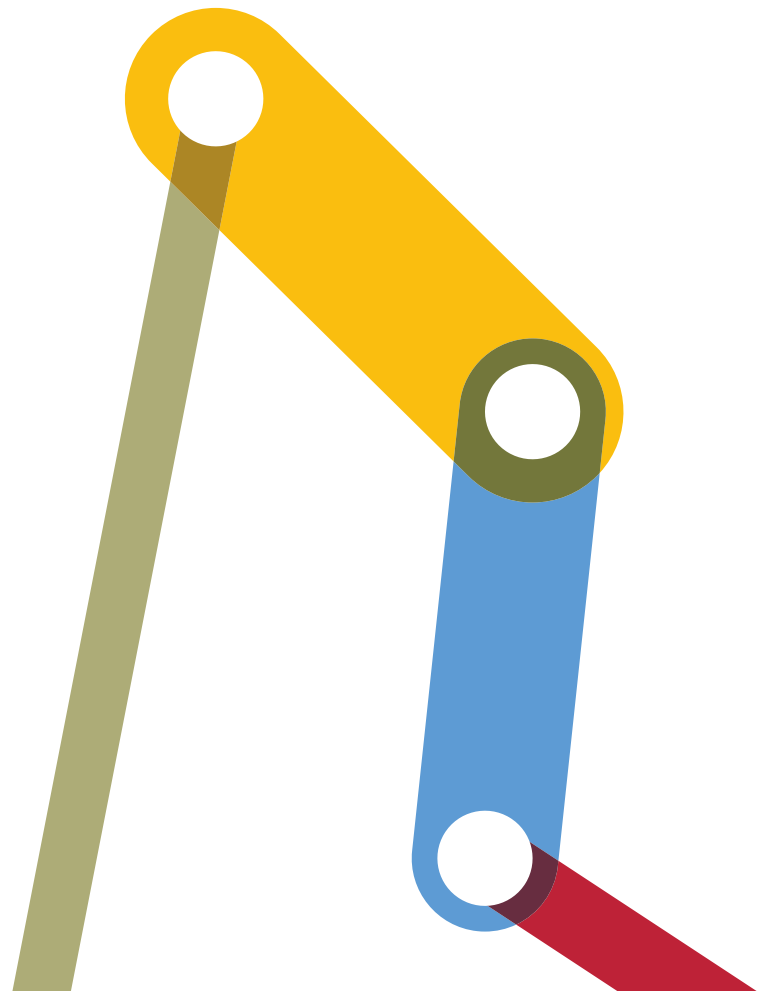


A CULTURE OF FOOD SAFETY

*A POSITION PAPER
FROM THE GLOBAL
FOOD SAFETY
INITIATIVE (GFSI)*

V1.0 - 4/11/18



Foreword from GFSI Board and Food Safety Culture Working Group

Since the Board decided to kick off a technical working group focused on food safety culture in June 2015, we have been hard at work gathering input from leading practitioners and scientists to provide stakeholders with GFSI's position and thought leadership on food safety culture. Such a topic that is relatively new to the global food industry required a diverse and passionate group to ensure practical and comprehensive thought leadership. We want to thank each of the 35 working group members their hard work, passionate discussions, and willingness to strive for a document that will add value to all parts of the global food supply chain, from the farm or factory to the shop, and across the global reach of the GFSI-benchmarked certification programmes. We hope you find the document valuable to you as you embed and maintain a positive food safety culture in your company.

Mike Robach
Chair of the GFSI Board

Lone Jespersen
Chair of the Food Safety Culture Working Group



1 EXECUTIVE SUMMARY

Virtually every enterprise that is a part of today's global food industry, from the smallest roadside vendor to the largest multinational corporation, follows some degree of safe food handling practices. By and large, these practices have kept, and continue to keep, most of the world's food supply safe for human consumption.

Because a significant portion of the developed world today depends upon mass-produced, globally sourced, processed and distributed food, the importance of maintaining food safety standards is well-recognised. However, an increasingly complex and fragmented food delivery system demands more than a reliance on written rules, regulatory oversight and safe food practices.

The Global Food Safety Initiative (GFSI), an industry-driven global collaboration dedicated to advancing food safety, believes that to be successful and sustainable, food safety must go beyond formal regulations to live within the culture of a company.

In contrast to the rule of law, culture draws its power from the unspoken and intuitive, from simple observation, and from beliefs as fundamental as "This is the right thing to do" and "We would never do this." Rules state facts; culture lives through the human experience.

This position paper was prepared by a GFSI technical working group (TWG) as a blueprint for embedding and maintaining a positive culture of food safety in any business, regardless of its size or focus. For our purposes here, we define a food safety culture as the shared values, beliefs and norms that affect mind-set and behaviour toward food safety in, across and throughout an organization.

This paper is designed to help food industry professionals promote and maintain a positive culture of food safety within their respective organizations.

It offers the insights of experts from different segments of our industry who collectively bring an international perspective to this important issue.

Emphasis is placed on:

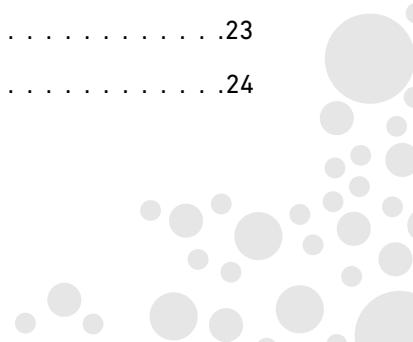
- The essential role of leaders and managers throughout an organization, from CEO to farm, field and shop floor supervisors, from local 'Mom and Pop' grocery stores to large franchise restaurant organizations.
- Why regular communication, education, metrics, teamwork and personal accountability are vital to advancing a food safety culture.
- How learned skills including adaptability and hazard awareness move important safe food practices beyond a theoretical conversation to live in "real time."

We also have included a set of tables that offer guidance across the food safety culture maturation process to foster culture change from both top-down and bottom-up. All sections are clearly marked for easy navigation.

GFSI believes that practices devoted to keeping the global food supply safe should be habitual and systemic. Further, we believe these qualities can develop naturally within a supportive and positive cultural setting -- although they demand conscious investment, strategic oversight and ongoing engagement.

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2 INTRODUCTION

Food is essential to our survival. Yet the World Health Organization estimates that almost one in 10 people is sickened by eating food processed or prepared by others. Consequently, the practices designed to ensure the safety of our food are as important as ever. When our food is grown, processed, prepared, sold and served by others, we rely on every person in the food supply chain to make the right decisions to keep our food safe. These decisions are highly impacted by the cultures of each individual organization along the chain, and how dimensions within these cultures either enable or hinder the decisions and practices of food safety.

The purpose of this document is to provide global stakeholders with the Global Food Safety Initiative's position on what organizational dimensions drive the maturity of food safety, and how a strong food safety maturity can be sustained over time through the organization's culture. As such, the document is targeted at a broad range of stakeholders, including business owners, manufacturers, retailers, restaurant managers and food safety experts.

Our primary goal is to outline the dimensions and critical content of food safety within the context of an organizational culture – referred to in this document as “food safety culture.” The content presented here has been written with all types of organizations, public and private, large and small, in mind. The dimensions are founded in science from organizational culture and psychology (see reading list for more detail) and designed to help organizations strengthen and maintain a positive and mature food safety culture and in turn, protect customers, consumers and communities around the world.

3 ABOUT THIS DOCUMENT AND ITS STRUCTURE

The content presented here is divided into five chapters, each addressing one of the five dimensions of food safety culture (Figure 1). These dimensions are based on an analysis of existing models used to evaluate food safety and organizational culture (see reading list for more detail). Each chapter defines a specific dimension and explains why it is important to advancing a culture of food safety. The chapters provide the reader with critical content areas that an organization should examine if it wants to better understand its current food safety culture and make improvements to strengthen it.

Each chapter also provides detailed “what” and “how” content to help you define your overall journey to maturing and sustaining food safety.

Each chapter concludes with a set of Guiding Questions designed as conversation starters to help readers determine how their particular company might initiate or advance the key components discussed in the chapter. To further help the reader, more detail has been provided in the appendixes in the form of a maturity model, things to look for and so forth.

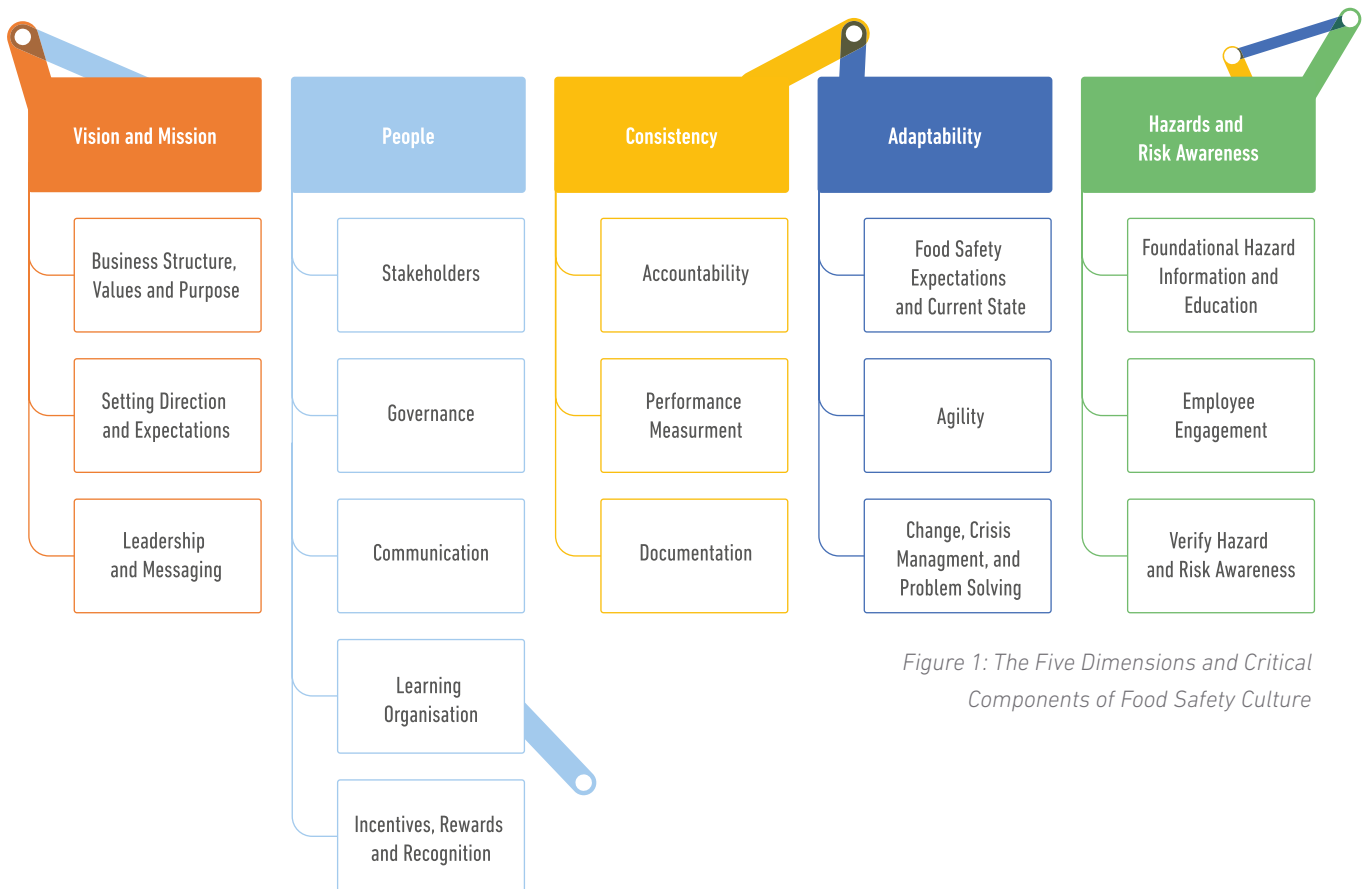


Figure 1: The Five Dimensions and Critical Components of Food Safety Culture

Two guiding principles helped to steer the creation of this document:

- (1) Content must be based on existing science and
- (2) All information presented must be clearly defined by practitioners, with priority given to the most critical components of a culture of food safety.

In other words, this is not another paper or book on food safety culture. Many have already been written, and a reading list of several has been provided in Appendix 2. Instead, these are the cultural dimensions and content GFSI believes to be most critical for practitioners and support/service companies alike to evaluate and nurture an organization's food safety culture.

3.1. About the GFSI Working Group Responsible for This Position Paper

In July 2015, the GFSI Board established a technical working group (TWG) to provide perspective on food safety culture, with the goal of offering guidance to companies seeking to incorporate cultural aspects into GFSI's benchmarked certification programmes. While culture has long been recognized as playing a significant role in organizational success or failure, it has not been communicated in the same way as more established food industry standards, including supplier verifications, sanitation and training requirements. This required the input of practitioners to explain how to give dimension to food safety culture.

