

PAS 320:2023

Developing and sustaining a mature food safety culture – Guide



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Foreword

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Use of this document

As a guide, this PAS takes the form of guidance and advisory recommendations. It is not to be quoted as if it were a specification or a code of practice.

Presentational conventions

The guidance in this document is presented in roman (i.e. upright) type. Any recommendations are expressed in sentences in which the principal auxiliary verb is "should".

Additional commentary, explanation and general informative material is presented in smaller italic type.

Where words have alternative spellings, the preferred spelling of the *Shorter Oxford English Dictionary* is used (e.g. "organization" rather than "organisation").

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In particular, attention is drawn to the following specific Act and regulations:

- EC Regulation No. 853/2004 of the European Parliament and of the Council of 29 April 2004 on the hygiene of foodstuffs [1];
- FDA Food Safety Modernization Act (FSMA) [2]; and
- Codex Alimentarius, CXC 1-1969 [3].

Introduction

According to the World Health Organization (WHO) [4], consuming contaminated food resulted in an estimated 600 million people – almost 1 in 10 people in the world – falling ill, and leads to 420 000 deaths every year, resulting in the loss of 33 million healthy life years.

These data confirm that organizations ought not to operate in functional silos. Instead, organizations need to have teams collaboratively working toward shared values and goals to implement an effective food safety management system (FSMS) by adopting a process approach to existing practices to drive positive behaviours.

Management commitment is fundamental to build the foundation for a food safety culture as a catalyst for business improvement, sustain the continual improvement of the organization's food safety performance, and mature its food safety culture with the mindset that food safety is a whole food supply chain responsibility regardless of the organization's size or complexity. The WHO [4] stated that "food safety is a shared responsibility, and everyone has a role to play including governments, industry, producers, business operators and consumers".

PAS 320 provides a framework, using the plan-do-check-act (PDCA) methodology and process approach, to support organizations in developing, maturing and sustaining the continual improvement of their food safety culture. This approach can be used equally well by large and small organizations. The combination of the five dimensions of food safety culture (4.2) with the FSMS, management principles, and statutory, regulatory and customer requirements related to food safety is fundamental to supporting organizations on this journey.

As a first step, PAS 320 provides guidance on understanding the fundamentals of a food safety culture, including its definition, integration between its dimensions and the FSMS principles, its relationship to the wider organizational culture, and related internal and external issues.

Following a structured and clear understanding of the fundamentals of a food safety culture, the establishment of governance plays a vital role in maturing it and sustaining its continual improvement. PAS 320 includes recommendations related to leadership; the organization's vision, mission, values and policy; organizational structure; responsibilities, accountabilities and authorities; guiding coalition team; interested parties; change champions; influencers; and food safety documentation.

With the governance in place, the guiding coalition team is able to understand the current state of their organization's food safety culture and plan to develop, mature and sustain its continual improvement. To support this step, PAS 320 provides guidance on the definition of the desired food safety culture and the assessment and measurement of the current maturity level of organizations' food safety culture.

Annex A provides an overview of the relationship of the PAS 320 clauses and key actions from each clause.

PAS 320 provides recommendations to enable the design of a strategic change plan to achieve the desired food safety culture.

PAS 320 provides guidance on the establishment of a performance monitoring system to enable ongoing evaluation of organizations' food safety culture. PAS 320 includes recommendations on implementing an ongoing improvement cycle approach which supports increased food safety performance and brings other benefits to organizations including, but not limited to, talent retention, investment return, business performance improvement, reduction of the costs associated with poor quality, and enhanced efficiency.

1 Scope

This PAS gives guidance on how to mature, sustain and continually improve a food safety culture within an organization.

The PAS provides a framework for:

- a) understanding the fundamentals of a food safety culture;
- b) establishing the governance of a food safety culture;
- c) understanding the maturity level of the organization's food safety culture;
- d) designing a strategic change plan to achieve the desired food safety culture;
- e) preparing key functions towards the desired food safety culture;
- f) embedding the food safety culture change plan into the existing FSMS;
- g) evaluating the performance of the organization's food safety culture; and
- h) sustaining continual improvement of the organization's food safety culture.

This PAS is intended for use by any organization of any size or complexity across the food chain, from primary production to final delivery to consumers.

This PAS might be of use to educational institutions, trade associations, coalitions of action, professional bodies, certification bodies and other services providers, accreditation bodies, scheme owners and regulatory bodies.

The recommendations in this document are generic. The level of complexity of the food safety culture will depend upon each organization's context.

2 Normative references

There are no normative references in this document.

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1.1 antecedent

situation or event that precedes or triggers behaviour

3.1.2 continual improvement

recurring activity to enhance performance

[SOURCE: BS EN ISO 22000:2018, 3.7]

3.1.3 culture

integrated shared values, beliefs, history, ethics, attitudes and observed behaviours

NOTE Food safety culture is defined separately, see 3.1.6.

[SOURCE: BS ISO 10010:2022, 3.1, modified – note replaced]

3.1.4 food chain

sequence of stages in the production, processing, distribution, storage, handling and retail of a food and its ingredients, from primary production to consumption

NOTE 1 The term “food” also includes ingredients, beverages, feed and animal food.

NOTE 2 The food chain also includes the production of materials intended to come into contact with food or raw materials.

NOTE 3 The food chain also includes service providers.

[SOURCE: BS EN ISO 22000:2018, 3.20, modified – “retail” has been included, note 1 modified to include “ingredients” and “beverages”]

3.1.5 food safety

assurance that food will not cause an adverse health effect for the consumer when it is prepared and/or consumed in accordance with its intended use

NOTE Food safety is related to the occurrence of food safety hazards in end products and does not include other health aspects related to, for example, malnutrition.

[SOURCE: BS EN ISO 22000:2018, 3.21]

3.1.6 food safety culture

shared values, beliefs and norms that affect mindset and behaviour toward food safety in, across and throughout an organization

NOTE Culture is defined separately; see 3.1.3.

[SOURCE: GFSI, A culture of food safety – A position paper from the global food safety initiative [5], modified – note added]

3.1.7 food safety hazard

biological, chemical or physical agent in food with the potential to cause an adverse health effect

NOTE 1 The term “hazard” is not to be confused with the term “risk” which, in the context of food safety, means a function of the probability of an adverse health effect (e.g. becoming diseased) and the severity of that effect (e.g. death, hospitalization) when exposed to a specified hazard.

NOTE 2 Food safety hazards include allergens and radiological substances.

NOTE 3 In the context of feed and feed ingredients, relevant food safety hazards are those that can be present in and/or on feed and feed ingredients and that can through animal consumption of feed be transferred to food and can thus have the potential to cause an adverse health effect for the animal or the human consumer. In the context of operations other than those directly handling feed and food (e.g. producers of packaging materials, disinfectants), relevant food safety hazards are those hazards that can be directly or indirectly transferred to food when used as intended.

NOTE 4 In the context of animal food, relevant food safety hazards are those that are hazardous to the animal species for which the food is intended.

[SOURCE: BS EN ISO 22000:2018, 3.22]

3.1.8 food safety management system

set of interrelated or interacting elements of an organization to establish policies, objectives and processes to achieve food safety management system objectives

[SOURCE: BS ISO 22003-1:2022, 3.1, modified – note omitted]

3.1.9 governance

system by which the organization is directed, controlled and held accountable to achieve its core purpose over the long term

[SOURCE: BS 13500:2013, 2.7, modified – note omitted]

3.1.10 guiding coalition team

diverse group of individuals (leaders), empowered by top management, that work together to secure support for change from all interested parties and lead the implementation of a change plan to achieve the desired food safety culture and sustain its continual improvement

3.1.11 interested party

person or organization that can affect, be affected by, or perceive itself to be affected by a decision or activity

[SOURCE: BS EN ISO 22000:2018, 3.23 and BS EN ISO 9000:2015, 3.2.3]

3.1.12 leadership

establishing unity of purpose and direction and creating conditions in which people are engaged in achieving the organizations' objectives

[SOURCE: BS EN ISO 9000:2015, 2.3.2.1, modified – "leaders at all levels" and "quality" omitted]

3.1.13 management

coordinated activities to direct and control an organization

[SOURCE: BS EN ISO 9000:2015, 3.3.3, modified – note omitted]

3.1.14 maturity model

self-assessment tool for assessing and measuring the performance of an organization and the degree of maturity of its management system, identifying areas for improvement and/or innovation and determining priorities for subsequent actions

