of resources to meet retailer, audit or regulatory compliance needs; reduce the cost of fines and judgements for food safety and food fraud events; and ensure both business and consumer risk protection. Further, insurance costs and the impact for recovery of losses, and certification, audit and associated costs for the UK supply chain will be reduced. It will also support evidence-based discussions when food safety challenges and failures arise. Root cause analysis can be performed against a more in-depth understanding of raw material, product and process performance. The robustness of original controls measures will be more transparent. Appropriate corrective and preventive actions needed to restore food safety assurance can be determined against a back drop of data and evidence. All of which will increase confidence in the capability of food safety controls in individual food operation, in various segments of the food system and the food supply overall.

Conclusion

Third party certification audits have been an important part of the verification of the effectiveness of a food business' food safety and quality management system. However, these audits do have limitations and are only a part of the verification process needed. In some cases, companies have tended to rely too heavily, sometimes solely, on these audits believing that an annual assessment against a generic food safety standard gave a complete insight into a food business capability to produce safe and legal food. These organisations were concerned that the restrictions imposed to try to control the pandemic would limit their ability to verify supplier competence.

We believe these current changes in our ways of working give us a unique opportunity to review the fundamental principles that underpin a competent food business and relook at our validation, monitoring and verification activities using remote activity and other forms of data collection. We should look beyond the audit and take a broader look at how we can determine the capabilities of a business to produce safe and legal food. To be effective, these new approaches will need to be bespoke and fit for purpose for each individual business and product range. This will make our food safety and quality management systems more robust than those solely dependent on activities associated with the third party certification audit. Ultimately this new approach, combined with third party certification audit(s) when possible, will be a paradigm shift in how we demonstrate business capability to consistently produce safe and legal food.

References

FDF Our Industry at a Glance https://www.fdf.org.uk/statsataglance.aspx

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IFST Food Safety Group Webinar Remote auditing 2020 https://www.ifst.org/events/ifst-food-safety-group-webinar-remote-auditing-video

Suggested Images

Could also have an image of remote monitoring body camera?