The GFSI board asked the group for three deliverables:

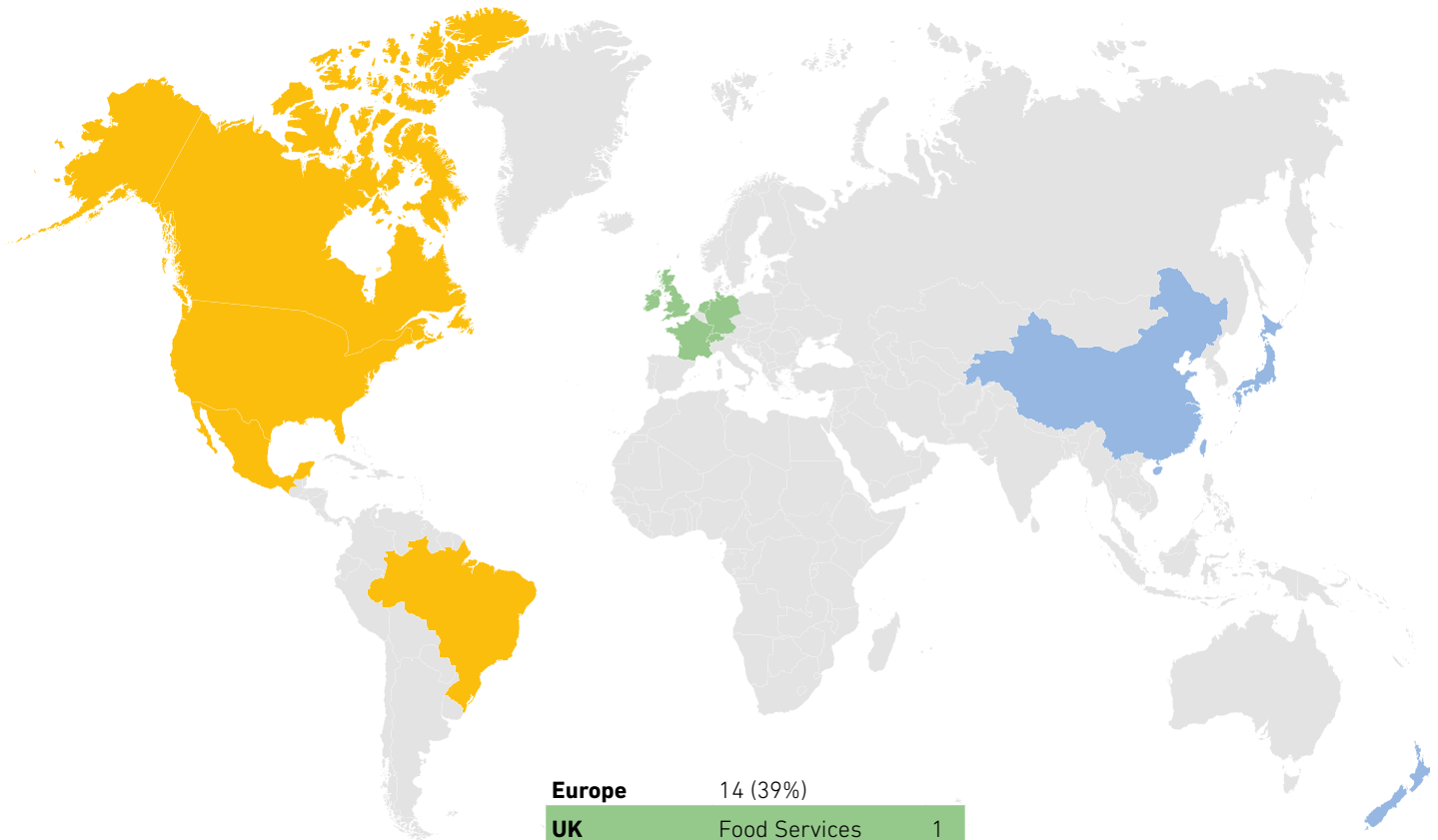
- (1) A position paper outlining the formal GFSI perspective,

(2) Benchmarking content, and

(3) A voluntary measurement system.

This paper contains material related to deliverable (1).

The contents contained here evolved through several working sessions with 35 TWG members. These individuals were selected through an application process designed to meet GFSI guidelines for international and cross-sectorial representation (Figures 1 and 2). Specific to country distribution, it is important to note that multiple members come from global companies with headquarters in the United States. As a result, they represent more than one country and were found to add significant value because of each company's global presence. A full membership list appears in Appendix 1.



Americas	19 (53%)		
US	15 (42%)	Food Services	2
		Primary	1
		Processor	6
		Retail	1
		Support	5
	2 (6%)	Processor	1
Brazil	1 (3%)	Support	1
Mexico	1 (3%)	Support	1

Europe	14 (39%)		
UK	5 (14%)	Food Services	1
		Processor	1
		Retail	1
		Support	2
Ireland	1 (3%)	Retail	1
France	3 (8%)	Processor	1
		Retail	1
		Support	1
Germany	1 (3%)	Processor	1
Switzerland	2 (6%)	Processor	1
		Support	1
Netherlands	2 (6%)	Support	2

Asia/Pacific	3 (8%)		
Japan	1 (3%)	Processor	1
China	1 (3%)	Retail	1
New Zealand	1 (3%)	Processor	1

Figure 2: Group members by sector and continent

3.2. Food Safety Culture

The GFSI TWG defines food safety cultures as, “shared values, beliefs and norms that affect mindset and behaviour toward food safety in, across and throughout an organization.” The definition is derived from existing literature on organizational

and food safety culture and made practical and applicable through the group’s work.

A few terms from this definition are referenced throughout this document and warrant discussion.

3.2.1. Shared Values, Beliefs and Norms

Culture of any kind lives not in individuals, but in groups. Values are shared with new members of the company and operationalized in groups through norms and behaviours. This sets formal systems apart from culture, in that what is “written” goes through human translation within the group to become norms – good and bad – which subse-

quently are shared and learned by new members of the group. This is one of several reasons why culture is perceived as hard to change. We are not changing formal systems, e.g., values, but rather the underlying norms and behaviours that are in many cases unwritten and sometimes unspoken.

3.2.2. Affect Mindset and Behaviour

Psychologically, our beliefs, mindsets and behaviours are impacted by multiple factors including our national culture, upbringing and life experiences. In a work environment, we are affected by the group we identify with, including our department, coworkers, our role and position, job security, formal and informal authority, and our own habits and consciousness around the job at hand. So, when we seek to not only understand how mature our food safety culture is but also how to sustain and further strengthen it, we should understand how the company’s overall values

and mission affect the thinking of the individuals within their respective groups. For example, are each person’s functions, roles and expectations clearly understood, and have they been a part of defining these roles? Do they understand how their roles contribute to the organization’s mission or purpose? These are examples of questions whose answers affect how groups and individuals view senior leaders’ commitment to food safety. They are essential to any organization’s food safety culture.

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3.2.3. Across and Throughout the Organization

A food safety culture is not a “one size fits all” proposition. Making it a reality means that throughout the organization, food safety has been defined for each member and department in terms and expectations that are both relevant and clear to them. What is required of the purchasing department, for example, is different from that of the maintenance team. Purchasing should understand the importance of selecting suppliers that are both economically viable and deliver on the company’s food safety requirements, not one or the other. Similarly, a maintenance leader should look out for the condition of the equipment to maximize up-time as well as food safety performance. For smaller organizations, the owner/operator leads by example and influences food safety culture significantly. A mature food safety culture is one in which the company vision and mission have been

broken down into the finer details of expectations for every department and person throughout the organization.

As you read through the individual chapters, remember that culture of any kind is shared and affects everyone throughout the company, and that one dimension on its own cannot strengthen a food safety culture. Instead, these dimensions must be viewed as integrated and in some cases working against each other, e.g., displaying a strong commitment to systems while remaining nimble enough to integrate change. Each chapter provides detailed “what” and “how” content to help you define your overall journey to maturing and sustaining food safety.



4 VISION AND MISSION

Vision and Mission communicates a business's reason for existence and how it translates this into expectations and specific messaging for its stakeholders.

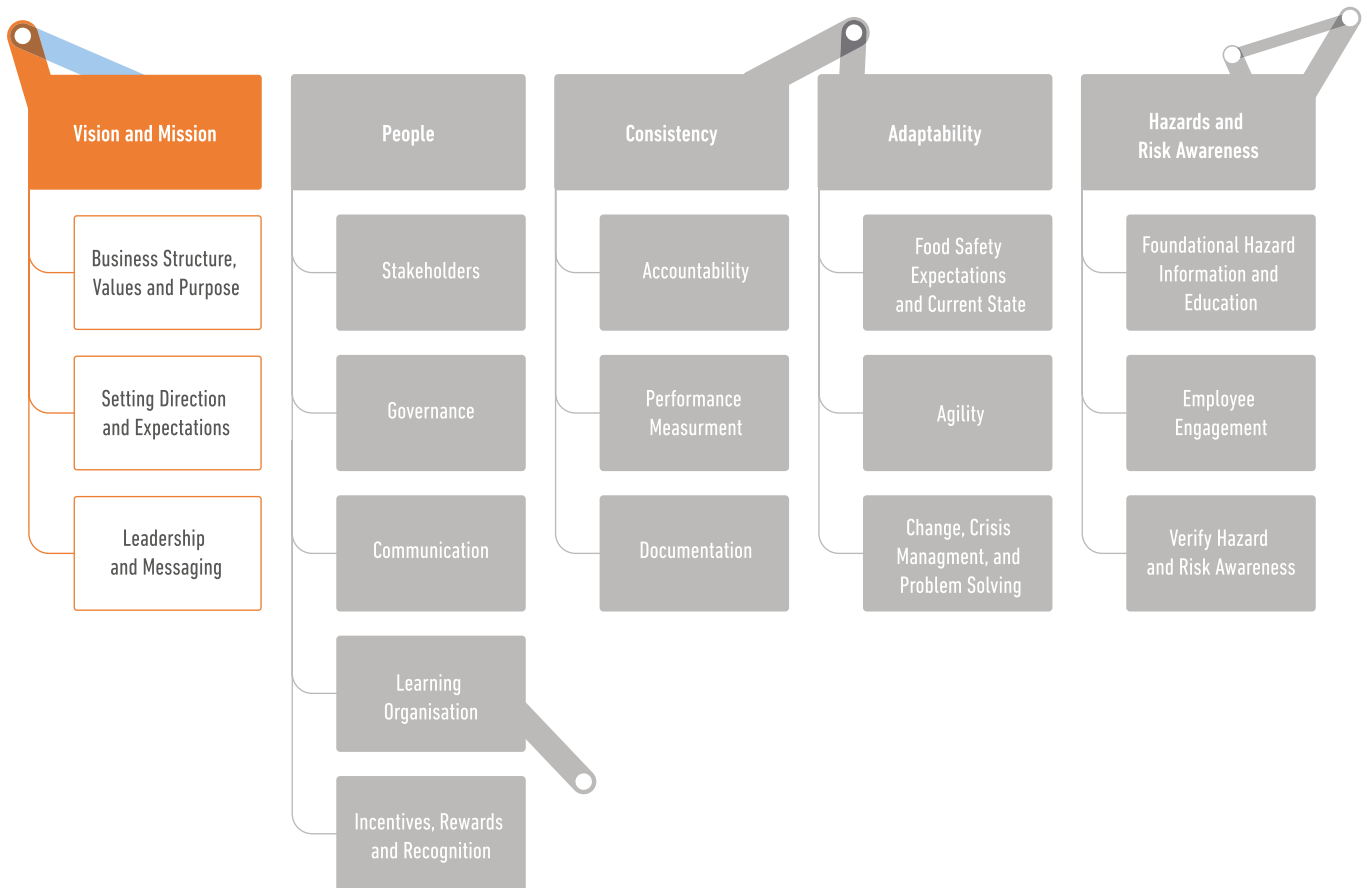


Figure 1: Critical content of the Vision and Mission dimension

4.1. Business Structure, Values and Purpose

The Vision and Mission are established by the senior leadership team and, when applicable, the board of directors or business owner. Vision and Mission statements need not mention food safety specifically, although their importance should be

reflected in the company's communications, including its website and corporate annual reports. Similarly, a company's core values transcend all aspects of the business and inform the food safety culture.

4.2. Setting Direction and Expectations

Direction-setting requires dedicated thinking and planning to identify one clear path to success. This defines a clear vision, shared and embedded

throughout the organization and understood by all. It also demands a clear understanding of what success looks like, along with long-term and short-

term milestones. Successful direction-setting involves regular follow-up meetings to evolve the direction and ensure sustainability and viability.

A company's changing priorities will drive its direction. Food safety should always be core to the business and integral in its direction-setting. When direction-setting, be mindful of all strategic priorities and ensure food safety is a consistent consideration in each.

Circumstances that can alter direction-setting include:

- Changes in regulatory requirements
- Buying a new business
- Changes in product category
- Entering new markets
- Serious food safety incidents
- Science, technology and analytical advances

4.3. Leadership and Messaging

4.3.3.1. Leadership Commitment

Leadership sets the direction and tone for a company's food safety culture in ways that support, align and contribute to its overall vision and mission. Enterprise leaders from headquarters to the local level, along with business owners, can have a profound impact on organizational culture. Leaders' commitment to food safety can significantly influence the development of a strong food safety culture. Proper allocation of resources, including financial, people and time, demonstrates leadership's dedication to food safety.

Leaders develop food safety policies and standards in alignment with the company's strategic direction, but policies alone are just documents and requirements. True meaning comes when policies are translated into clear behavioural expectations for employees. A consistent, visible and credible leadership commitment to food safety and accountability is a foundational element of a food safety culture.

The food safety policy statement places food safety requirements in alignment with the company's strategic direction and is endorsed by senior leadership and site leaders. It addresses food safety ownership of staff at all organizational levels, and establishes

responsibility for the food safety of products from product design across the full supply chain.

Messaging

Effective messaging is essential to successfully communicate a company's food safety expectations. Such messaging should be consistent and clear to all staff members, so that they understand and are regularly reminded of the company's safe-food practices and overall approach to food safety.

The goal of all food safety messaging is to educate, inform and raise awareness among all new and existing employees of safe practices so they assume ownership of their role in ensuring consumer safety and brand protection. The company's food safety policy statement plays an important role and must be easily accessible to everyone and referenced regularly in company communications.

Messaging should target all constituents, from full-time and temporary employees to contractors and external partners, as appropriate. It should be tailored to the organization's various stakeholder groups and created in multiple forms. The messages should cascade from leadership to

all employees consistently. Additionally, styles of messaging should change regularly to keep it fresh, relevant and top-of-mind.

Applicable regulatory requirements regarding food

safety, whether local, regional, national or company-specific, must be shared with all employees. It is equally important to explain why these regulations matter, and how they must be followed by everyone throughout the enterprise.

4.3.3.2. *Messaging Tools*

There are a variety of strategies and technologies that help to spread key food safety messages across all segments of the company. They include frequent communications from leadership, distributed via the organization's customary channels including company email, intranet, worksite bulletin boards and the corpo-

rate website, as well as work team meetings and informal learning events. Message effectiveness can and should be measured via online surveys and employee focus groups.

4.4. Summary

Organizational leadership sets the tone and direction for its food safety culture. The corporate vision and mission statements need not mention food safety specifically, although its importance should be reflected in company communications. Direction-setting helps establish a good food safety culture because it requires a clear vision, shared and embedded throughout the organization. Investment alignment ensures that the organization is properly resourced for food safety initiatives. A food safety policy statement places

its requirements in alignment with the company's strategic approach. It is essential to utilize effective messaging regarding food safety across the entire organization. Messaging should be clear, consistent and tailored to different stakeholder groups. A messaging framework and its related tools should distribute vital food safety messages throughout the organization. The credibility of an organization's food safety messaging ultimately is dependent upon the value the organization places on food safety.