[SOURCE: BS EN ISO 9004:2018, A.1 and A.2, modified – reworded from list items]

3.1.15 near miss

incident where no injury and ill health occurs, but that has the potential to cause an adverse health effect for the consumer when food is prepared and/or consumed in accordance with its intended use

3.1.16 nudge

positive reinforcement and/or indirect suggestions that alter people's behaviours and direct them towards positive behaviours without excluding choice

NOTE Examples include, but are not limited to:

- a) *altering the behaviour of a group to maintain social distancing by adding floor markings;*
- b) *discouraging team members from coming to work sick by sharing how others are put at risk by their sickness;*
- c) *flies embossed into the urinals at Schiphol airport, which have reduced spillage and bathroom cleaning costs.*

3.1.17 organizational culture

values, beliefs and practices that influence the conduct and behaviour of people and organizations

[SOURCE: BS ISO 30400:2022, 3.1.3]

3.1.18 process approach

systematic definition and management of processes, and their interactions, so as to achieve the intended results in accordance with the food safety policy and strategic direction of the organization

[SOURCE: BS EN ISO 22000:2018, 0.3.1]

3.1.19 scheme owner

person or organization responsible for the development and maintenance of a conformity assessment system or conformity assessment scheme

[SOURCE: BS EN ISO/IEC 17000:2020, 4.13, modified – conformity assessment repeated for clarity]

3.1.20 social norm

common standards within a social group regarding socially acceptable or appropriate behaviour in particular social situations, the breach of which has social consequences

3.1.21 succession plan

process for identifying and developing current employees with the potential to fill key positions in the organization

[SOURCE: BS ISO 30400:2022, 3.2.11]

3.1.22 top management

person or group of people who directs and controls an organization at the highest level

[SOURCE: BS EN ISO 22000:2018, 3.41]

***NOTE** Top management positions may differ from one organization to another and may include, but are not limited to, organization owners, board members, chief officers and the CEO.*

3.1.23 walking the talk

showing that something is true by actions rather than words

3.2 Abbreviated terms

For the purposes of this document, the following abbreviated terms apply.

FSMS	food safety management system
HACCP	hazard analysis and critical control point
MS	management system
PDCA	plan-do-check-act

4 Understanding the fundamentals of a food safety culture and the context of the organization

4.1 Defining the concept of a food safety culture

The organization should define, communicate (see 8.4) and document (see 8.5) across all areas of the organization its position on, and understanding of, food safety culture and what it means.

NOTE All organizations have a food safety culture at a particular level of maturity. A common understanding of what a food safety culture is supports organizations to assess, measure, mature and sustain the continual improvement of its food safety culture.

4.2 Establishing the relationship between food safety culture and organizational culture

The organization should mature and sustain the continual improvement of its food safety culture as an integral, constituent and inseparable part of its wider organizational culture.

The organization should fully integrate the five dimensions of a food safety culture, the organization's FSMS and related management principles, and embed them into the organizational culture. The organization should use food science and social science to support this integration and assess its impact over the organizational systems, processes and procedures. The five dimensions of a food safety culture that should be integrated within the organization are:

- a) vision and mission;
- b) people;
- c) consistency;
- d) adaptability; and
- e) hazard and risk awareness.

NOTE 1 These five dimensions are present in all organizations and are expressed in accordance with the maturity level of the organization's food safety culture.

NOTE 2 FSMS principles include the following key elements as described in BS EN ISO 22000:2018.

- a) prerequisite programmes;
- b) hazard analysis and critical control point (HACCP) principles;
- c) system management; and
- d) interactive communication.

NOTE 3 Management principles include the following as described in BS EN ISO 22000:2018:

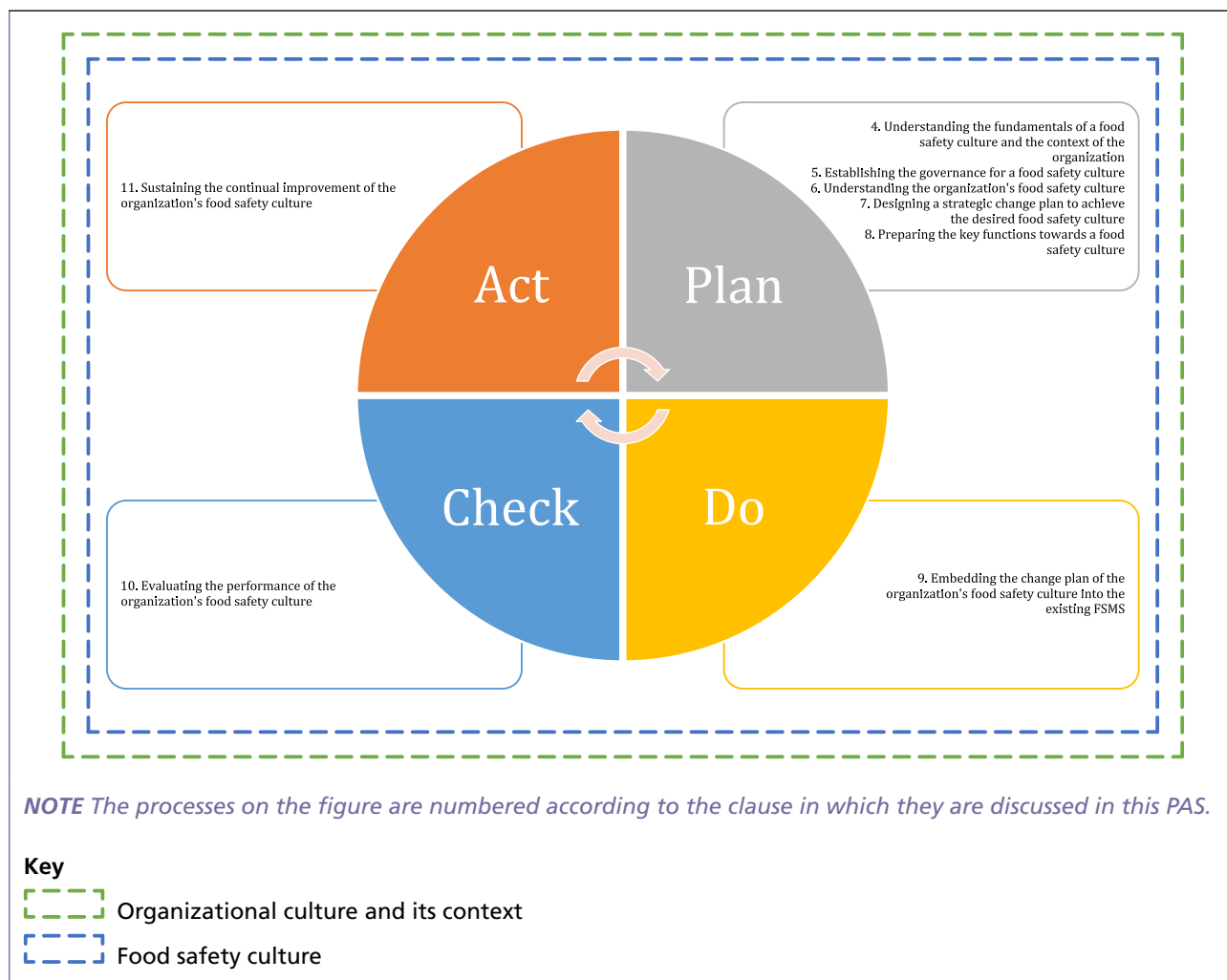
- a) customer focus;
- b) leadership;
- c) engagement of people;
- d) process approach;
- e) improvement;
- f) evidence-based decision making; and
- g) relationship management.

NOTE 4 Integration is critical to establish the relationship between food safety culture and organizational culture. PAS 99 provides a framework for integration with other management system standards to support a consistent and harmonious organizational structure

The organization should follow the framework for a process to mature and sustain the continual improvement of its food safety culture given in Figure 1.

NOTE 5 The wider organizational culture impacts the way people think and feel (attitudes) which in turn influences their actions (behaviours) and therefore affects (positively and negatively) the food safety culture.

Figure 1 – Framework for a process to mature and sustain the continual improvement of the organization's food safety culture



4.3 Understanding the organization's internal and external issues

The organization should identify, document (see 8.5) and monitor the organization's internal and external issues (positive and negative) which have the potential to have an impact on its food safety culture.

NOTE 1 External issues, as described in BS ISO 10010:2022, include but are not limited to:

- a) industry and sector-specific;
- b) country and region;
- c) political, economic, social and cultural factors and religious beliefs;
- d) legal, statutory and regulatory requirements;
- e) needs and expectations of customers, supply chain and other interested parties;
- f) competitive and market forces;
- g) technological status;
- h) environmental aspects and impacts;

- i) history and traditions; and
- j) local demography.

NOTE 2 Internal issues, as described in BS ISO 10010:2022, include but are not limited to:

- a) top management and people;
- b) product and service offering;
- c) organizational maturity;
- d) approach to risks and opportunities;
- e) resourcing;
- f) training and education;
- g) awareness of the need for a food safety culture;
- h) available technologies;
- i) earning expectations;
- j) collective agreements and labour representatives;
- k) diversity of workforce; and
- l) feedback and complaints.

5 Establishing the governance for a food safety culture

5.1 Top management commitment, accountability and consistency

Top management should demonstrate their consistent commitment and accountability with respect to the five dimensions of a food safety culture, the organization's FSMS and related management principles to mature and sustain the continual improvement of the organization's food safety culture by:

- a) setting the organizational vision, mission and values (see 5.2), food safety and human resources strategy, and policy for food safety culture (see 5.3) and related objectives [see 10.1b)];
- b) embracing food safety as an integral and vital component of the organization's mission, vision, values and priorities;
- c) supporting the integration of the organization's food safety culture into the broader organizational culture (see 4.2) by embedding a common understanding about the relationship between them at all levels and functions;
- d) providing resources (see 8.2) for maturing and sustaining the continual improvement of the organization's food safety culture;
- e) defining and assigning the structure, responsibilities, accountabilities and authorities related to food safety (see 5.4);
- f) defining, engaging, empowering and supporting the guiding coalition team (see 5.4.2);
- g) effectively communicating (see 8.4) the strategic direction of the organization's food safety culture (see Clause 7) and the sense of shared responsibility to food safety throughout the organization and in its supply chain;
- h) being accessible to all organizational levels and functions, enabling messages (positive and negative) to be transparently shared, heard and addressed;

***NOTE 1** The combination of accessibility, sharing and listening followed by positive actions from top management can build trust and transparency, which in turn can contribute to a strong working relationship based on loyalty.*

- i) promoting and supporting food safety hazard and risk awareness (see 8.3.3) at all organizational levels and functions;

- j) positive reinforcement of food safety practices through consistent demonstration of food safety desired behavior;

***NOTE 2** Leading by example through "walking the talk" (3.1.23) builds credibility.*

- k) valuing people by acknowledging their effort, recognizing and rewarding them for improving food safety, and celebrating gains (see 11.4);
- l) applying sustained data-oriented actions (see Clause 10) driven by the organization's vision, mission and values (see 5.2);
- m) supporting food safety interventions (see 11.3);
- n) supporting organizations to adapt and respond to changes, disruptions and crises (see 9.2); and
- o) promoting an ongoing approach to sustain the continual improvement of the organization's food safety culture (see 11.1).

***NOTE 3** Leadership and management are closely related concepts and there is some natural overlap. Leadership involves setting direction and giving guidance, and is about behaviour and creating the culture of the organization. Management is about monitoring and controlling the organization. These concepts are developed more fully in the BSI paper "The importance of leadership in ISO management system standards" [7].*

Top management should be aware of the powerful influence of people (behavior, competence, diversity) on the organization's food safety culture.

5.2 Defining the organization's vision, mission and values

Top management should clearly define the organization's core commitments to the food safety culture through the establishment of the organization's:

- a) expectations of what it desires to achieve (vision);
- b) purpose (mission); and
- c) principles and beliefs (values).

Food safety should be embedded as an integral and vital component of the organization's vision, mission and values, and consistently reviewed when priorities are set.

The organization's vision, mission and values should be consistent with the desired food safety culture and aligned with the organization's objectives. They should take into account the internal and external issues (see 4.3) relevant to the organization's food safety culture.

NOTE 1 *Vision, mission and values form the foundation of the organization's strategy for maturing and sustaining the continual improvement of its food safety culture.*

The organization's vision should be specific and measurable.

NOTE 2 *A specific and measurable vision can support the guiding coalition team in establishing a measurement system with objectives that indicate whether the organization is on the right track to reach its vision.*

The organization's vision, mission and values should be effectively communicated (see 8.4) to all interested parties and be documented (see 8.5).

NOTE 3 *Storytelling can help the organization effectively communicate its vision, mission and values and help interested parties understand them. A story can contextualize the vision, mission and values with tangible examples, create awareness about why they matter to the food safety culture and facilitate the incorporation of their meaning into people's routine, practices and behaviours. Storytelling can support change to be successful and promote deeper engagement at all organizational levels and functions by activating emotions, based on the sense of why the what matters, and therefore creating connections between people. Some undesired behaviours occur because it is not clear to the person what is expected to be done, how it needs to be done, why it needs to be done, and the related positive and negative consequences.*

5.3 Establishing the policy for a food safety culture

Top management should establish, implement and sustain a policy for a food safety culture that:

- a) is aligned with organizational vision, mission and values (see 5.2), and with the strategic plan to achieve the desired food safety culture (see Clause 7);
- b) is supported by measurable objectives [see 10.1b)];
- c) encourages cross-functional collaboration to achieve the goals of the organization's food safety culture;
- d) establishes food safety as everyone's shared responsibility within the organization and throughout the supply chain;
- e) holds employees accountable with consequences for non-compliant food safety behaviors;
- f) supports communication (see 8.4) as a key tool to mature and sustain the continual improvement of the organization's food safety culture; and
- g) includes a commitment to:
 - 1) meet the requirements of the organization's food safety culture related to food and social sciences, regulations, norms, statutes and customers;
 - 2) develop employee competence at all organizational levels and functions and raise food safety hazard and risk awareness;
 - 3) support and empower employees to take ownership; and
 - 4) mature and sustain continual improvement of the organization's food safety culture.

The policy for food safety culture should be communicated (see 8.4), documented (see 8.5), understood, available and applied at all organizational levels and functions. The policy should be available to all external interested parties.

5.4 Establishing and managing organizational structure, responsibilities, accountabilities and authorities

5.4.1 General

Top management should establish:

- a) an employee recruitment strategy (including an onboarding program) aligned with the competency and awareness system (see 8.3) and designed to attract a diverse applicant pool;
- b) an employee career development plan and a succession plan strategy aligned with each other and with the employee's career goals and the organization's objectives. These should be supported by the competency and awareness system (see 8.3);
- c) a reward and recognition programme (see 11.4);

NOTE 1 *Employee career development plan and succession plan strategies can help mature the organization's food safety culture since they support the organization to adapt when strategic change on structure occurs, transfer knowledge, influence employee retention and allow employees to enhance their competency.*

- d) an employee retention programme;

NOTE 2 *Employee retention programmes can contribute to the performance of the organization's food safety culture by reducing turnover rate, increasing employee engagement, and improving profitability.*

- e) an organizational structure that does not compromise the impartiality of the decisions taken;
- f) a clear statement of:
 - 1) the responsibilities, accountabilities and authorities related to the food safety culture for each role of the organizational structure (including structures other than food safety);
 - 2) the specific desired outcome (expectations) of the organization's food safety culture for which each role is accountable;
 - 3) the reason the responsibilities [see 5.4.1f)1)] for each role are needed;
 - 4) the current and potential food safety hazards and risks [including awareness-related information as listed in 8.3.3a) to 8.3.3g)];
 - 5) how each role fits into the team and impacts the desired outcomes [see 5.4.1f)2)]; and
 - 6) how each role contributes to achieving the organization's vision and mission.

NOTE 3 *Understanding why and how each role contributes to achieving the desired outcomes of the organization's food safety culture combined with food safety hazard and risk awareness can support employees to take ownership.*

All employees, from all organizational departments, should embrace food safety, be responsible for reporting food safety issues related to their role and beyond their responsibilities, and be empowered and responsible for initiating positive change and supporting the organization to mature and sustain the continual improvement of its food safety culture.

Accountability and authority should be established and aligned with each other.

Responsibilities, accountabilities and authorities should be communicated (see 8.4) throughout the organization so that they can be understood at all organizational levels and functions, and be documented (see 8.5).

5.4.2 Establishing a guiding coalition team

Top management should define, engage, empower and support a guiding coalition team and nominate its leader.