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4.5. Guiding Questions

- How do your senior leaders engage with food safety?
- How is your messaging used to communicate food safety expectations to all employees?
- Is your company's vision and mission clearly expressed so that both are understood by all staff?



5 PEOPLE

People are the critical component of any food safety culture. Our behaviour and activities, from processes on the farm to practices in the kitchen, as well as consumer habits prior to eating the food, contribute to the safety of food and potentially decrease or increase the risk of foodborne illness.

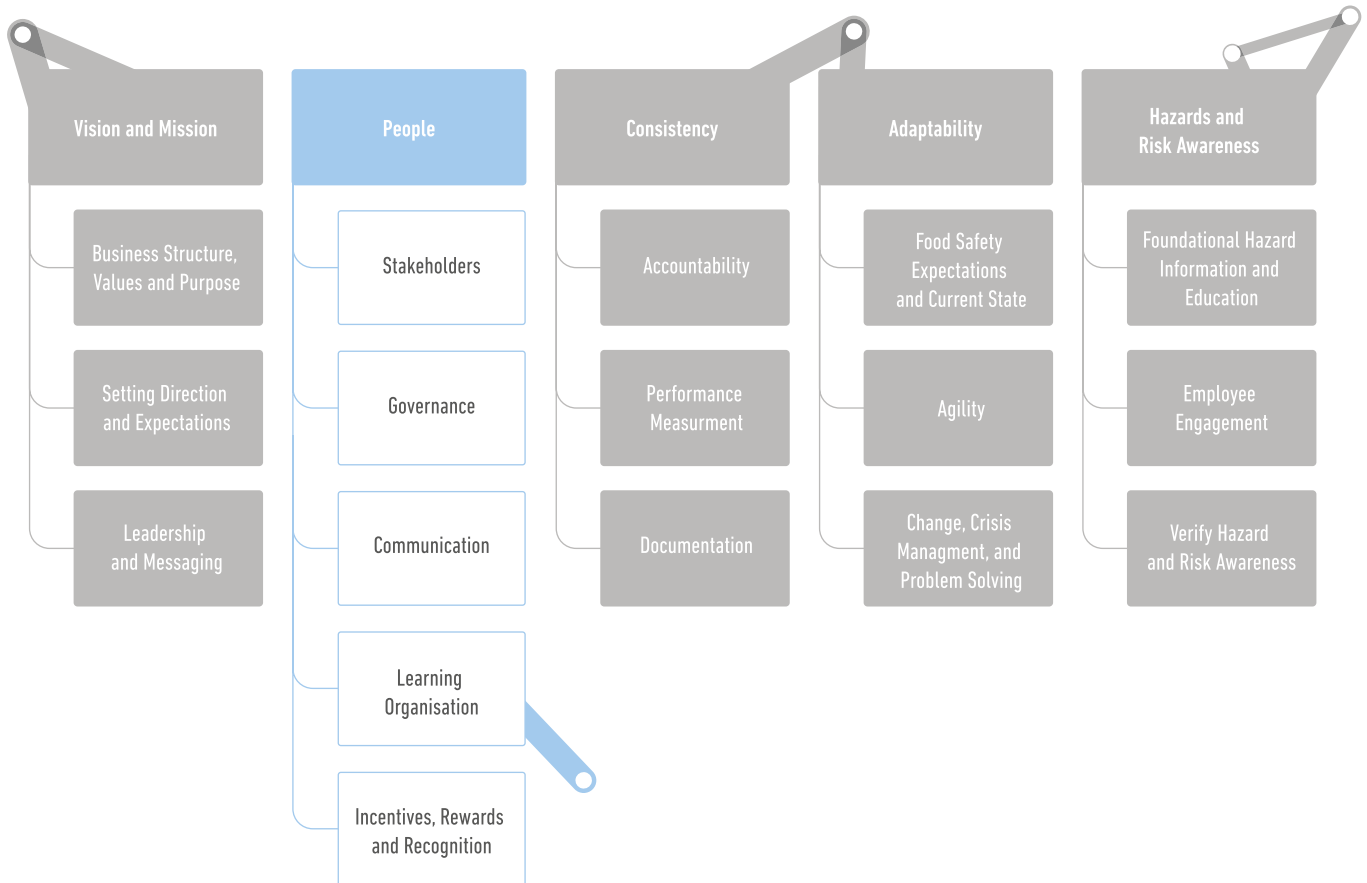


Figure 2: Critical content of the People dimension

With “People,” we refer here to everyone engaged within the food industry, from farm, field and fishing boat to processing, packaging, distribution and the serving of food. This of course also comprises those in distribution, marketing, sales, customer service, in fact the entire food chain, end-to-end. Major processes contained within the People dimension include everything from recruitment and on-boarding to capability-building, educating and empowering employees. In addition to establishing proper governance and metrics, an organization should create a robust system of rewards and consequences. Creating a sense of personal responsibility, along with

an understanding of everyone’s essential role in maintaining the entire organization’s food safety standards, can help to foster a sustainable food safety culture.

Broken down to their most primary components, the elements of the People dimension focus on competencies in food safety fundamentals; providing everyone with the tools to maintain a safe-food environment (knowledge, standards, metrics and accountability); and empowering them to use their skill-set to maintain effective food safety practices. A company that devotes time and attention regularly to food safety information, education and

accountability helps sustain a food safety culture. As explained previously, the concept of a “food safety culture” is adapted from the general definition of culture, i.e. “shared values, beliefs and norms” that affect mindset toward and behaviour regarding food

safety in, across and throughout an organization. It is important to be mindful of the workforce diversity throughout the supply chain (e.g., languages, genders, ages, education levels, ethics, length of tenure, socio economic status and religious and cultural beliefs).

5.1. Food Safety Stakeholders

“Stakeholders” in this context refers to everyone across all aspects of the supply chain, both within and outside of a company, who supply, support or otherwise influence that company. This includes field workers, production line people, maintenance crews, delivery drivers, deli workers, wait staff and franchise owners. The maturity of an organization’s food safety culture can be measured by the extent to which all stakeholders acknowledge

shared food safety goals, assume accountability for their active role in maintaining food safety standards, and work in concert to achieve those objectives (Appendix 4). Working groups can be established as cross-functional teams of food safety champions. It is critical to note that the traditional members of a food safety team cannot be solely responsible for an organization’s food safety culture.

5.2. Food Safety Governance

Food safety should be embedded within the organization’s governance structure and have the appropriate profile across the whole enterprise. It is critical to establish standards that align with global food industry best practices. Food safety governance should cover elements including:

- Strategic direction
- Organizational structure and accountability
- Policies and standards
- Risk and issues management
- Culture and behaviours

The best results are achieved when the business maintains a formal food safety structure with clearly defined individual responsibilities and non-negotiable rules that exist throughout the organization. In larger businesses, a clear delineation should be made to separate commercial from safety decision-making to minimize conflicts of interest. Consider creating an independent escalation route that allows the food safety team to report directly to senior leadership rather than senior operations staff.

As part of a company’s communication programme a whistle-blowing policy should be established and include the education of employees on the appropriate steps to take in communicating their ethical concerns to appropriate company personnel. Additionally, employees should believe that their concerns will be taken seriously and will be investigated.

5.2.3.1. People Empowerment

The extent to which people within a business have both the knowledge and authority to act will impact that organization’s ability to adapt, improve

and sustain its food safety culture. Employees at all levels should have the power to lead or initiate positive change.

5.2.3.2. Employee Capability

A commitment to developing employee competence in food safety will influence both the organization's and its employees' ability to adapt to change. Such development initiatives should encompass specific, technical food safety capabilities in addition to broader leadership and management skills such as negotiation and influence, communications, problem-solving and change deployment. It is also important to monitor how employee development impacts individual performance and behaviour. An organization that successfully adapts to change typically is characterized by empowered employees capable of taking on new and challenging responsibilities.

Training and education are essential tools.

Training and education are essential tools. It is vital to determine how well people both understand and

have confidence in the training and education they receive. Only through complete comprehension and confidence are they likely to implement safe-food behaviours and influence others around them to do likewise.

Typically, people fall into one of the groups identified in the chart below. In each quadrant, specific approaches show how to manage that group. (Appendix 5 provides additional elements that impact people management.) Individuals throughout the organization will have varying levels of knowledge, understanding and confidence in food safety behaviours. These levels may fluctuate, based on changing competencies, new programmes and circumstances. To manage these variances, a company will need a process to routinely evaluate not only levels of understanding but demonstrated confidence in employee behaviours.

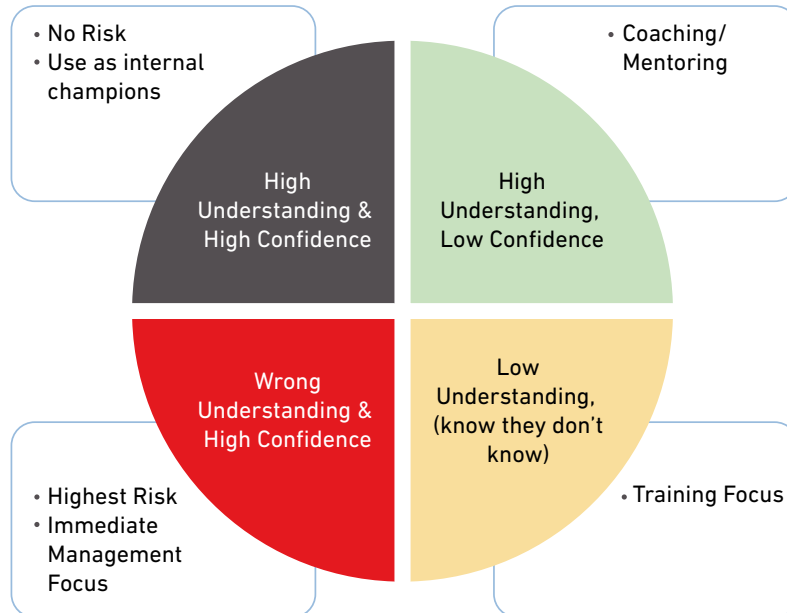


Figure 3: Confidence and understanding matrix; Original Source and with permission from Cognisco (www.cognisco.com).

5.3. Food Safety Communication

Communication is fundamental to all human interaction, and it plays an undeniable role in fostering a sustainable food safety culture. Good communication ensures that a company's food safety strategy is received and understood by all employees within the organization. It must occur regularly, be tailored to the organization's various audiences, accessible wherever the desired behaviour should occur, and measured for effectiveness.

Examples of available food safety communication channels include:

- Posters
- Meetings
- Briefings
- Videos
- Phone calls
- Conferences
- Shift Huddles
- Digital Coaching
- Mentoring
- Feedback/Suggestions process
- Company Intranet and message boards
- Competitions
- Buddy programme
- Gemba Kaizen circle meetings
- Awards and recognition
- Consequences (Including disciplinary actions up to termination)

Internal Social Network (e.g. Yammer). Achieving a high standard in communications requires consideration of the differences between industry sectors and structures – such as retail when compared to manufacturing, family-run than that of chain restaurant and corporate compared to franchisee – and how they communicate both internally and externally. As an example, a single site that washes and packages potatoes will have a different approach to risk communications when compared to a global foodservice organization.

5.3.3.1. Communication of Risk

Communication of food safety risk may be challenging, but it is an important element of promoting a shared understanding of risk within an organization. Communications to senior and cross-functional personnel regarding the likelihood and potential effects of a food safety crisis will drive risk-based decision-making and a commitment of financial resources to increased knowledge and improved practices.

The technical community is usually relied upon to lead risk assessment and influence decisions related to its management. However, it is also im-

portant to help employees inside and outside the technical team understand the hazards associated with their duties. This requires education, training and effective communication. It is also important for routine status reporting as well as to identify the early escalation of risk-related issues, which within a mature organization will lead to discussions and decision-making by those both inside and outside the technical community.

As food safety risk awareness improves, the need for additional investment and optimization will become evident. Using risk assessment to prioritize

improvements proves beneficial in justifying and communicating the need for change and avoiding the potential for complacency over time.

Drivers for continuous human and capital invest-

ment may include ongoing internal surveillance data and insights, tracking external industry data including the root cause of failures, and changes in industry expectations. All require the effective communication of risk.

5.4. The Learning Organization

Training and education are essential to the People dimension. Training is as important for senior and middle management/supervisors as it is for frontline employees. Each group has its own food safety-related training needs.

Senior management is often excluded from food safety training. As a result, managers may lack a fundamental understanding of food safety risks as well as the need for the resources to maintain compliance with a food safety programme (See Appendix 4).

A global food safety training survey found 62 percent of food safety respondents agreed that “Despite our efforts, we still have employees not following our food safety programme on the plant floor.” The extent to which all employees internalize consistent food safety behaviours is largely influenced by their own cultures, attitudes, values, beliefs and training effectiveness, as well as those of their peers and their business. (Reference: 2016 Global Food Safety Training Survey by CampdenBRI & Alchemy) In addition to creating effective food safety training for a diverse workforce and verifying comprehension, it is important to determine the most efficient methods for its delivery. On-the-job training, classroom instruction, self-directed study, coaching and mentoring all can be used to optimize learning.

Training content must be relevant to each learner’s job competencies, and employees must be able to apply that learning in their work environment. Trainers should be technically competent, with a thorough knowledge of theory and practice, and of course it is equally important that they are good communicators. Additionally, they should

receive periodic refresher training. All locations responsible for processing or preparing food should have key indicators and a recognition system in place to measure performance and recognize continuous improvement.

Companies seeking to take their training and education programmes to a more advanced level can use the training and maturity model included in this document’s Appendix 4 as a guide. Collaboration and teamwork are key to ensuring the effective sharing of lessons learned both from within the organization and from other businesses.

You need to define a competency framework which includes the set of competencies required for each role in your business to be performed effectively. Benefits experienced include:

- Employees are clearer on what is expected of them
- Clearer accountability
- More effective recruitment and new staff selection
- More effective performance evaluation
- More efficient identification of skill and competency gaps
- Helps to provide more customized training and professional development
- More effective succession planning
- More efficient change management processes

More mature organizations use approaches based

on competency-based learning. Competency-based learning systems focus on front-end analysis to determine the desired knowledge, skills, abilities, and behaviours necessary for high level job performance. Such systems emphasize the use of assessments to determine the level of competence against desired outcomes, and focus learning and developmental efforts on helping the

individual determine a learning path, identifying the learning experiences that help the individual attain the desired competencies. The instructional design methodology known as ADDIE (analysis, design, development, implementation, and evaluation), coupled with stakeholder input, learning experience review, and support systems make the system robust, efficient, and effective.