The guiding coalition team should be a diverse and cross-functional team, including top management and representatives from different departments of the organization including, but not limited to:

- a) human resources (HR);
- b) procurement;
- c) sales;
- d) marketing;
- e) research and development (R&D) and new product development (NPD);
- f) production;
- g) maintenance;
- h) quality assurance, inspection and laboratory;
- i) finance;
- j) compliance; and
- k) information technology (IT).

NOTE 1 *The quantity of people selected to be part of the guiding coalition team depends on the size and complexity of the organization.*

The guiding coalition team should be responsible for:

- 1) identifying the organization's maturity level (see Clause 6.1) at regular intervals and integrating the findings into the strategic plan (see Clause 7);
- 2) building the strategic plan to achieve the desired food safety culture (see Clause 7) consistent with organization's vision, mission and values (see 5.2);
- 3) leading and managing the process of embedding the change of the organization's food safety culture into the existing FSMS (see Clause 9) and sustaining its continual improvement (see Clause 11);
- 4) verifying that a competency-based employee development programme is in place (see 8.3.2) and that food safety hazard and risk awareness is raised at all organizational levels and functions (see 8.3.3);
- 5) supporting the implementation of a communication and nudging system (see 8.4);
- 6) encouraging the desired food safety behaviour at all organizational levels and functions;

NOTE 2 *An example of encouraging desired behaviour is "walking the talk". The guiding coalition team demonstrates the desired behaviour through their actions as well as through communication.*

- 7) taking actions to inspire and empower employees to deliver their best performance and improve ownership (see 11.4); and
- 8) reporting to top management the effectiveness of the food safety culture (see Clause 10).

5.4.3 Identifying and engaging interested parties

The guiding coalition team should identify and engage internal and external interested parties which impact (positively and negatively) the organization's food safety culture.

The guiding coalition team should verify that the needs and expectations of interested parties are integrated into the organization's food safety culture.

***NOTE 1** External interested parties include, but are not limited to, clients, customers, suppliers, contractors, certification bodies, trade associations, labour organizations and regulatory authorities.*

***NOTE 2** Engagement of interested parties is vital for the organization's food safety culture change and serves as a foundation to create trust, ownership and motivation to embrace and sustain new behaviours. Empowered interested parties can act as change champions (see 5.4.4).*

5.4.4 Establishing and managing change champions

The guiding coalition team should establish, engage, empower and support change champions from different organizational levels, functions and areas. The champions should be responsible and accountable, along with the coalition team, for promoting changes in the food safety culture and supporting its implementation. Champions should be acknowledged for their contributions.

***NOTE** The change of the organization's food safety culture is a shared responsibility of all employees in the organization, not only of change champions or the guiding coalition team.*

5.4.5 Identifying and managing social influencers

The guiding coalition team should identify, engage, empower and support social influencers in their role of exerting influence over employee's food safety behaviour in their network.

***NOTE** Empowering marketing team members can help to leverage social influencers in positively reinforcing the message, using trustworthy storytelling techniques, with their networks, and therefore accelerating the change process.*

6 Understanding the organization's food safety culture

6.1 Determining the current maturity level of the organization's food safety culture

6.1.1 General

The guiding coalition team should assess and measure the current maturity level of its existing food safety culture, at regular intervals, using a maturity model (see 3.1.14) that best fits the organization and that incorporates the five dimensions of a food safety culture and their critical elements, the key elements of FSMS and the management principles (see 4.2).

NOTE 1 The GFSI position paper [5], Appendixes 4 and 5, has proposed a maturity model considering the five dimensions of a food safety culture, its critical components and five stages of maturity.

The organization should establish a numerical scale of maturity levels.

NOTE 2 This numerical scale allows change in the maturity level of the organization's food safety culture to be measured.

6.1.2 Collecting data for maturity assessment

The guiding coalition team should collect and document data to assess and measure the maturity level of its food safety culture.

NOTE 1 Data are essential elements for an accurate assessment and measurement of the maturity level of the organization's food safety culture, an effective mapping of needs, expectations and changes to the existing system against culture maturity gaps, and a risk-based approach to setting priorities for change.

The organization should define the methods and tools for data collection, including a sampling plan.

NOTE 2 Tools for data collection include, but are not limited to, internal audits, behavioural observations, interviews, questionnaires and surveys.

The tools selected should enable the organization to obtain data related to each element of the maturity model and its related dimensions of food safety culture. The tools should collect data using a scale that aligns with the maturity model so that it can be assessed against the maturity levels.

When the tool selected involves feedback from employees, the organization should establish a process that offers anonymity in order to encourage honest feedback from employees.

The organization should establish rules to minimize bias in the interpretation of the data collected.

The organization should establish rules to prevent retaliation in response to the outcome of data collected.

6.1.3 Assessing and measuring the current maturity level of the organization's food safety culture

Using the data collected (see 6.1.2), the guiding coalition team should:

a) identify the minimum and maximum score obtained and calculate the mean score for each dimension of a food safety culture assessed;

b) identify statistically significant differences within each dimension of a food safety culture assessed;

NOTE 1 The identification of statistically significant differences of maturity within the same dimension supports mapping needs, expectations and changes to the existing systems against maturity gaps.

NOTE 2 Statistics software is a useful tool to support organizations in assessing data related to the maturity level measurement of their food safety culture.

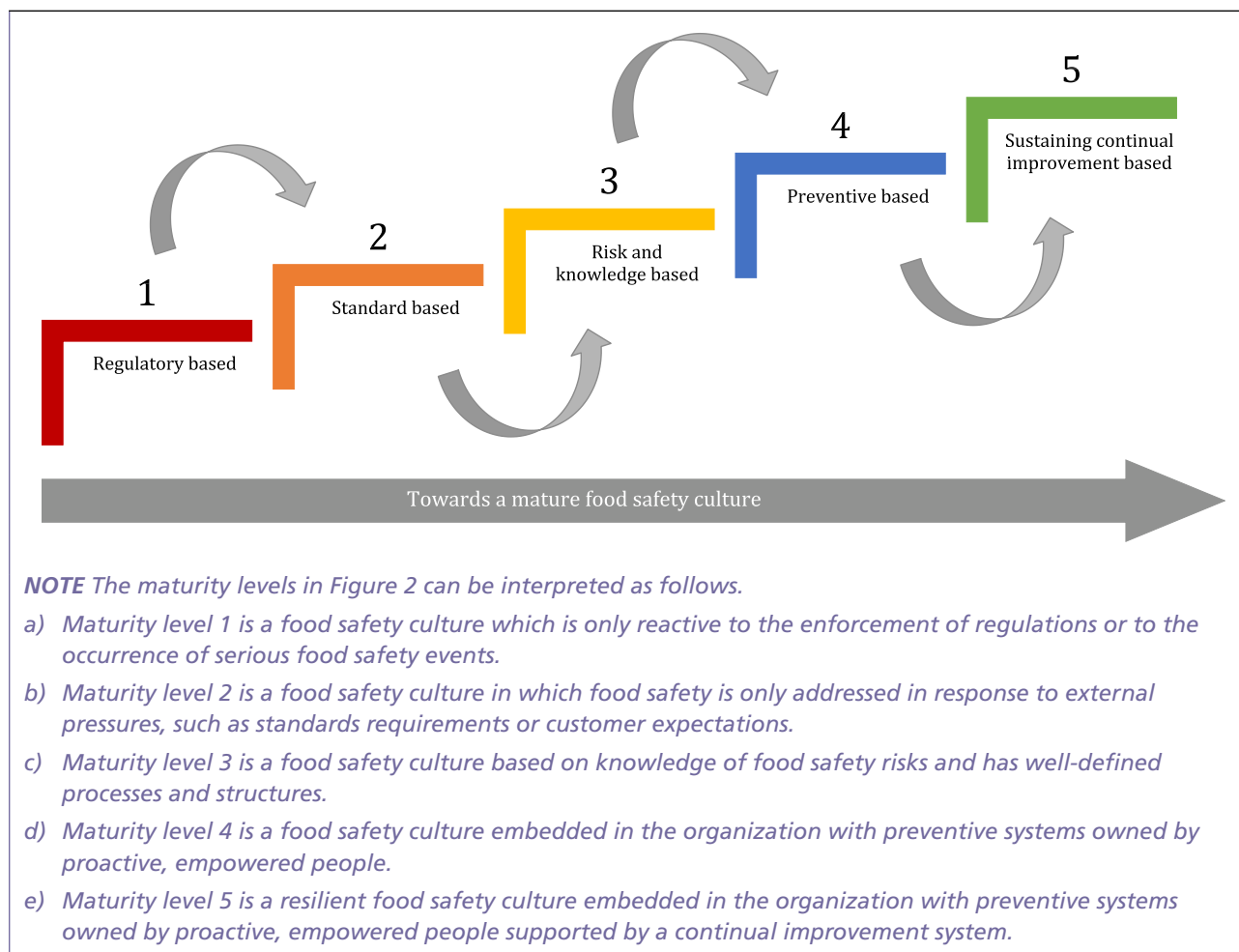
c) insert in the maturity model the minimum, mean and maximum score obtained against each assessed element of the maturity model and its related dimensions of a food safety culture; and

d) define the maturity level of the organization's food safety culture for each element of the maturity model and its related dimensions of a food safety culture based on the mean score obtained in each of them.