5.4.3.1. Behavioural Influencers

A food safety influencer is any person or thing that has the capacity to have an effect on food safety protocols, procedures or behaviours that may positively or negatively impact the organizational food safety culture. Recognizing the influencers of employee behaviours and developing food safety training and communications to accommodate them will optimize employee adherence to food safety programmes. Common influencing behaviours that drive human behaviour include:

- Shine the Light – “I can be seen”
- The Herd Effect --“Everyone else does it”
- Carrot and Stick – “I get rewarded or punished”
- Follow My Leader – “My manager does it”
- Guilt and Conscience – “I know it is the right thing to do”

To better understand the link between employee behaviours, the influencers of those behaviours and appropriate consequences to take based on employee behaviours, the ABC model can be utilized. The ABC model stands for Antecedents, Behaviours, and Consequences. An antecedent is something that comes before a behaviour and is required for an individual to understand what is expected and how to perform a behaviour e.g. stimulus, policy, stated expectations, training, job aids, circumstances, event past experience.

Training and communications are critical antecedents, but it is important to acknowledge that there are many antecedents that can be deployed to align employee behaviours. These antecedents include appropriate tools and equipment, sufficient time, trust and openness, competency, confidence, simplified procedures, skilled senior leaders and managers, data measurement, tracking and trending, etc.

5.5. Incentives, Rewards, and Recognition

Rewards, when paired with fair and transparent recognition programmes, can help management guide desired food safety behaviours. Such programmes should be designed to accommodate cultural differences within the organization. See the reading list at the end of this document for more detail.

Clear accountability and compliance foster commitment, empowerment and ownership. Com-

panies can use various incentives and deterrents to achieve consistent compliance, including:

- Positive and negative feedback
- Sharing best demonstrated practices
- Learnings from failures

- Recognition programmes
 - Individual and team awards
 - Corporate, peer and self-recognition
- Monetary and time compensation, praise
- Incentives to report failures and near-misses

- Promotion and demotion

5.6. Summary

People are the critical component of a food safety culture. Employee behaviour and activities, from processes on the farm to serving customers, contribute to the safety of food and potentially decrease or increase the risk of foodborne illness. It is important to establish a formal food safety structure with clearly defined individual roles and responsibilities. Major elements of this dimension include everything from educating employees and reinforcing good behaviour to creating proper gov-

ernance and metrics. The extent to which people are empowered to promote food safety will impact their organization's ability to adapt, improve and sustain its food safety culture. Good communication ensures that messaging regarding food safety is understood by all within the organization. All leaders must "walk the talk," and remain consistent in their messaging to ensure that there is the clear understanding that food safety is a journey of continuous improvement.

5.7. Guiding Questions

Individuals throughout an organization with an effective food safety culture should be able to answer the following questions:

- When was the last time you or someone on your team raised a food safety concern?
- How do you contribute to food safety in your organization?
- When was your last food safety training and what did you learn?
- To what level are people committed and acting in accordance with food safety expectations?
- How is your food safety performance measured?



6 CONSISTENCY

Consistency refers to the proper alignment of food safety priorities with requirements on people, technology, resources and processes to ensure the consistent and effective application of a food safety programme that reinforces a culture of food safety.

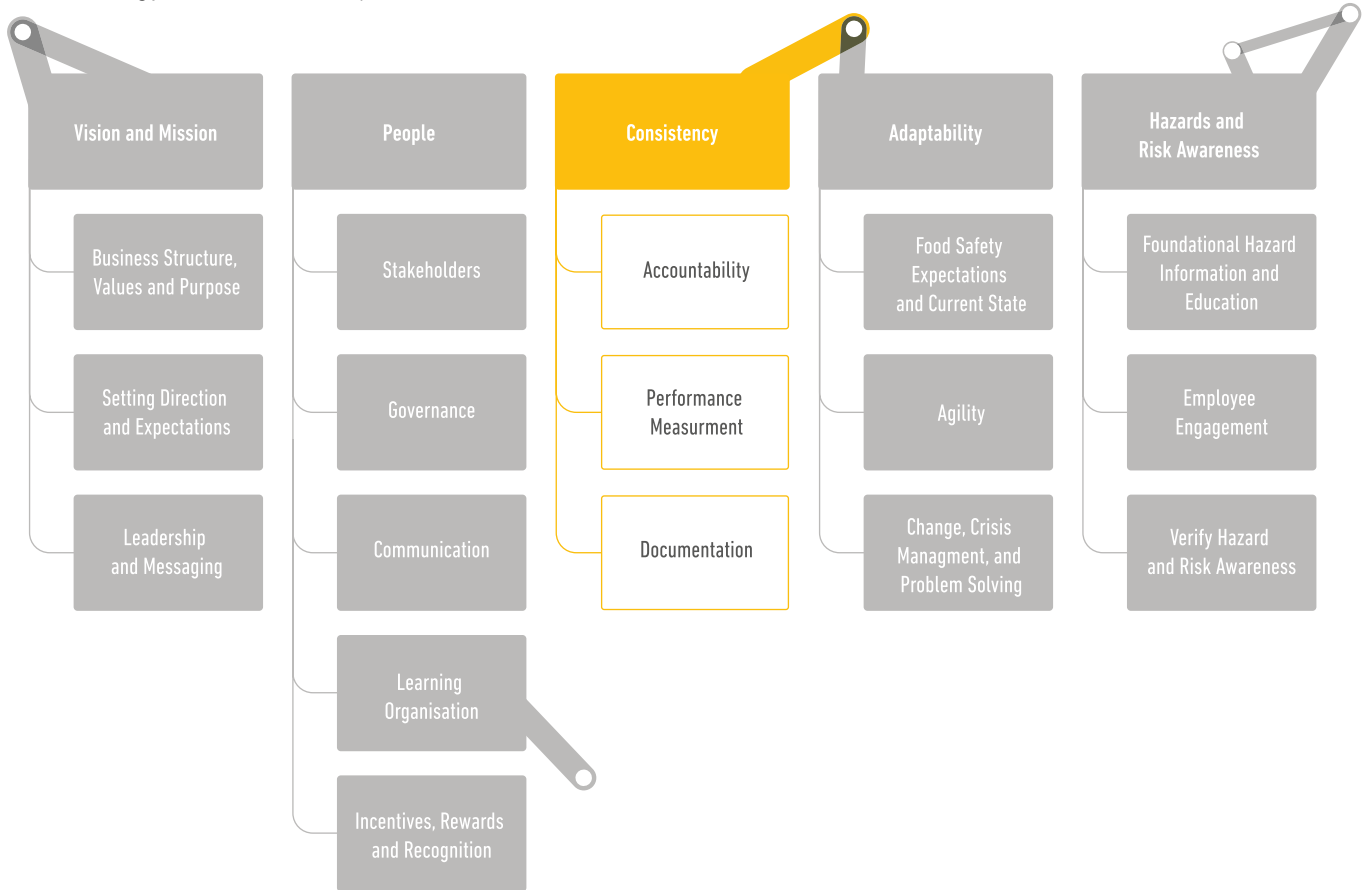


Figure 4: Critical content of the Consistency dimension

Consistency needs to flow through all food safety-related decisions, actions and behaviours within the organization, from top management to operations. For example, technical and management resource decisions should be in line with food safety priorities as defined by the company vision; tasks, responsibilities and authorities should be well defined, communicated and understood (see related table in appendix 8).

Performance measurements enable a company to assess the actual situation, compare against desired outcomes and behaviours, and identify opportunities for improvement and verify consistency.

Consistency is supported by three major elements:

1. Accountability
2. Performance Measurement
3. Documentation

6.1. Accountability

To ensure a consistent food safety system, it is essential that all employees have clearly defined accountabilities. This enables individuals to take appropriate responsibility for food-safety-related decisions and actions, and their consequences.

Individual accountability includes the acknowledgment of responsibility for actions, products, decisions and policies within the scope of one's role or employment position and encompasses an obligation to report and explain resulting consequences.

Accountabilities should be interconnected at an organizational level. For example, an employee must know where to refer food-safety-related issues beyond his or her responsibilities.

Accountabilities should be consistent with levels of authority. For instance, it must be clear who decides to do reworks or to reject non-compliant batches.

Within the context of food safety culture, it is important that everyone's values and beliefs do not conflict with their accountabilities.

6.2. Performance Measurement

Performance measurement makes it possible to monitor in accordance with defined food safety policies, expectations and requirements, as well as to acknowledge good performance and make improvements where needed. To support an environment of continuous improvement, these measurements must align with the organization's food safety priorities.

A strong connection exists between what is measured and subsequent behaviour. Consequently, performance measurements and their connected reinforcement systems should be carefully considered before implementation. For instance, many companies use audit results to measure food safety performance, awarding a bonus payout if a plant achieves a top audit score. This may be a good way to direct attention to the audit, but is it an appropriate way to focus on everyday food safety behaviours and actions?

Results should be transparent and communicated within the organization. Where improvement is required, actions should be clearly defined and understood by those who must execute them. The effectiveness of improvement measures should be verified to assure the intended changes are achieved.

Food safety performance measurements should not only address product and process performance but decisions, actions and behaviours, as well. A strong, company-wide measurement system comprised of organizational, functional and individual metrics, will help to capture the underlying mechanisms (artifacts, espoused values and beliefs, and underlying assumptions) that can influence the effectiveness of food safety implementation.

The nature of performance measures should also be considered, since reactive (lagging) and proactive (leading) measures have different objectives. Measuring foreign material (i.e. supplier) findings appraises what has been found and so is reacting to something that has already occurred. Conversely, measuring the effectiveness of a supplier's preventive maintenance programme can help block foreign material from reaching the plant in the first place. Such actions proactively hinder the impact on the customer while moving the risk one step further away from the consumer.

Metrics should be chosen and cascaded throughout the organization carefully, as a poorly developed metric can swiftly undermine an organization's culture objectives. Ideally, high-level, strategic metrics are not simply duplicated at lower levels of the organization. Instead, the higher-level metric could

be developed as the desired outcome of lower-level, operational or tactical metrics. For example, imagine a high-level, strategic metric designed to monitor the number of food safety incidents an organization generates. If this metric were simply duplicated throughout the organization and at the operational level, it could generate the exact opposite of the desired cultural behaviour. The desired behaviour could be defined as accurate and complete reporting of the number of incidents that have occurred, while the metric is incentivizing individuals and teams to reduce the number of incidents. This “gaming” of the metric (whether conscious or subconscious) is certainly not a desired cultural behaviour. It can be avoided by eliminating the mere duplication of the metric and instead developing derived metrics

from one or more operational-level metrics such as process Cpk, consumer complaints and audit performance that would ultimately lead to a reduction in food safety incidents.

Both insights from the business’s external and internal environment are needed. Mechanisms to monitor the business environment may include the use of internal and external insights including customer feedback and surveys, customer or consumer complaints, regulatory inspection results, internal culture surveys, measures and interviews. Additionally, the use of leading and lagging indicators, metrics and reporting on food safety can either enable or disable an organization’s capacity to align internal business processors based on external insights.

6.3. Documentation

Food safety documentation enables proper, consistent decision-making. It encompasses data (e.g. product, process and training records) and information about food safety expectations, plans and operational procedures and helps to verify consistency. It also creates a starting point for new employees and refresher training for tenured staff and external partners.

Documentation safeguards an organization’s accumulated knowledge base and eliminates the need to rely on individual employee knowledge. Related systems may vary from small to complex, but should be comprehensive and appropriate to the organization.

To be truly effective, a documentation system

must be accessible and up-to-date, as well as easily understood. Attention should be paid to the development of procedures and instructions, with its users directly engaged in the process to ensure system feasibility.

Examples of relevant documentation to support food safety include:

- Food safety plans/manuals based on different schemes
- Clear descriptions of tasks/responsibilities and authorities
- Process standard operating procedures (SOP)

6.4. Summary

Consistency refers to ensuring the alignment of food safety priorities, with people, technology, resources and processes, to effectively apply a food safety programme and support its culture. Such consistency occurs in a variety of related decisions, actions and behaviours including accountability

and compliance, performance measurement and documentation. Other essential processes where consistency is crucial include direction-setting in alignment with risks, investment alignment and coherent food safety communications. These aspects are explained in the Strategy section.

6.5. Guiding Questions

- Are you confident that all employees know their responsibilities and are held accountable for their food-safety-related tasks, and that accountabilities are well-connected?
- How does what you measure (e.g. customer complaints; compliance to procedures, productivity, etc.) influence your food safety culture?
 - Are your measurements related to volume/efficiency at the expense of food safety measures?
- Is your documentation designed to support employees' food safety decisions and behaviours?
- Are employees engaged in the design and improvement of food safety-related protocols and instructions?



7 ADAPTABILITY

Adaptability refers to the ability of an organization to adjust to changing influences and conditions and respond within its current state or move to a new one.