The outcome of the assessment and measurement of the maturity level of the organization's food safety culture should be documented and communicated to top management, within the guiding coalition team, and to other interested parties.

Figure 2 demonstrates a structured example of both the progressive nature of the maturity levels and how the organization might refer to these levels in order to facilitate the internal communication of the maturity level of the organization's food safety culture.

Figure 2 – Structured example of the progressive nature of the maturity levels of the organization's food safety culture



6.2 Determining the desired food safety culture

The guiding collation team, along with the top management and applicable interested parties from different levels of the organization, should determine the desired food safety culture based on its business model, its internal and external issues, and its mission, vision, values and policy.

The desired food safety culture should be accessible, communicated (see 8.4) to applicable interested parties and documented (see 8.5).

7 Designing a strategic change plan to achieve the desired food safety culture

7.1 General

The guiding coalition team should design, document (see 8.5) and implement a change plan, using the PDCA methodology, to achieve the desired food safety culture.

7.2 Identifying the drivers of change

The guiding coalition team should establish what drivers can effect positive changes in the organization's food safety culture.

NOTE Examples of drivers of change include but are not limited to:

- a) organizational mission, vision, values and environment (work climate, regulations and sector development);
- b) food safety requirements;
- c) culture and behavior;
- d) social changes; and
- e) technology and innovation.

7.3 Establishing the organization's readiness to drive change to achieve the desired food safety culture

The organization should assess its readiness to drive change in its food safety culture, taking into account the following elements:

- a) top management commitment;
- b) availability of resources (including but not limited to financial, time and people);
- c) organizational priorities in relation to food safety culture change;
- d) existing internal and external barriers associated with internal and external issues (see 4.3);

NOTE 1 Barriers can include, but are not limited to, language, time zones, work environment, and rewards and incentives. Rewards and incentives can be a barrier when they are absent or when they drive unethical and negative food safety behaviours.

- e) organizational structure, including the existence of a guiding coalition team; and

- f) ownership of change management.

NOTE 2 The organization's readiness is fundamental to embedding changes into the existing FSMS (see Clause 9) successfully.

The gaps and challenges identified in the readiness assessment should be addressed in the mapping needs, expectations and changes (see 7.4) before the organization starts embedding changes into the existing FSMS.

7.4 Mapping the needs, behaviours, expectations and changes to the existing FSMS against the culture maturity gaps

The guiding coalition team should map and document (see 8.5) the needs, behaviours, expectations and changes required to the existing systems against the culture maturity gaps.

Positive and negative insights from the data collected (see 6.1.2), assessment and measurement of the maturity level of the organization's food safety culture (see 6.1.3), the organization's readiness (see 7.3), the drivers of change (see 7.2) and the organization's internal and external issues (see 4.3) should be used as inputs for the mapping process.

The guiding coalition team should define a tool to be used for mapping current positive and negative behaviours.

NOTE 1 An example of a tool that can be used is the ABC model (antecedents, behaviours and consequences). The ABC model is a technique that was developed in cognitive behavioural therapy. It is used to identify external (e.g. work environment) and internal (e.g. emotions or physical sensations) triggers for behaviours (antecedents) and the results of those behaviours (consequences). The ABC model can support the guiding coalition team to understand why certain behaviours occur in particular scenarios and why they change in others. Raised awareness of the connections between antecedents, behaviours and consequences can support the organization in determining the actions needed to achieve the desired food safety culture.

The behaviour mapped should be specific, observable and measurable.

NOTE 2 *Specific, observable and measurable behaviours include the expression of feelings rather than the feeling itself.*

The mapping should include:

- a) all interested parties;
- b) current negative food safety behaviours, their context and triggers (antecedents), and the events that follow them (consequences);
- c) current positive food safety behaviours, their context and triggers (antecedents), and the events that follow them (consequences);
- d) changes needed based on the outcomes of 7.4b) and 7.4c) and the expected positive behaviours to move to the next maturity level with, their context, triggers and consequences; and

NOTE 3 *Changing context and consequences eliminate the reason for the old behaviour and provide a new reason for the desired new behaviour.*

- e) actions needed to increase positive behaviours based on the outcomes of 7.4d).

7.5 Determining food safety risks and opportunities

The guiding coalition team should determine, document (see 8.5) and monitor the current and emerging food safety risks and opportunities that need to be addressed to positively change the organization's food safety culture.

The outcomes of mapping the needs, behavioural expectations and changes to existing systems against the culture maturity gaps (see 7.4) should be used to determine the food safety risks and opportunities.

NOTE 1 *The determination of food safety risks and opportunities supports the guiding coalition team in setting risk-based priorities (see 7.6) for a long-term sustainable food safety culture and in leveraging the organization's strengths through the opportunities identified.*

The risk determination should include:

- a) risk identification;
- b) risk analysis (probability of occurrence of an event and consequence of the event); and
- c) risk evaluation (function of probability of occurrence of an event and consequence of the event).

NOTE 2 *BS EN 31010 provides guidance on the selection and application of systematic techniques for risk assessment.*

7.6 Setting priorities for positive food safety culture change

The guiding coalition team should select a tool to set actions to address the risks and opportunities and prioritize the actions which are most likely to create improvement.

NOTE *The "impact effort-matrix" is an example of a dynamic decision-making tool that can be used to set priorities and determine which actions to focus on, based on the effort required to implement them and their potential impact. This tool can support addressing short- and long-term issues and contribute to an effective change of the organization's food safety culture.*

The functions impacted by or related to the changes should provide their input (rating the solution/actions) to the priority setting process.

7.7 Establishing a change plan for the organization's food safety culture

The guiding coalition team should create a change plan to implement the actions (see 7.6) to address the food safety risks and opportunities (see 7.5) identified.

The change plan should be aligned with the organization's mission, vision and values (see 5.2) and be defined at individual, group and organizational levels.

NOTE *Individual and group levels of the organization include full time, part time, seasonal and temporary workers as well as other interested parties. Changing plans at the organizational level affects the individuals and groups within the organization.*

The plan should be designed to gain acceptance and participation from all interested parties. It should include, but not be limited to:

- a) the desired food safety behaviour and changes needed [see 7.4d) and 7.4e)], including details about what the changes are, and how changes are going to be tested, implemented and integrated into the existing FSMS across functions;
- b) resources needed for implementing the change plan (see 8.2);
- c) storytelling about the reasons changes are needed [including food safety hazard and risk awareness as listed on 8.3.3a) to 8.3.3g)], the related positive consequences of its implementation and the negative consequences of non-implementation (see 5.2);
- d) the competencies needed for those involved in the actions (see 8.3);
- e) a structure for implementing changes with responsibilities, accountabilities, authorities and ownership;
- f) a structure to support the changes and spread new practices (cross-functional support);
- g) interested parties (see 5.4.3), change champions (see 5.4.4) and influencers (see 5.4.5);
- h) the contribution that each role makes to the food safety culture change [see 5.4.1f)1) to 5.4.1f)6)];
- i) a timeline for implementation;
- j) monitoring and measurement (see 10.1); and
- k) reinforcement (see 8.4).

8 Preparing the key functions towards a food safety culture

8.1 General

The organization should take actions to prepare and strengthen the key existing functions to move towards the desired food safety culture. The work to develop the maturity of the food safety culture should not take second place to production and efficiency.

8.2 Resources

The organization should identify and provide the resources needed to mature and sustain the continual improvement of the organization's food safety culture.