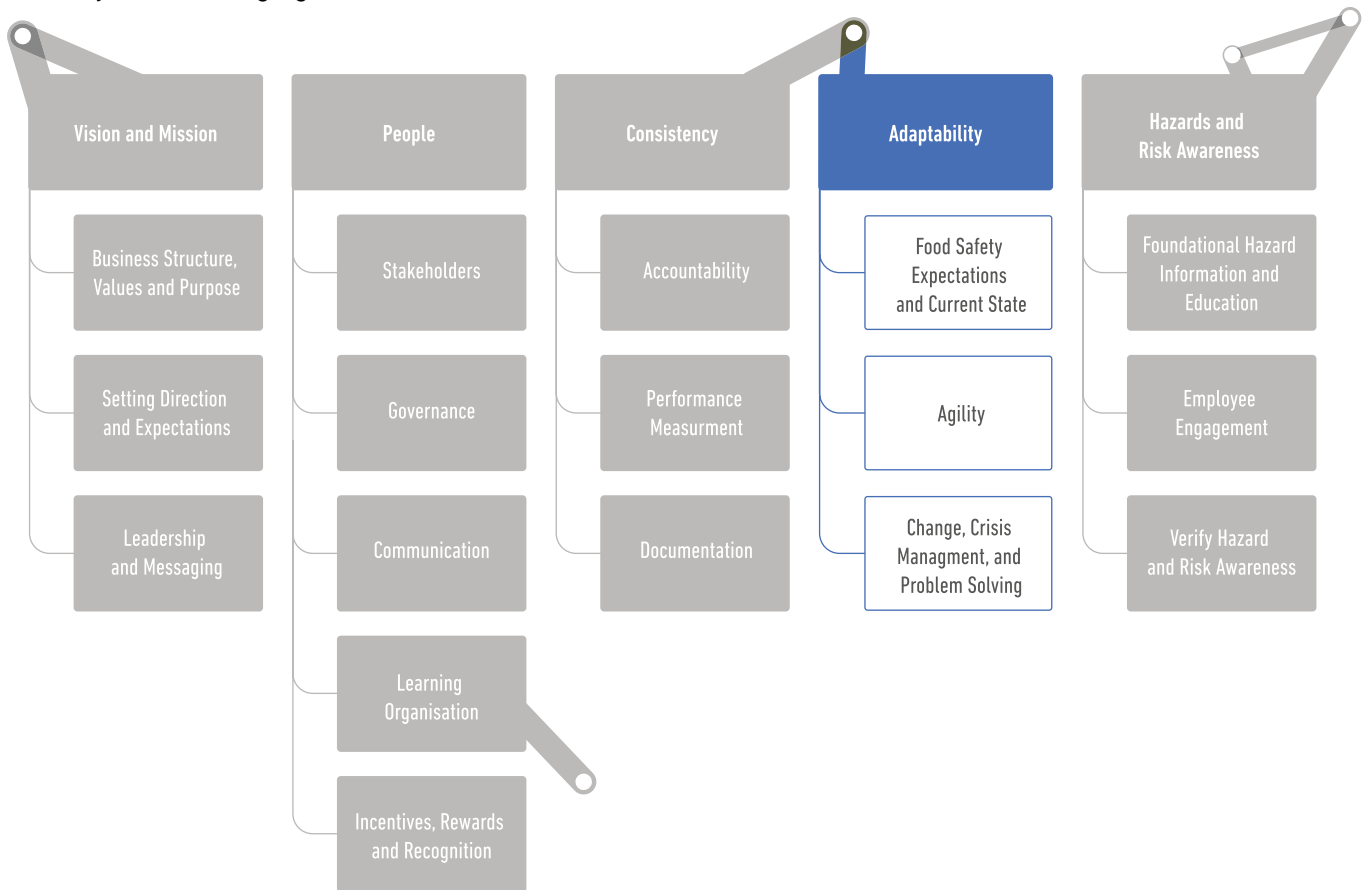


Figure 5 : Critical Components of the Adaptability dimension

7.1. Why is Adaptability Important?

The ways an organization responds to changes within the environment in which it operates will both impact, and be impacted by, its food safety culture. These changes may be anticipated or not, but the nature, speed and success of that response are dependent on the adaptability of employees as individuals, within groups or teams, and as part of the organization.

In any enterprise with a strong food safety culture, its adaptability is reflected in its skill in anticipating, preparing for and responding to change and unexpected disruptions to ultimately survive and prosper.

Critical components of adaptability include:

7.2. Food Safety Expectations and Current State

As detailed in the Vision and Mission section, once expectations and direction are clear, the enterprise can assess its current food safety culture against those expectations. Where food safety is part of a

vision or values statement, are these being applied to food safety decisions at all levels, by all employees and especially in crisis decisions?

7.3. Agility

Agility is defined as the ability to think and draw conclusions quickly. In an organizational setting specifically, agility concerns the ability to assess opportunity and/or threat and adjust one's strategy accordingly. Does a company's strategy enable or hinder its ability to respond and adapt to changing circumstances?

How is leadership involved in these activities? Can leaders quickly evaluate and assume, avoid or mitigate risks and influences whenever a situation is deemed an opportunity or a threat? This requires leadership commitment, visible modelling and a demonstration of the desired food safety behaviour.

As noted in Governance, proper oversight of performance against expectations will help inform agile responses to change. Accountability, transparent decision-making processes and sustainable deployment of change are essential, while simultaneously staying true to vision and values.

How much and how quickly can the company's current business structure and processes be adjusted if necessary? Does the presence or lack of a hierarchy and working standards, formal and informal, help or hinder the ability to adapt?

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7.4. Change, Crisis Management and Problem-Solving

Consider how your business manages change. Does an awareness exist of the need to change, a desire to do it, the knowledge of how to make it happen, and the ability to do it well so it is sustainable? Effective change requires a structured human-centric approach, as well as ongoing reinforcement to ensure success.

within defined expectations and values. A good crisis management plan includes a post-crisis review that enables learning and continuous improvement.

Crisis management addresses how well a business anticipates and responds to critical situations

Problem-solving concerns how a business responds to issues identified through measures, insights, near-misses or other events. It includes a focus on determining root cause and implementing long-term corrective and preventive actions.

7.5. Summary

"Adaptability" refers to the ability of an organization to adjust to changing influences and conditions. Change may be anticipated or could take the form of an event, such as a product recall or customer issue. In any enterprise with a strong food safety

culture, its adaptability is reflected in its skill in anticipating, preparing for, responding and adapting to change. Strong and engaged leadership plays a significant role in how well a business enterprise adapts to change and responds to crisis.

7.6. Guiding Questions

1. Can you articulate your company's food safety expectations and how they are applied to every decision?
2. Does your strategy enable you to respond quickly and effectively, with appropriate oversight to ensure the right decisions are made?
3. How do you anticipate, manage and respond to change, learn from the past and prepare for the future?



8 HAZARD AND RISK AWARENESS

This dimension differentiates food safety culture from the broader organizational culture. Recognizing actual and potential hazards and risks at all levels and functions represents a key element to building and sustaining a food safety culture. Basic scientific and technical information should be accessible and understandable to everyone.

As a company, it is important to keep current on the latest industry intelligence including market incidents, changes to food safety legislation, significant new technology and analytical advances. This will broaden awareness and understanding of potential risks and hazards.

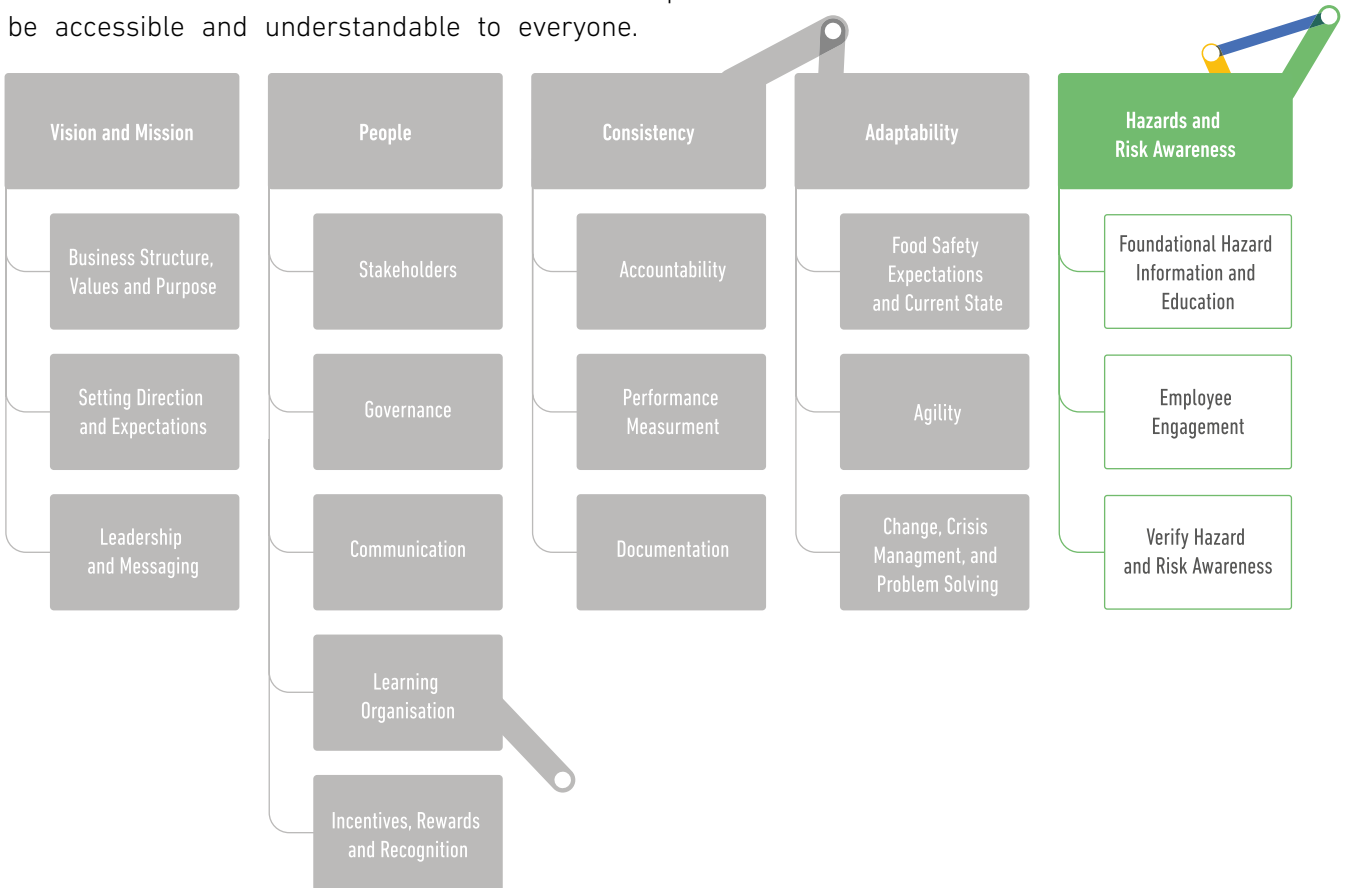


Figure 6 : Critical content of the Hazards and Risk Awareness dimension

8.1. The Importance of Understanding Hazards and Risks

How is information related to hazards and risks accessed and interpreted within your company? Is it viewed as providing real value, or as unnecessarily complex? How are risks communicated to

diverse functional groups and departments?

Levels of understanding often vary considerably within a company. Consequently, risk perception

likewise will vary. The regulatory requirements that drive bottom-line compliance sometimes lack employee understanding of how potential hazards and risks might affect the business overall. Advancing a culture of food safety requires establishing a uniform base-level comprehension of hazards and risks, a goal best achieved through employee education. The culture cannot evolve when focus is limited strictly to meeting

minimum regulatory requirements.

Everyone must understand “why we do things” to promote trust that the right decisions are being made relative to policies, procedures, and the proper investment of financial and human capital. Education can create a sense of shared responsibility enterprise-wide, and help to engage both hearts and minds.

8.1.1. Foundational Hazard Information and Education

All employees need a basic overview of hazards to recognise the responsibility that comes with being in an industry in which customers consume the product. In addition, each employee and department should understand their respective food safety-related responsibilities. Everyone has a role, and recognizing potential hazards is as important at the senior executive level as it is for line workers.

Everyone should be trained in the hazards and risks specific to their role. (For a list of topics to consider for inclusion within a hazard and risk curriculum, please refer to Appendix 6.)

Operators, technicians and practitioner-level staff should receive additional training relative to their area of work. The curriculum here likely will go

into greater depth, particularly around control measures. This group should include operators responsible for critical control points (CCPs) and certain pre-requisite programmes, such as sanitation and allergen control programmes. Training should be designed to reflect observable, measurable changes in food safety-related behaviours.

All training curricula should be regularly reviewed to ensure that it continues to capture the relevant hazards and risks the company has identified.

Training and education should be sensitive to different learning styles, appropriate to the functional need, role and level of responsibility, and understandable by technical and non-technical staff alike.

8.1.2. Hazard and Risk Technical Training and Education

Typically, training will be facilitated by those responsible for food safety hazard analysis and risk evaluation, generally the same individuals who lead the overall development of food safety programmes and norms. They should have a deep

understanding of actual and potential hazards, including the likelihood of occurrence and severity of effect. They also should be able to challenge assumptions and communicate risk as appropriate.

8.2. Employee Engagement

Pro-food-safety communications from the CEO affirm true top-down engagement. Management’s commitment to food safety is demonstrated through the allocation of financial resources, alongside

more formal education and training. In a manufacturing environment, actions by plant managers and supervisors often are quite impactful to employees. Together with improving awareness and under-

standing, this is key to bottom-up engagement.

Current and emerging food safety hazards must be communicated regularly to employees. This inspires trust and belief in the food safety system, which in turn builds a supportive culture. Employees will then take a greater interest in understanding why mishaps occur and identifying ways to prevent them. Examples of genuine failure, illustrated through case studies and other tools, can make a significant impression -- for example, demonstrating the real impact on human lives whenever foodborne illness or injury occurs.

It is important to ensure that all employees comprehend the procedures, practices and behaviours that act as preventive control measures. Manufacturing plant employees often clearly understand the importance of good health and safety practices, largely because they are regularly monitored to achieve related metrics. In contrast, the consequences of food safety failures may not directly or immediately impact them. Employees therefore need to know why the control measures are important and what consequences they may face when measures fail or are not followed. Equally, they must fully understand their responsibilities when failures occur, and feel they have the support

to fully carry out remedial action, such as shutting down lines and isolating product.

Prevention is preferable to treatment, so employees should be encouraged to report and share "near-misses," while company management should provide the necessary resources to address any actions that result. Similarly, management should foster a trusting environment in which employees can share positive experiences and speak up when they see potential food safety hazards or inappropriate behaviour.

All employees are themselves consumers with families, and should feel the sense of responsibility that comes from working within the food industry. Consequently, they should play a part in the decision-making process and be empowered to suggest improvements to reduce food safety risks. Communications at all levels within the organization should reflect this.

An organization's hazards and risks are unlikely to remain static, so end-to-end reviews of business activities should be conducted regularly, with input from frontline employees as well as managers. Any changes should likewise be reflected in training curriculum, as appropriate.

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8.3. Verify Hazard and Risk Awareness

Proper verification should confirm that efforts to generate hazard and risk awareness are succeeding. Several tools and techniques can be used to validate these efforts, including:

- **Audits** to drive expectations down to line-level employees and ensure ownership. Audit gaps should be highlighted. An experienced auditor can evaluate the existence of an active and supportive food safety culture and confirm if a deep and applied understanding of food safety hazards exists.
- **Reviews of near-misses**, including effectiveness of investigations to establish root cause and resultant corrective and preventive action plans.
- **Behavioural observation** can establish whether the desired behaviours are routinely practiced, which will only happen if employees believe they are required.

Regardless of which technique is used, it is vital to verify that hazard and risk awareness exists to avoid the potential for system failure.

8.4. Summary

Understanding hazards at all organizational levels and functions is essential to establishing an effective food safety culture. This can be accomplished through ongoing education, the use of metrics,

rewards, disciplinary actions and recognition, and reinforcing the importance of recognizing and controlling food safety hazards.

8.5. Guiding Questions

- How do you educate staff to understand why the hazard and risk management controls in their areas are so important, and what would be the consequences of not following them?
- How do you review your “near-misses” and use this information to drive improvements in your food safety system?
- Can you identify examples of where using industry intelligence has helped identify potential hazards or risks to your business?



9 CONCLUDING SUMMARY

Food industry laws and formalised standards have done much to make the global food supply safer for those living in today's industrialised world. Virtually everyone responsible for food safety, from point of origin to plate, receives at least fundamental instruction in safe food handling, along with an explanation of the risks and sanctions imposed when safety standards are ignorantly or willfully disregarded.

However, the Global Food Safety Initiative believes that to be successful and sustainable, food safety must go beyond formal regulations to live within the culture of a company. We wrote this working paper as a blueprint for embedding and maintaining a culture of food safety in any business, regardless of its size or focus.

Culture exists apart from written laws and regulations. It can trickle down from the highest levels of a social entity, or bubble up from its greatest depths. It may appear complete and whole at inception, or take years or even generations to mature. It does not follow formal rules, or even a straight line. Cultural standards often are shared via casual conversation and reinforced through thoughts and actions until they rest in the unconscious.

We recognise the contradiction here in suggesting that culture operates on a more instinctual, spontaneous level even as we present how-to advice and by-the-numbers checklists designed to nurture a culture of food safety. In our defense, we note that this information comes directly from human experience and extensive observations of how a corporate culture is born and evolves. Our goal is to offer these cultural insights as tools to engage with and adapt to your organization's own food safety initiatives as you see fit.

The guidelines, methods of measurement and advice presented here may go a long way toward helping your enterprise expand your culture of food safety. Ultimately, its long-term success will be determined by how spontaneously and unconsciously its practices are made manifest every day, from the CEO's office to the front lines of service.

10 APPENDIX

Appendix 1: Glossary

Appendix 2: Reading List

Appendix 3: Technical Working Group Members

Appendix 4: Education and Training Maturity Model

Appendix 5: People Elements Maturity Model

Appendix 6: Hazard and Risk Curriculum

Appendix 7: Vision and Mission – Things to Look For

Appendix 8: Consistency – Things to Look for



Appendix 1: Glossary

Food safety culture - shared values, beliefs and norms that affect mind-set and behaviour toward food safety in, across and throughout an organization.

Influencer – A person or group with the ability to affect the behaviour, opinions or actions of others. This term is particularly popular today in marketing and social media, but it applies equally in a corporate setting to those capable of influencing an organization's social or cultural norms.



Appendix 2: Reading List

- Ajzen, I. (1991). The Theory of Planned behaviour. *Organizational behaviour and Human Decision Processes*, 50, 179-211.
- Ball, B., Wilcock, A., & Aung, M. (2009). Factors influencing workers to follow food safety management systems in meat plants in Ontario, Canada. *International journal of environmental health research*, 19(3), 201-218.
- Bandura, A. (1991). Social Cognitive Theory of Self-Regulation. *Organizational Behaviour and Human Decision Processes* 50(2) 248-287.
- De Boeck, E., Jacxsens, Bollaerts, & Vlerick. (2015). Food safety climate in food processing organizations: Development and validation of a self-assessment tool. *Trends in Food Science & Technology*, 46(2015), 242-251.
- De Boeck, E., Jacxsens, L., Bollaerts, M., Uyttendaele, M., & Vlerick, P. (2016). Interplay between food safety climate, food safety management system and microbiological hygiene in farm butcheries and affiliated butcher shops. *Food Control*, 65, 78-91.
- De Boeck, E., Mortier, A. V., Jacxsens, L., Dequidt, L., & Vlerick, P. (2017). Towards an extended food safety culture model: Studying the moderating role of burnout and jobstress, the mediating role of food safety knowledge and motivation in the relation between food safety climate and food safety behavior. *Trends in Food Science & Technology*, 1-13.
- Festinger, L. (1962) *Cognitive Dissonance in Sutherland et al (2000) The Management of Safety: The Behavioural Approach to Changing Organizations*. Sage Publications; London.
- Fleming, M. (2000) *Safety Culture Maturity Model*, HSE Books; Suffolk.
- Griffith, C. J. (2010). Do businesses get the food poisoning they deserve? *British Food Journal*, 112(4), 416-425.
- Griffith, C. J. (2014). *Developing and Maintaining a Positive Food Safety Culture*. Highfield.co.uk Limited.
- Griffith, C. J., Jackson, L. M., & Lues, R. (2017). The food safety culture in a large South African food service complex: Perspectives on a case study. *British Food Journal*, 119(4), 729-743.
- Griffith, C. J., Livesey, K. M., & Clayton, D. (2010). The assessment of food safety culture. *British Food Journal*, 112(4), 439-456.
- Griffith, C. J., Livesey, K. M., & Clayton, D. A. (2010). Food safety culture: the evolution of an emerging risk factor? *British Food Journal*, 112(4), 426-438.
- Hofstede, G. (1980). *Culture's Consequences – International differences in work-related values*. : Sage Publications, London.
- Jespersen, L. (2017). Supply chain and food safety culture. *Food Safety Magazine*, February - March.
- Jespersen, L., Griffiths, M., & Wallace, C. A. (2017). Comparative analysis of existing food safety culture evaluation systems. *Food Control*, 79, 371-379.
- Jespersen, L., & Huffman, R. (2014). Building food safety into the company culture: a look at Maple Leaf Foods. *Perspectives in Public Health* (May 8, 2014).
- Jespersen, L., T., M., & Vlerick, P. (2017). Development and validation of a scale to capture social desirability in food safety culture. *Food Control*.
- Jespersen, L., & Wallace, C. A. (2017). Triangulation and the importance of establishing valid methods for food safety culture evaluation *Food Research International*.
- Knott, D. Muers, S. And Aldridge, S. (2008) *Achieving Culture Change*. The Prime Minister's Strategy Unit. London; Cabinet Office.

- Nyarugwe, S. P., Linnemann, A., Hofstede, G. J., Fogliano, V., & Luning, P. A. (2016). Determinants for conducting food safety culture research. *Trends in Food Science & Technology*, 56, 77-87.
- Reason, J. (1997) *Managing the Risk of Organizational Accidents*. Ashgate; Aldershot.
- Saari, L. M. and Latham, G. P. (1982) Employee reaction to continuous and variable ratio reinforcement schedules involving a monetary incentive. *Journal of Applied Psychology* 67(4).
- Schein, E. H., & Schein, P. (2017). *Organizational Culture and Leadership*: Wiley.
- Sutherland, V., Makin, P. And Cox, C. (2000) *The Management of Safety: The Behavioural Approach to Changing Organizations*. Sage Publications; London.
- Taylor, J. (2011). An exploration of food safety culture in a multi-cultural environment: next steps? *Worldwide Hospitality and Tourism Themes*, 3(5), 455-466.
- Taylor, J., Garat, J. P., Simreen, S., & Sarieddine, G. (2015). An industry perspective: A new model of Food Safety Culture Excellence and the impact of audit on food safety standards. *Worldwide Hospitality and Tourism Themes*, 7(1), 78-89.
- Wallace, C. A. (2009). *The impact of personnel, training, culture and organizational factors on the application of the HACCP system for food safety management in a multinational organization* (PhD Thesis).
- Wilcock, A., Ball, B., & Fajumo, A. (2011). Effective implementation of food safety initiatives: Managers', food safety coordinators' and production workers' perspectives. *Food Control*, 22(1), 27-33.
- Yiannas, F. (2009). *Food safety culture creating a behavior-based food safety management system*: New York : Springer, c2009.
- Yiannas, F. (2015). *Food Safety = Behavior: 30 Proven Techniques to Enhance Employee Compliance*: Springer.



Appendix 3: Technical Working Group Members

Brian Bedard	Gma science and education foundation
Megh Bhandari	Barry callebaut
Ray Bowe	Musgrave group ltd.
David Brackston	Brc global standards
Kerry Bridges	Walmart
Laurent Camberou	Afnor - association française de normalisation
John Carter	Danone
Chris Chapman	Pepsico, inc.
Leann Chuboff	Sqfi
Andrew Clarke	Subway
Pierre de Ginestel	Auchan
Lydia de Meyer	Danone
Bertrand Emond	Campden bri
Kathleen Ensley	Taco bell
Dan Fone	Walmart
Joanna Gilbert	Fonterra
Charlean Gmunder	Maple leaf foods inc.
Rolando Gonzalez	The acheson group
Megan Guilford	The hershey company
Dave Harlan	Cargill, incorporated
Tony W. Huang	Cofco corporation
Kentaro Ida	Suntory holdings limited
Lone Jespersen	Cultivate
Fiona Kibby	Tesco
Michael Liewen	Pepsico, inc.
Ellen Lopes	Food design consultants
Paola López	Sigma alimentos
Pieterneel Luning	Wageningen university
Jeff Miller	Mars inc.
Sara Mortimore	Land o'lakes inc.
Ingo Mücke	Bahlsen gmbh & co. Kg
Laura Nelson	Alchemy systems
Steve Parker	Mondelez
Bizhan Pourkomailian	Mcdonalds
Fons Schmid	Foundation for food safety system certification 22000
Laurel Stoltzner	Osi industries, llc
Linda Wesolowski	Nestle
Bob Whitaker	Pma

Appendix 4: Education and Training Maturity Model

Education and Training Maturity Model		Maturity Model Phases				
		1	2	3	4	5
Senior Management	Maturity Characteristics	<p>No recognition from executives that training for this population is necessary. Food safety seen as Quality Assurance issue only. Training materials non-existent or poorly produced, content weak, does not target specific company. Trainings not always registered, no performance evaluation. Executives delegate food safety responsibilities to Quality Assurance and Quality Control; Limited or no communication between the two groups. Food safety concept not universally understood among senior management team. Training materials, if existent, focus primarily on personal hygiene. Senior management does not monitor money spent on food safety training programs.</p>	<p>Company operates in reactive mode regarding food safety issues, no action other than in response to complaints, recalls or poor inspection results. No formal system for training exists. Some ad hoc sessions conducted, not all senior management attend. No formal testing of competence and understanding. Senior management may understand food safety, but consider it the responsibility of the Quality Assurance and Quality Control teams. Information regarding food safety is delivered sporadically to specific executives, generally regarding a crisis. Lack of foundational information creates a void for sound decision-making and limits ability to affect positive change and continuous improvement. Training materials go beyond personal hygiene, but are more rules-focused without addressing risks.</p>	<p>Beginning of systems development to provide training, manage information and record performance. All executives receive food safety training and achieve a clear understanding of their own food safety program components. Additional training for critical food safety hazards at food sites. Communication mechanism established to keep executives updated on food safety program status. Senior management begins to engage with food safety issues and support the Quality Assurance and Quality Control teams.</p>	<p>Proactive food safety messages incorporated into regular communications from senior management; formal system of management training in place and implemented. Senior management comfortable discussing key risks and control measures, has system in place to evaluate employee understanding and performance. Food safety data and communication shared with senior executives routinely and discussed for increased food safety comprehension within the team. Key business decisions considered with food safety in mind. Training materials highlight food safety's importance for personnel and facility, including equipment and routine practices, risks, and possible consequences. Senior management strongly supports Quality Assurance and Quality Control teams, and food safety results are followed systematically. Senior management looks to middle management for specifics regarding food safety training's return on investment (ROI).</p>	<p>Food safety training integral to senior management roles, tailored to specific areas but all executives can explain key risk areas, controls and why food safety culture is essential across the organization. Executives view food safety as fundamentally important and potentially a business differentiator. Executives keep current on food safety issues across the industry, and actively question performance training materials to emphasize the importance of food safety for personnel and facilities. Attention given to equipment and routine practices, risks, possible consequences, to stimulate pro-active and predictive actions. Senior management strongly supports the Quality Assurance and Quality Control teams, incentivizes them to promote continuous improvement via graduation courses, participation in external continuing ed seminars, etc. Senior management understands return on investment (ROI) of training programs.</p>