The organization should align decisions related to resource availability with food safety priorities.

NOTE Resources include, but are not limited to, people, time, infrastructure, equipment, funding, technology and work environment. A work environment includes the human, social and physical aspects that influence an employee's performance.

8.3 Developing competence and awareness

8.3.1 General

The guiding coalition team should establish, document (see 8.5) and implement a competency-based employee development programme aligned with the employee's career development plan and the organization's succession plan.

The employee development programme should include, but not be limited to:

- a) the organization's business context and its products, processes, technologies and systems;
- b) food safety, including its hazards and risks;
- c) social sciences;
- d) ethics and compliance;
- e) management; and
- f) leadership.

8.3.2 Competency-based learning programme

The guiding coalition team should establish, document, implement and maintain an accessible and comprehensive competency-based learning programme by:

- a) defining the competences needed for each role at all organizational levels and functions;
- b) designing engaging learning assets;

NOTE 1 Examples of engaging learning assets include, but are not limited to, storytelling connected with real-life, videos, images, and gamification.

- c) defining and structuring the methods and tools needed for the delivery of the learning programme;

NOTE 2 Methods for learning delivery can include, but are not limited to, education, training and coaching. Tools for learning delivery can include, but are not limited to, videos, platforms, artificial intelligence and virtual reality.

- d) mapping the current competency levels of each role at all organizational levels and functions;
- e) identifying gaps between the competency needed [see 8.3.2a)] and the competency mapped [see 8.3.2d)];
- f) establishing priorities for developing a competency;
- g) defining personalized learning paths to obtain the competencies needed and to sustain and improve the competencies obtained for each role at all organizational levels and functions;
- h) defining the desired outcomes from each learning asset and the measurement system;
- i) defining interested parties;
- j) delivering the learning programme;
- k) assessing the effectiveness of the learning programme;
- l) continually monitoring employee development, performance and behaviours (see Clause 10);

NOTE 3 Informal training takes place between colleagues outside formal learning programmes and can affect an employee's development, performance and behaviours. Poor employee habits and wrong information shared by other employees can be reasons for employees not following expected food safety behaviors.

- m) analyse data and report accordingly to interested parties; and
- n) taking follow-up actions (including reinforcing food safety behaviours) based on the data.

8.3.3 Food safety hazard and risk awareness

The guiding coalition should be alert to emerging hazards and risks related to its products, process and/or people that can affect food safety, and remain cognisant of the most up-to-date industry food safety data.

The guiding coalition team should communicate to employees at all organizational levels, functions and other interested parties the most recent information related to:

- a) current and potential food safety hazards, and associated risks specifically related to their role, product, process and area;
- b) how and why the food safety hazard occurs;
- c) food safety hazard preventive measures;
- d) food safety hazard control plans (e.g. critical limits, monitoring procedures, and corrections to be made when measures fail);
- e) the consequences to food safety when measures fail or a negative behaviour is in place;
- f) why the employees' roles and associated tasks are important to prevent, eliminate or reduce the hazards to acceptable levels; and
- g) how food safety hazards and risks impact the organization's vision and objectives.

8.4 Communicating and nudging

8.4.1 General

The organization should establish, implement and maintain internal and external effective and targeted communication and nudging systems that include an emphasis on food safety culture.

The internal and external communication should be transparent and consistent.

NOTE *Communication and nudging systems can support the organization to improve food safety knowledge sharing, create awareness and genuine commitment, build trust, positively impact employees' engagement and ownership, influence their behaviour, enable changes and sustain gains.*

8.4.2 Internal communication and nudging

The organization should establish an open two-way communication mechanism between top management and employees, and encourage employees to share their experience and opinions.

NOTE 1 *Open two-way communication between top management and employees can build loyalty and empowerment.*

The organization should enable employees to express concerns, risks, near misses and make suggestions without negative consequences, and should support employees in the event of failure.

The organization should demonstrate that it values questions from employees, and takes issues, concerns and/or suggestions seriously by providing answers and communicating the actions taken to address them.

The organization should establish and implement a consistent, structured and transparent feedback system.

The internal communication plan should include, but not be limited to:

- a) verbal, visual and written communication;
- b) horizontal, cross-functional, upward and downward open communication flow;
- c) a defined target audience for each communication;
- d) a language of communication;
- e) different means of communication to disseminate the message throughout the organization;

NOTE 2 *Means of communication include, but are not limited to, videos, emails, intranets, handbooks, meetings, internal social media, mobile apps, surveys, flyers, procedures, briefings and conferences.*

NOTE 3 *The effectiveness of different means of communication is dependent on the technology available and the timing and accessibility of the communications.*

- f) engaging and usable content;
- g) information on what matters to food safety for all content communicated;

NOTE 4 *Annex B provides a non-exhaustive list of information to be communicated internally within the organization to support and mature the organization's food safety culture.*

- h) active and positive reinforcement (nudging);
- i) schedule;
- j) responsibilities and authorities;

- k) review and follow up actions; and
- l) a mechanism by which top management can be updated.

The guiding coalition team should identify which behavioural change needs to be supported by a nudge and design the nudging intervention for it.

The internal communication and nudging should be documented in the existing FSMS.

8.4.3 External communication

The organization should provide a mechanism for ongoing two-way communication with all external interested parties regarding its food safety culture.

The organization should make food safety related information available to all interested parties.

NOTE Food safety related information includes, but is not limited to, products, processes, systems, behaviours, performance, and responses to food safety issues, hazards and risks.

8.4.4 Effectiveness measurement

The organization should measure the effectiveness of its communication system.

NOTE Examples of tools to measure communication effectiveness include, but are not limited to, surveys, platforms and social media engagement statistics.

When the data indicate ineffective communication, the guiding coalition team should identify the root cause and take action to improve the effectiveness of the communication.

8.5 Documentation

The guiding coalition team should establish and maintain accessible, easy to understand, and controlled documentation of the organization's FSMS integrated with its elements of food safety culture and the related management principles. The documentation system should conform to the requirements of the organization's food safety culture related to social, human and food sciences, norms, regulations, statutes and customers.

The documentation should include the what, how, why and by whom of tasks, process and procedures.

9 Embedding the change plan of the organization's food safety culture into the existing FSMS

9.1 Managing and embedding change

The guiding coalition team should lead the process of embedding the change plan (see 7.7) of actions to address food safety risks and opportunities into the existing FSMS.

The guiding coalition team should:

- a) launch the change plan (see 7.7);
- b) establish the desired behaviour as a social norm (see 5.4.5);

NOTE 1 Social norms can be a valuable driver for effecting a positive and meaningful change of the organization's food safety culture since they influence human behaviour.

NOTE 2 Social norms are driven from the organization's principles and beliefs (values).
- c) include all organizational levels and functions involved in the changes to empower people to have autonomy to drive positive changes in the food system;
- d) make the support team ready to spread new and best practices across the organization;
- e) provide training to raise awareness (see 8.3) regarding all aspects of the actions needed to address food safety risks and opportunities (see 7.7) at all organizational levels and functions;
- f) consistently communicate changes and progress status, and take into account feedback from employees and other interested parties;
- g) support employees during the process of change;

NOTE 3 A change curve (e.g. Kubler-Ross Model) can be used as a tool to support employees to deal with changes.
- h) reinforce the change (nudging, see 8.4) and employee accountability with consequences for compliant and non-compliant food safety behaviors;
- i) work with interested parties, change champions and influencers;
- j) integrate food safety into other functional responsibilities;
- k) adopt collaborative mindset at all organizational levels, functions and departments;
- l) apply data-driven (see Clause 10) actions aligned to the organization's vision, mission and values (see 5.2); and
- m) recognize people and celebrate gains (see 11.4).

9.2 Managing disruptions and crises

The organization should determine the actions needed to increase its resilience and anticipate and respond to disruptions and crises.

The organization should conduct post-crisis reviews to identify corrective actions. The organization should document the learning and results of the review.

NOTE BS 65000 provides guidance on organizational resilience.

10 Evaluating the performance of the organization's food safety culture

10.1 Monitoring and measuring

The guiding coalition team should establish, document, implement and maintain a performance monitoring and measuring system of the organization's food safety culture, aligned with food safety priorities and connected with the communication system (see 8.4).

NOTE 1 A monitoring and measurement system can support the organization's decision-making process, indicate trends to support early-risk identification, and provide a basis for intervention and continual improvement.