	<p>Suggestions for Maturation:</p>	<p>Development of customized induction training for senior management. "Comprehension training" for senior management provides food safety fundamentals and importance of leading by example. Training underscores each individual's role in food safety and management's support. Opportunity to establish "best-in-class" food safety programs (see Land Of Frost, Maple Leaf and Grocery Manufacturing Association's "Food Safety for Senior Leaders" seminar as examples).</p>	<p>Begin development of systems to provide training, manage information and record performance. Ensure all executives receive food safety training to achieve a clear understanding of their own food safety program components. Provide additional onsite training for critical food safety hazards. Establish a communication mechanism that continually updates executive team on the food safety program's effectiveness. Senior management begins to support the quality assurance and quality control teams, and remains engaged with food safety issues.</p>	<p>Further implementation of systems, development of area-specific training and evaluation of knowledge and understanding (and confidence). Senior level rewards process implemented to encourage learning (or conversely ensure strong consequence management is in place). Senior management ensures adequate funding available and believes that resources for food safety training are an "untouchable" in each budget review/discussion. Knowledge exchange format created to collectively review key decision points within the organization and related impacts on food safety, including how equipment is cleaned, how new products may introduce new allergens to operation, etc. Food safety program updates shared with management.</p>	<p>Senior management coached and supported as leaders develop a stronger understanding of food safety risks. Ongoing training program developed to expand knowledge and embed need to focus on food safety. Use of external resourcing for training and/or specific off-site events designed to engender team spirit around food safety. Development of a food safety training message from senior management for all employees. Continuous learning opportunities provided for senior leadership on topics including horizon scanning and emerging food safety threats.</p>	<p>Food safety messaging updated frequently to keep information fresh. Senior management actively supports suppliers' improvements in food safety initiatives. Mechanisms developed for senior leadership to help execute employee food safety behaviours, coach and mentor employees. Food safety awareness training regularly updated and customized to the organization. Continuous improvement and well-developed recognition system.</p>
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<p>Middle Management, Supervisors</p>	<p>Maturity Characteristics</p>	<p>No recognition from supervisors that training for this population is necessary. Food safety seen as Quality Assurance role only. Training materials non-existent or poorly produced, content weak and not tailored to specific company. Educational focus limited to technical competences. Training materials, if existent, focus only or mainly in personnel hygiene. Middle managers, supervisors and/ or Human Resources staff see food safety as a practice with no theoretical background necessary, so only very basic rules are provided before an employee begins working. Limited or no unique training provided beyond the basics; employee's specific role in food safety is undefined. Focus remains exclusively on attaining production goals. No ability to explain the 'why's' behind food safety protocols.</p>	<p>Company remains in reactive mode regarding food safety issues, no consideration given other than responding to complaints, recalls or poor inspection results. No formal training system exists; some ad hoc sessions are conducted, not all supervisors attend and little formal recording. No formal test of competence and understanding. No formal coaching and mentoring provided to validate expected employee behaviours. Time committed to food safety is spent exclusively on correcting negative behaviours. Training materials go beyond personnel hygiene, but are more linked to rules and not to potential risks. Some behavioural capacitation(??) is given to them/ show the importance of "walk the talk".</p>	<p>Company remains in reactive mode, but has started a formal system for staff training and development; system remains general with no food safety roles or responsibilities specified. Supervisory staff in key risk production areas operate with limited understanding of food safety issues. Supervisory team meetings occasionally review food safety and report back on audits, etc. Supervisors accept importance of internal training and audits, but don't always follow up on needed corrective and preventive actions. Training materials cover the basics but still do not address risks and possible consequences. Supervisors set an example and to act as food safety knowledge multipliers, but still a stronger capacitation in behavioural and andragogic tools are lacking.</p>	<p>Proactive food safety messages incorporated into regular senior management communications and shared. Formal system of management training in place and implemented. Supervisors comfortable in discussing key risks and control measures for their areas of responsibility and across production. System in place for evaluating understanding and performance is regularly evaluated by supervisory team, built into KPIs for production areas and subject to routine consideration. Training materials emphasize the importance of food safety for personnel as well as for the equipment and routine practices, with focus on risks and its possible consequences. The trainings are interesting and stimulate participation. Supervisors act as good examples and encourage operational teams to act proactively.</p>	<p>Food safety training integral to supervisory roles, tailored to specific areas but all supervisors able to explain key risk areas, controls and why food safety culture across the organization is important and their respective roles. Supervisors see food safety as fundamentally important and potentially a business differentiator. Supervisors are aware of current food safety issues across the industry and actively question performance. Internal champions exist across supervisory teams and are positive influencers on company performance. Training materials show the importance of food safety for personnel as well as for the facility, equipment and routine practices, with focus on risks and its possible consequences and stimulate to predict problems and to give solutions. The trainings are interesting and stimulate their personnel to participate. They act always as good examples, as food safety knowledge multipliers and they stimulate their operational team to act proactively. They reward the frontline employees which are best examples.</p>
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	Suggestions for Maturation:	Customized induction training developed for supervisors. Delivery of 'comprehension' training so that senior management understands importance of leading by example. Technical food safety training specifically for supervisors developed to create a deeper understanding of the 'whys' behind food safety protocols and procedures. Development of behavioural competences. Upper management communicates the importance of comprehensive training.	Systems developed to provide training, to manage information and to record performance. Soft skill training developed to aid in improved communications, motivational skills, providing constructive feedback, coaching, demonstration of leadership, etc. Development of supervisor training skills.	Further implementation of systems, development of area-specific training and evaluation of knowledge, comprehension and confidence. Rewards process at implemented at supervisory level to encourage learning and conversely ensure strong consequence management is in place. Continuing skills development for supervisors. .	Ongoing coaching and support for supervisory team as they develop much stronger understanding of food safety risks. Ongoing training program that expands knowledge and acts to embed desire to focus on food safety. Use of external resourcing for training and/ or specific off-site events to engender team spirit around food safety Continuing skills development as trainers; options exist to reward those who are best examples.	Continuous improvement of technical and behavioural skills. Mechanisms developed for senior leadership to help execute employee food safety behaviours, coach and mentor employees demonstrating their knowledge and support of food safety. General and area-specific food safety training updated regularly.
Frontline Employees	Maturity Characteristics	Either no training or compliance training only; limited onboarding training provided based on new hire remaining with company; 'Refresher training' missing or inconsistent and consists of same onboarding content; Training is outdated and not reflective of current workforce demographics (culture, language, age, learning preferences, gender); Training facilitators are not content experts and lack consistency in delivery; More training needed but resources are not made available; No measure of training effectiveness - move this sentence to the Middle Management, Supervisors section. Training materials if existent, focus only or mainly in personnel hygiene. Only very general rules are given before they begin working. They think the hygiene rules are not in fact important.	Company continues to be reactive to food safety issues, no consideration of food safety other than resulting from complaint, recall or poor inspection result. No formal system for training exists but some ad hoc sessions are operated, not all staff are required to attend and little formal recording. No formal test of competence and understanding. Employees occasionally discuss food safety outbreaks/recalls in the news. Training materials go beyond the personnel hygiene, but is more linked to the rules and not to the risks concept. GMP are to be followed specially if supervisor is near them.	Formal system for training exists during onboarding and refresher training .as induction and refresher trainings. Employees understand rules are mandatory but they don't always follow the rules.	Majority of staff, understand what the control mechanisms are and how to implement them., they have confidence to act if they see something they know to be wrong. Formal system for training exists during onboarding and refresher trainings. Contents is reviewed periodically using performance for continuous improvement. Operational team demonstrating a preventive mindset. Training materials go beyond the personnel hygiene; rules are showed as preventive actions to avoid risks. GMP rules are always being followed due to a good level of consciousness	Formal system for training exists as induction and refresher trainings and its contents is reviewed periodically to go deeper, per the team evolution, reinforcing the necessary aspects as detected during internal audits + the supervisor's perception. Operational team in fact goes further and do have a preventive attitude. They stimulate new employees with their example and help newcomers to follow the rule and they appoint errors if there is some. Training materials go beyond the personnel hygiene; rules are showed as preventive actions to avoid risks and its format is very stimulating and participative. Good Manufacturing Practices rules are always being followed and the workforce takes pride in their performance.





	<p>Suggestions for Maturation:</p>	<p>Update training content to reflect current operational, regulatory, customer expectations AND to keep employees engaged; Insure training is at the appropriate training level using the Flesch-Kincaid test (suggested 8th grade level) by using Microsoft Word's readability statistics; Insure all employees are onboarded with fundamentals prior to beginning work regardless of turnover rate; Insure all employees receive 'refresher' training. Provide training in formats that all employees can comprehend (heavy imagery vs. text) and provide language translations Format heavy imagery X text will depend on the educational level of the team composition. Contents shall cover all aspects not only personnel hygiene, but focusing specially the actual food safety risks.</p>	<p>Training materials should go beyond rules, with focus on the risks concepts and their consequences. GMP is always to be followed.</p>	<p>Specific training developed and delivered for every area across the company; some evaluation of understanding and confidence in understanding being implemented. Improvement of trainings and to have a system to recognize when they adhere to the rules.</p>	<p>Strong system in place to evaluate understanding and confidence, support mechanisms in place for staff who show poor understanding or lack confidence. Differing approaches available to aid effective learning. Food safety seen by all staff as 'non-negotiable' ability to challenge and 'stop the line' is positively encouraged. Improvement of trainings, to have a system to recognize when they adhere to the rules with special attention to the newcomers.</p>	<p>Continuous improvement. Encourage confident employees to monitor and observe each other and provide feedback and coaching around food safety. Maintain food safety awareness programs specific to the operation (posters, huddle talks, digital signage). Celebrate food safety achievements across the organization.</p>
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Appendix 5: People Elements Maturity Model

People Elements	Maturity Model Phases				
	1	2	3	4	5
<p>Governance (who, what and how authority is exercised, system of management) (based on greenback and skill-soft) VISION AND MISSION PEOPLE</p>	<p>Consciously do not comply unless enforcement obliges them to. e.g. lack of presence within the business with no delegation of responsibility for food safety. Structure is decentralized, lacking consistent standards and controls; resulting in little to no coordination between corporate and departmental efforts, so operations are highly inefficient. The lack of coordination may hit a pain point or a clash between teams where conflict can arise. Such conflicts often remain unresolved. Since there is a lack of governance-based controls, there is duplication resulting in higher overall expenses.</p>	<p>Place ownership and responsibility for food safety compliance on the regulator and other third parties. e.g. just tell me what you want me to do (e.g. with regard to food safety)'. Coordination between departments (e.g. learning, talent development) starts to become more organized, beginning with the formation of some common standards and partnerships with suppliers, often facilitated by procurement. Typically, this stems from an imperative to resolve skill gaps among targeted employee groups (sales, customer service, leadership, new employee orientation, etc.). Organizations may have a learning council but participation tends to be ad-hoc. Agendas for the council meetings are often not directly connected to the business – they are more topically based or simply provide a forum for voluntary sharing.</p>	<p>Good hygiene requirements seen as burdensome. Businesses do not consistently exhibit ownership of food safety practices as these are believed unnecessary. e.g. we don't need to worry - the staff know what they are doing – it's common sense. A steering committee is established to provide oversight to the change management processes. The cross-functional team includes senior executives, business stakeholders, key representatives from talent and learning as well as senior sponsors from IT. Some turf-protections rise up in the early stages. The organization assembles a talent transformation plan to earmark its milestones. Accountability to the plan and adherence to the emerging controls are reported regularly to senior executives. The support of the executive team will greatly influence how difficult it is as better governance is rooted.</p>	<p>Understand the importance of food safety compliance and take ownership of meeting the requirements. e.g. clearly understood organizational structure and defined responsibilities for food safety. Governance is well-established with strong business and procurement stakeholders. Centralized decision making is the norm for the strategic and operational aspects of talent and learning. The infrastructure and processes are standardized across the enterprise. There are often specialized centers of excellence that stay on top of what is trending. Formal meetings (typically quarterly) include senior Human Resources, IT and business stakeholders and executive-level updates are issued after each meeting. Academy or university leads are typically in place to liaise with each business unit, geography or in support of a global portfolio</p>	<p>Actively check and improve food safety in absence of third party inspection or requirements. See food safety as a business risk that they must be excellent at. e.g. evidence of active management of food safety and completion of records, timely reaction to issues. The governance processes are fully mature and decisions for all aspects of talent and learning are made from a fact-base of data-driven inputs. The organization runs efficiently because the vision is well understood and controls are not difficult to maintain. There is a high degree of team consensus, often underpinned by a less hierarchical structure where all ideas for improvement are respected. Annually, a detailed plan is written by the governance team to articulate any changes in budget, staffing, program plans, and business alignment practices. The plan also highlights Human Resources' key performance indicators (KPIs) to illustrate how the current plan is tracking to expectations and what adjustments in measures are proposed for the new year.</p>

<p>Supply Chain (people involved with materials / ingredients extending through a manufacturing process to the distributor, retailer, consumer) PERFORMANCE MEASURES PEO-PLE HAZARD AND RISKS</p>	<p>Lack awareness of food safety issues for food supply chain related personnel. Supply chain is still seen as out of the food safety management processes. Deviation of standards is motive for conflict as the parts involved may think is not their responsibility. Losses of materials may happen because there exists a lack of clear agreement on the food safety standards.</p>	<p>Supply chain personnel still do not take ownership for food safety issues, but they follow what they see as burdensome requirements of specialized departments. Some initiatives of negotiation and beginning of a better understanding begin to appear. Beginning of the development of partnership between supply chain personnel and their clients.</p>	<p>Good hygiene requisites are required for suppliers but is seen as burdensome. Ownership of food safety by suppliers is still inconsistent, because their personnel lacks deepened understanding on the discrimination between quality requirements and food safety resulting in delegating the responsibility of rework on the quality and assurance personnel. Supply chain representative is invited to the steering committee, but its participation is inconsistent</p>	<p>Suppliers demonstrate better knowledge of food safety requirements, its reasons and importance. Processes are standardized and monitored. Metrics show improvement and deviations are less frequent, and problems are resolved promptly. Supply chain's representatives become more integrated in the steering committee.</p>	<p>Suppliers demonstrate that teams are fully aware of the importance of abiding to Food Safety requirements and processes; take ownership of food safety issues, requirements, processes and measurements; team is competent and does critical analysis and contributes to mitigating risks. Supply chain's representatives are fully integrated on cross functional steering committee.</p>
<p>Supply Chain (people involved with materials / ingredients extending through a manufacturing process to the distributor, retailer, consumer) PERFORMANCE MEASURES PEO-PLE HAZARD AND RISKS</p>	<p>Lack awareness of food safety issues for food supply chain related personnel. Supply chain is still seen as out of the food safety management processes. Deviation of standards is motive for conflict as the parts involved may think is not their responsibility. Losses of materials may happen because there exists a lack of clear agreement on the food safety standards.</p>	<p>Supply chain personnel still do not take ownership for food safety issues, but they follow what they see as burdensome requirements of specialized departments. Some initiatives of negotiation and beginning of a better understanding begin to appear. Beginning of the development of partnership between supply chain personnel and their clients.</p>	<p>Good hygiene requisites are required for suppliers but is seen as burdensome. Ownership of food safety by suppliers is still inconsistent, because their personnel lacks deepened understanding on the discrimination between quality requirements and food safety resulting in delegating the responsibility of rework on the quality and assurance personnel. Supply chain representative is invited to the steering committee, but its participation is inconsistent</p>	<p>Suppliers demonstrate better knowledge of food safety requirements, its reasons and importance. Processes are standardized and monitored. Metrics show improvement and deviations are less frequent, and problems are resolved promptly. Supply chain's representatives become more integrated in the steering committee.</p>	<p>Suppliers demonstrate that teams are fully aware of the importance of abiding to Food Safety requirements and processes; take ownership of food safety issues, requirements, processes and measurements; team is competent and does critical analysis and contributes to mitigating risks. Supply chain's representatives are fully integrated on cross functional steering committee.</p>