The monitoring and measurement system should include:

- a) what will be measured and why, and the relationship to the dimensions of food safety culture;
- b) the objectives related to the food safety culture, systems, products, processes, norms and employee behaviours, and development and performance at organizational, functional and individual levels;
- c) a combination of a range of leading and lagging indicators for the established objectives;

NOTE 2 An effective use of both leading and lagging indicators allows the organization to analyse trends for ongoing adjustments to support the change process (leading) and determine if outcomes were met (lagging).

NOTE 3 Leading indicators as stand-alone metrics focus on short-term performance and anticipate potential issues; however, they do not allow the organization to confirm whether the objective has been achieved. Lagging indicators as stand-alone metrics confirm whether the organization's objectives have been achieved; however, they do not provide information for organizations on whether they are on track to achieve their goals.

NOTE 4 Examples of leading indicators are near miss event counts, number of people trained and behaviour observations. Examples of lagging indicators are food recalls, customer complaints, environmental monitoring results, inspections and audit outcomes.

- d) the data collection process (including which data are to be collected, the reason for collecting the data, the method and frequency of collection, how data will be stored and how the data impact the related dimension of food safety culture);

- e) the expected use of data by all related interested parties;
- f) the consequences associated with achievement and non-achievement of objectives;
- g) the expected course of actions when objectives are not met;
- h) responsibilities, accountabilities and authorities [see 5.4.1f)1)]; and
- i) frequency of monitoring.

The established objectives should be measurable, specific, risk and time-based, achievable and aligned with the organization's mission, vision, values and policy of food safety culture.

The guiding coalition team should validate the monitoring and measurement system prior to its use.

The guiding coalition team should provide training and information for employees at all organizational levels and functions on the monitoring and measurement system.

10.2 Verifying

10.2.1 Assessing behaviour

The guiding coalition team should establish a method for assessing behaviour (including, among other food safety aspects, employees' food safety hazard and risk awareness) at all organizational levels and functions.

NOTE Methods for assessing behaviour include, but are not limited to, observation of employees during their normal daily operation, surveys and interviews.

The guiding coalition team should:

- a) measure the behaviours against current expectations (see 7.4);
- b) give feedback (see 8.4.2) to the employee(s) whose behaviour is being assessed; and
- c) apply interventions (see 11.3) when behaviours are not meeting expectations and set continual improvement actions when positive behaviours are observed.

10.2.2 Assessing the food safety culture

The organization should assess (see Clause 6) the effectiveness and suitability of its food safety culture at regular scheduled intervals and establish a plan (see Clause 7) to achieve the next level of maturity.

Organizations should map improvements to its food safety culture against its maturity matrix.

10.2.3 Internal audits

The guiding coalition team should include the audit criteria related to the recommendations of this document in their existing FSMS internal audit programme.

10.3 Analysing, evaluating and reporting

The guiding coalition team should establish a method and frequency to collect, analyse, evaluate and report the performance of the organization's food safety culture.

When the data from the monitoring and measurement system and verification activities indicate a need for interventions, the guiding coalition team should lead the process of defining, implementing and verifying actions to address them.

NOTE 1 *Visual information connected with real lives can attract people's attention, create an emotional connection and impact the way people think and feel (attitudes), which in turn influence their actions (behaviours) and therefore affect the food safety culture.*

NOTE 2 *Examples of data reporting connected with real life through storytelling are:*

- a) *negative real-life story (consequence): organization's listeria contamination data report connected to a case of a child who died after eating a contaminated salad; and*
- b) *positive real-life story (consequence): organization's progress in implementing food safety practices connected with a case in which the organization was recognized for having significantly advanced food safety practices.*

The guiding coalition team should make information available to employees on the reporting system adopted.

10.4 Management review

Top management should include in the existing FSMS management review programme:

- a) the organization's food safety culture maturity level (see 6.1);
- b) the status of the strategic change plan to achieve the desired food safety culture (see Clause 7);
- c) the effectiveness of communication (see 8.4);
- d) the effectiveness of learning and competence programmes (see 8.3);
- e) any near miss data (see 11.2);
- f) the performance of the organization's food safety culture (see Clause 10); and
- g) the outcomes from the recognition programme (see 11.4).

11 Sustaining the continual improvement of the organization's food safety culture

11.1 Continual improvement

The organization should sustain the continual improvement of its food safety culture by ongoing:

- a) top management commitment and consistency (see 5.1);
 - b) communication and nudging (see 8.4);
 - c) employee engagement, empowerment and ownership (see 5.4.1 and 8.2);
- NOTE BS ISO 10018 provides guidance on engagement.*
- d) data-based actions to improve the performance of the organization's food safety culture (see Clause 10);
 - e) reporting of near misses (see 11.2);
 - f) application of interventions (see 11.3) and commitment to holding employees accountable with consequences for non-compliant food safety behaviors;
 - g) recognition of people and celebration of gains (see 11.4);
 - h) management of changes (see 9.1) and of disruption and crises (see 9.2); and
 - i) assessment (see 10.2.2) and update (see 11.5) of the food safety culture.

11.2 Reporting near misses

The guiding coalition team should encourage and empower all employees at all organizational levels and functions to report near misses using an open two-way communication [see 5.4.26) and 8.4.2].

Where near misses are reported, the organization should identify the root cause of detected near misses and implement an effective correction action plan to avoid recurrence. The guiding coalition team should verify that the employee or team that reported the near miss has been informed of the actions taken in response to the near miss.

11.3 Applying interventions

The organization should intervene when food safety expectations are not met (correction and corrective action), and/or when a potential risk to food safety is identified (preventive action), and/or when norms are not aligned with the organization's mission and vision.

The organization should incorporate interventions into the non-conformity system of its current FSMS as part of its root cause analysis and related corrective action plan.

The organization should document any food safety interventions that are implemented and communicate them to interested parties.

11.4 Recognizing people and celebrating gains

The guiding coalition team should establish, implement and maintain an effective and valued targeted reward and recognition programme.

NOTE Recognition and appreciation of those that have embraced food safety and achieved the expectations are fundamental elements of a mature food safety culture and can support employee engagement. Rewards can be part of the recognition programme, but they are not the most important part of it: sometimes a simple "Thank you" (recognizing and appreciating) can have more effect than a reward. Nominations for recognition can be top-down, bottom-up, cross-functional or a combination of them all.

The organization should verify that the recognition programme is:

- a) aligned with the organization's vision, mission and values (see 5.2);
- b) integrated with the food safety culture strategy (see Clause 7);
- c) connected with the achievement of expectations (see 7.4);
- d) communicated to relevant interested parties (see 8.4.1); and
- e) transparent, fair and consistent.

The organization should connect recognition for competencies associated with an employee's role with their career plan [see 5.4.1b)].

11.5 Updating

The organization should continually update its FSMS to reflect the desired food safety culture.

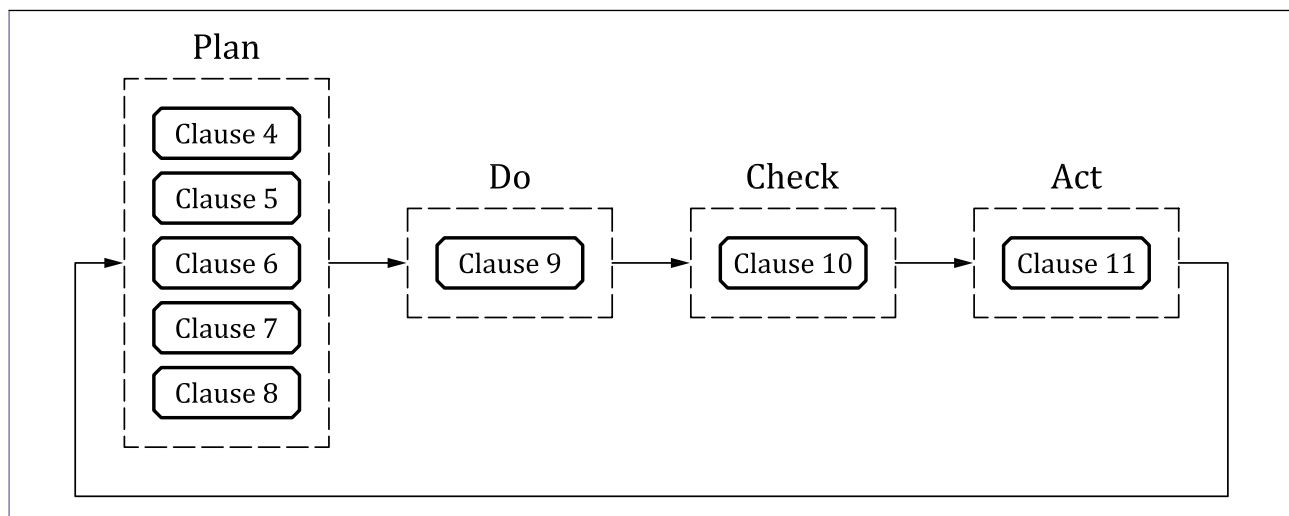
Annex A (informative)

Summary of actions from the main clauses in PAS 320

This annex provides a summary of the actions from the main clauses in PAS 320. The clauses are aligned with the framework shown in Figure A.1 and the actions from each clause are grouped under Plan, Do, Check and Act.

Figure A.1 shows the relationship of the clauses.

Figure A.1 – Overview of the relationship of the clauses in PAS 320



The actions can be summarized as follows.

a) Plan.

- 1) Understand the fundamentals of a food safety culture and the context of the organization (Clause 4).
 - i) Define the concept of food safety culture.
 - ii) Establish the relationship between food safety culture and organizational culture.
 - iii) Understand the organization's internal and external issues.
- 2) Establish the governance for a food safety culture (Clause 5).
 - i) Demonstrate commitment, accountability and consistency from top management.
 - ii) Define the organization's vision, mission and values.
 - iii) Establish the policy for a food safety culture
- 3) Understand the organization's food safety culture (Clause 6).
 - i) Determine the desired food safety culture.
 - ii) Collect data for maturity assessment.
 - iii) Assess and measure the current maturity level of the organization's food safety culture.
- iv) Establish and manage organizational structure, responsibilities, accountabilities and authorities.
 - Establish a guiding coalition team.
 - Identify and engage interested parties.
 - Establish and manage change champions.
 - Identify and manage social influencers.

- 4) Design a strategic change plan to achieve the desired food safety culture (Clause 7).
 - i) Identify the drivers of change.
 - ii) Establish the organization's readiness to drive changes to achieve the desired food safety culture.
 - iii) Map the needs, behaviours, expectations and changes to the existing FSMS against the culture maturity gaps.
 - iv) Determine food safety risks and opportunities.
 - v) Plan the changes of organization's food safety culture into the existing FSMS.
- 5) Prepare the key functions towards the desired food safety culture (Clause 8).
 - i) Identify and provide resources.
 - ii) Develop competence and awareness.
 - iii) Communicate and nudge.
 - iv) Establish and maintain documentation.
- b) Do (Clause 9).

Embed the change plan of the organization's food safety culture into the existing FSMS.

 - 1) Manage and embed change.
 - 2) Manage disruptions and crises.
- c) Check (Clause 10).

Evaluate the performance of the organization's food safety culture.

 - 1) Monitor and measure.
 - 2) Verify.
 - 3) Perform management review.
- d) Act (Clause 11).

Sustain the continual improvement of the organization's food safety culture.

 - 1) Continually improve the organization's food safety culture.
 - 2) Report near misses.
 - 3) Apply interventions.
 - 4) Recognize people and celebrate gains.
 - 5) Update the FSMS to reflect the desired food safety culture.

Annex B (informative)

Information to be communicated internally within the organization

The following information can be communicated internally within the organization (see 8.4.2):

- a) the organization's mission, vision and values;
- b) the organization's policy of food safety culture and related measurement system outcomes;
- c) responsibilities, accountabilities and authorities;
- d) the organization's food safety culture maturity level;
- e) current and emerging food safety hazard and risk awareness information as listed in 8.3.3;
- f) the change plan (see 7.7) and its related elements;
- g) positive changes;
- h) failures and concerns;
- i) near misses (see 11.2);
- j) disruptions and crises (see 9.2);
- k) performance of food safety culture (see Clause 10);
- l) gains and recognition (see 11.4);
- m) latest industry knowledge and learnings, trends and food safety events related to the organization's business;
- n) outcomes of the assessment of food safety culture (see 10.2.2); and
- o) any other parameters related to food safety that might impact the organization's culture.

NOTE This is a non-exhaustive list.

Bibliography

Standards publications

For dated references, only the edition cited applies.
For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 13500:2013, *Code of practice for delivering effective governance of organizations*

BS 65000, *Organizational resilience – Code of practice*

BS EN 31010, *Risk management – Risk assessment techniques*

BS EN ISO 9000:2015, *Quality management systems – Fundamentals and vocabulary*

BS EN ISO 9004:2018, *Quality management – Quality of an organization – Guidance to achieve sustained success*

BS EN ISO 22000:2018, *Food safety management systems – Requirements for any organization in the food chain*

BS EN ISO/IEC 17000:2020, *Conformity assessment – Vocabulary and general principles*

BS ISO 10010:2022, *Quality management – Guidance to understand, evaluate and improve organizational quality culture*

BS ISO 10018, *Quality management – Guidance for people engagement*

BS ISO 22003-1:2022, *Food safety – Requirements for bodies providing audit and certification of food management systems*

BS ISO 30400:2022, *Human resource management – Vocabulary*

PAS 99, *Integrated management systems*

PD ISO/TR 14639-2:2014, *Health informatics – Capacity-based eHealth architecture roadmap – Part 2: Architectural components and maturity model*

Other publications

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- [2] US FOOD AND DRUG ADMINISTRATION (FDA). Food Safety Modernization Act (FSMA) PUBLIC LAW 111–353. Maryland: FDA, 2011.²⁾
- [3] FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO)/WORLD HEALTH ORGANIZATION (WHO). *General principles of food hygiene*. Codex Alimentarius, CXC 1-1969. FAO/WHO: Adopted in 1969 and last reviewed in 2020.³⁾
- [4] WORLD HEALTH ORGANIZATION (WHO). *Food Safety Fact Sheet*. Geneva: WHO, 2020.⁴⁾
- [5] GLOBAL FOOD SAFETY INITIATIVE (GFSI). *A culture of food safety – A position paper from the global food safety initiative (GFSI)*. V1.0-4/11/18.⁵⁾
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²⁾ Available at: <https://www.fda.gov/food/food-safety-modernization-act-fsma/full-text-food-safety-modernization-act-fsma>.

³⁾ Available at: https://www.fao.org/fao-who-codexalimentarius/sh-proxy/en/?lnk=1&url=https%253A%252F%252Fworkspace.fao.org%252Fsites%252Fcodex%252Fstandards%252FCXC%252B1-1969%252FCXC_001e.pdf.

⁴⁾ Available at: <https://www.who.int/news-room/fact-sheets/detail/food-safety>.

⁵⁾ Available at: <https://mygfsi.com/wp-content/uploads/2019/09/GFSI-Food-Safety-Culture-Full.pdf>.

⁶⁾ Available at: <https://www.oed.com>.

⁷⁾ Available at: https://www.bsigroup.com/LocalFiles/EN-HK/ISO%20Revision_FDIS/Importance%20of%20Leadership%20whitepaper%20-%20FINAL%20-%20July%202015.pdf.

Further reading

JESPERSEN, L., GRIFFITHS, M., MACLAURIN, T., CHAPMAN, B. & WALLACE, C.A. Measurement of food safety culture using survey and maturity profiling tools. In: *Food Control*, Volume 66, 174-182. Elsevier: 2016.⁸⁾

YIANNAS, F. *Food safety culture. Creating a behavior-based food safety management system*. Springer: 2008.⁹⁾

YIANNAS, F. *Food safety = behavior – 30 proven techniques to enhance employee compliance*. 2016. Author: Frank Yiannas.¹⁰⁾

US FOOD AND DRUG ADMINISTRATION (FDA). *New era of smarter food safety – FDA's blue print for the future*. FDA: 2020.¹¹⁾

THALER, R. and SUNSTEIN, C. *Nudge: Improving Decisions about Health, Wealth and Happiness*. London: Yale University Press, 2008.

Useful websites

Food and Agriculture Organization of the United Nations (FAO)/World Health Organization (WHO) Codex Alimentarius
<https://www.fao.org/fao-who-codexalimentarius/en/>

Global Food Safety Initiative (GFSI)
<https://mygfsi.com/>

World Health Organization (WHO) – Food safety
<https://www.who.int/health-topics/food-safety>

US Food and Drug Administration (FDA)
<https://www.fda.gov/food>

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