<p>External Stakeholders (vendors, regulators that provide services like temporary staffing PERFORMANCE MEASURES PEOPLE HAZARD AND RISKS</p>	<p>External stakeholders work autonomously without oversight or expectations; no mechanisms or processes in place for performance review, contract compliance</p>	<p>External stakeholders are fully integrated with shared food safety goals integration training and seek to just to comply with regulators /minimum standards. They do not consider that they should follow all requirements, because they do not understand its importance. Food safety rules, processes etc. seen as client's annoyance. Only abide if constantly supervised.</p>	<p>Efforts of food safety training and shared food safety goals are more consistent. They show more understanding and acceptance of food safety requirements and processes, but they still lack accountability for all risks and impacts.</p>	<p>The external stakeholders / staffing are more competent in regard to food safety issues. They tend to follow the standards with only minor deviations. The communication is constant and there is more confidence to point out doubts, suggestions or even errors. The metrics are taken seriously and made to analyze the results and improve performance. They are consulted and inserted on the improvement plans.</p>	<p>External stakeholders are seamlessly integrated into organization with routine performance reviews, continuous improvement plans, collaborations to enhance operational goals; External stakeholders are seamlessly integrated and share food safety objectives with routine, consistent performance reviews, continuous improvement plans, collaborations to enhance operational goals.</p>
<p>Teamwork and Collaboration (the characteristics and approaches for creation cooperative work; efficient, effective behaviors from cohesive workforce) PEOPLE CONSISTENCY ADAPTABILITY HAZARD AND RISKS</p>	<p>Departments/shifts are maintained in silos without cross functional activities; employees lack 'big picture' of how their role affects organization goals; problem-solving is completed in isolation; roles and responsibilities lack clear definition; opinions and consensus is not solicited or welcome; no reward or recognition for working together; lack of communication</p>	<p>Few efforts in the direction of more cross-functional team cooperation. Minimum opportunities to give and receive opinions. More awareness of the need to clarify the roles and responsibilities regarding food safety but limited in awareness plan execution. Still lack clear understanding of difference of quality and food safety. More prone to work together.</p>	<p>Some departments/ teams are more open to communicate and work together, especially to solve common problems. Roles have been clarified. Better comprehension of the impacts of each role on the organization results and objectives. More freedom to give opinions and feedbacks. Recognition or reward exist, but not in a systemic way and is dependent on the leadership of the area.</p>	<p>Majority of teams work more integrated and the cooperation is more intense even with departments that usually are not cross-functional in normal operations. Have developed a complete picture of the impacts of each area and role on the food safety of the company. Recognition and reward systems are devised in a systemic way and are based on metrics/ current data. Teams spontaneously seek external opinions, suggestions and present their worries in routine efforts to solve problems or improving things.</p>	<p>Departments/shifts/ employees exhibit deep level of commitment and trust in each other and with the organization; open lines of communication exist; teams exhibit wide range of competencies and participate in cross functional teams as needed; Teams exhibit adaptability and are flexible in meeting changing plant conditions/ needs; creative thinking is encouraged and rewarded</p>





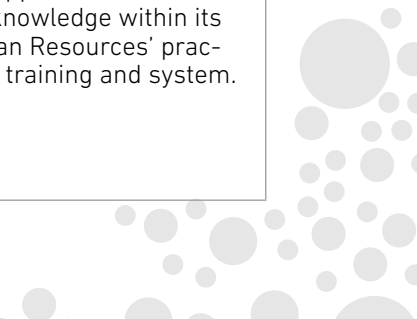
<p>Policy of Consequences (incentives, awards, recognition) PEOPLE PERFORMANCE MEASURES CONSISTENCY</p>	<p>There is no policy, there is no consistency in management of non-compliances/ compliances. There no reward</p>	<p>They realize they need to give feedback but there is no consistency nor established structure to be followed. There is some reward but no transparency.</p>	<p>They realize it's important to have some kind of system/ scheme, but it's a "crude" system, for example peer to peer established, not individualized / for groups. Perceived almost as fair and transparent.</p>	<p>There is a formalized consequences policy. Zero tolerance where necessary. Perceived as fair and transparent. Tailored for individuals or groups and tied to strategic goals of food safety</p>	<p>Behaviors are already internalized, with the right mindset for the majority of personnel. They do not need special recognition for compliant behaviors. People try to inspire others to do their best.</p>
<p>Empowerment (the process of giving or delegating power and authority within the organization) PEOPLE CONSISTENCY</p>	<p>No knowledge/ not allowed to take any action</p>	<p>Some knowledge/ allowed to take action (localized, not across all the organization). Do not receive general support for taking appropriate responsibility</p>	<p>Good but not full knowledge/ encouraged to take action</p>	<p>Almost full knowledge/ most of the actions are taken independently and correctly</p>	<p>Full knowledge/ correct actions are always taken; proactively predicting problems beyond his/ her own responsibility</p>
<p>Community (when necessary – that means: direct family, relatives and wider groups). PEOPLE VISION AND MISSION</p>	<p>Lack of people, recruitment issues, high turnover, government subsidies No involvement with community.</p>	<p>Acknowledge that the support of the community is needed. Identifying how to assess the problem to design a plan.</p>	<p>Connections between employees with wider community is established.</p>	<p>Programs in place. Improved stability of workforce.</p>	<p>Focused in building social programs, full engagement of community, High loyalty. Lower turnover. Stable workforce.</p>
<p>Performance (the assessment of works, acts, behaviors, actions, deeds, in the execution of intended purpose) PEOPLE PERFORMANCE MEASURE CONSISTENCY</p>	<p>No measurement. No metrics.</p>	<p>Ad hoc metrics, metrics of food safety are still not separated from quality metrics. No feedback is provided.</p>	<p>There are some metrics. Not systematically done. Individual / groups performance is clearly related to food safety but little feedback or use of data.</p>	<p>Full metrics, used to drive continuous improvement. Validation and support from supervisors/leaders</p>	<p>High performing teams. Demonstrable. Success of the metrics. Trying to exceed. They are fully supportive of each other.</p>



<p>Motivation Commitment & Engagement (the process that sustains and regulates employee behavior) <i>(based on Maslow and Greenstreet)</i> PEOPLE PERFORMANCE MEASURE CONSISTENCY</p>	<p>Mostly disengaged workforce; mainly working for the money; not particularly satisfied and excited by the job; Dictatorial approach to managing staff or simply do not seek staff opinion.</p>	<p>Mostly not engaged; interested in overtime; have more sick days than they should; working conditions not great; not particularly keen on manager and/or on own team; does not really like the job but gets on with it. Looking around for other jobs in other companies Development and application of practices and procedures is driven by the regulator and other third parties. e.g. staff are left to get on with what they are paid to do. Staff do what they think is appropriate.</p>	<p>Almost engaged but there are times when not. Relatively proud to work in the company but not telling others as such. Might leave if tempted. No particular career development prospects here Doubt the significance of the risk posed by food safety and the effectiveness of food hygiene regulations and requirements e.g. 'we've always done it this way'</p>	<p>Engaged; feel like a vital part of the business; feel important at work; really busy and feeling sometimes stressed; feeling of achievement; will only leave if something much better comes along Employee engagement is accepted to help comply with regulation. Develops food safety practices with some staff involvement and offers the opportunity for employees to comment once complete. e.g. Hazard Analyses Critical Control Plan/Safer Food, Better Business review.</p>	<p>Highly engaged, self-motivated, committed workforce; people inspire each other to do their best and keen to identify what they can do for others. Love working here; clear career development prospects here. High flyers can strive. Actively seek employee views on how to improve food safety. e.g. evident active interest in continual improvement in food safety – incentives/rewards for compliance and consistent achievement of internal standards; encouragement of suggestions for improvement.</p>
<p>Responsibility & Accountability (delegation and acceptance of one's individual actions or the organization's actions) PEOPLE PERFORMANCE MEASURES VISION AND MISSION</p>	<p>No clear responsibility & accountability established. The victim and persecutor mentality is in place.</p>	<p>They are informed about their responsibilities, duties, and what they are expected to do but still tend to resist seeing as more exaggerated demands of people that are nitpicking! Usually try to defend and attribute responsibility to others.</p>	<p>Individuals or groups know what to do but not always do what they are supposed to do. Generally, they tend to follow what they are required to do in the presence of their leaders or people in charge of monitoring the standards.</p>	<p>Individual or groups are fully aware of what they need to do and the reason why they should do it. Their behavior is more consistent, even in the absence of their direct leaders. They reinforce each other to abide. They are more vigilant and tend not to allow colleagues be noncompliant with regulations and requirements.</p>	<p>Fully Responsible & accountable. Clear position, Role descriptions. Supported by higher level, team and the peers.</p>
<p>Regionality and Cultural Fit (cultures, languages, genders, ages, education levels, length of tenure) PEOPLE CONSISTENCY</p>	<p>Ignore any differences; impose one; varying level of compliance</p>	<p>Acknowledge cultural differences but cater for majority. Ad hoc activities. Responding to issues following poor audit</p>	<p>Doing diagnostics on cultural differences; create and execute plan taking account differences</p>	<p>Assess plan success, continuous measurement and get to deeper beliefs</p>	<p>Celebrate differences and proactive development of community activities; ability to successfully absorb cultural differences</p>



<p>Metrics (standards for measurement or evaluation of efficiency, performance, progress or quality of a plan or process) PEOPLE PERFORMANCE MEASURES CONSISTENCY</p>	<p>No Food Safety Culture Diagnosis</p> <p>No metrics for elements: Turnover, GMP compliances, Learning plans, audits results, internal audit, custom complaints, behavioral verification, Leading indicators, peer to peer observations, pre-op compliance, downtime, regulatory Food Safety compliance, balance score card, engagement research, annual performance review</p>	<p>Diagnosis of Food Safety Culture show around 1/3 evolution</p> <p>Lagging indicators, not systematically implemented nor treated.</p>	<p>Food Safety Culture Diagnosis show around ½ level of evolution</p> <p>Addition of some leading indicators not systematically implemented nor treated.</p>	<p>Food Safety Culture Diagnosis show around 2/3 maturity level</p> <p>Leading indicators systematically implemented nor treated but not for all the organization</p>	<p>Food Safety Culture Diagnosis approaching maximum maturity level</p> <p>Adequate capture and treatment for all these indicators Behaviors and attitudes involved acknowledged adjusted and internalized across all the organization. Data are integral towards the decision making</p>
<p>Resources, Funding & Investment (sufficient people, time, equipment, structure to achieve behaviors) (based on greenback) PEOPLE VISION AND MISSION</p>	<p>Consider food safety to be as a nuisance. Food safety requirements are rejected for reasons of self interest.</p>	<p>Consider food safety to be of low priority in relation to other business priorities. e.g. 'I have a business to run, tax return to complete etc '.</p>	<p>Food safety given low priority as business fails to see the benefit or importance of food safety. e.g. business resistant to discussions about food safety – 'we've never poisoned anyone'. Evidence of misplaced complacency. Focus on getting the job done.</p>	<p>Sets food safety as one of several business priorities. Accept that food hygiene is important. e.g. evident acknowledgement of compliance within the business. Receptive to suggestions from Local Authority Inspector.</p>	<p>Considers food safety to be a top priority, a critical business success factor & something they must be seen as excellent at. e.g. frequent reference to food safety/hygiene, enthusiasm for prevention rather than cure i.e. using sampling and testing to verify safety rather than control issues.</p>
<p>Behavioral Science (application of the scientific study of human behavior)</p>	<p>Do not feel the need for searching behavioral knowledge. Even technical knowledge usually does not comprise food safety issues profoundly.</p>	<p>Few people realize that technical knowledge is not enough. Feel the need of the help of behavioral aspects. Become aware that more behavioral science knowledge is necessary to help and leverage the efficacy of technical aspects. This kind of knowledge is aggregated through the support of more curious people, Human Resources representatives or with the help of consultants.</p>	<p>Behavioral Science concepts are being inserted into the training. Start incorporating and applying some concepts on the Human Resources management tools and Human Resources system. People refer more frequently on daily interactions, meetings etc. to achieve behavioral outcomes</p>	<p>Behavioral Science is reputed as important as technical knowledge. Board, Directors, Managers and leaders are trained, understand and apply concepts and tools from behavioral science on their daily interactions.</p>	<p>Company have specialized people or persons more interested or have established ways for constantly updating on behavioral knowledge. And applies/ articulates this knowledge within its Human Resources' practices, training and system.</p>





<p>Competency (job tasks, work instructions, knowledge, skills, behaviors) PEOPLE PERFORMANCE MEASURES CONSISTENCY HAZARD AND RISKS</p>	<p>No definition of required skills, no job tasks or work instructions.</p>		<p>Competencies are described for all functions and positions. And communication was completed. So everybody knows about its meanings, importance for their performance evaluation, development and advancement plan.</p>	<p>Competency concepts and tools have already been implemented and people are informed about the competencies profile of their function / positions. Personnel knows the meaning of the competencies, was trained on how to evaluate, to monitor, to give feedback.</p>	<p>Competency Management System is completely developed and integrated to all HUMAN RESOURCES practices and tools. Competence system is articulated with Food Safety in training, management practices, performance evaluation, career advancement, reward system. Personnel is provided with opportunities of development and advancement.</p>
<p>Management Support and Oversight/ Accountability (resource allocation, personal demonstration of food safety support, food safety priority within operations, food safety recognition, ethics and integrity in food safety decision-making) PEOPLE MISSION AND VISION CONSISTENCY</p>	<p>Management advocates non-compliance except where risk of enforcement. e.g. no attempt to provide suitable equipment /facilities to enable staff to work correctly e.g. hand wash facilities</p>	<p>Leadership surrounding food hygiene is inconsistent and follows instruction from the regulator. e.g. lack of initiative and drive from the business. - little presence of /direction from the business in workplace with regard to food safety. Except following inspection</p>	<p>Leaders fail to role model food safety behaviours and express cynicism to staff. Poor food safety practice remains unchallenged and feedback is not provided with regards to hygiene behaviours. e.g. Managers not adhering to protective clothing rules</p>	<p>Leaders role model and encourage the food safety behaviours desired from their staff as per the regulations. Leaders challenge poor food hygiene practices which fail to comply with legislation. e.g. complies with rules for hygienic practice. Shows active interest in compliance and deals with breaches.</p>	<p>Frequently encourage staff to apply food safety procedures, explain why this is necessary and applaud good practice. e.g. evident active interest in food safety; leadership through good examples. Recognition of achievement i.e. scores for compliance with standards</p>



<p>Communications (trust to engage in food safety and report issues, escalation protocols for food safety concerns, spoken and non-spoken communication practices) <i>(based on Green street and skillssoft)</i> PEOPLE CONSISTENCY HAZARD AND RISKS</p>					
<p>Human Resources' Role (strategy; learning & talent ownership, job role specific training, outcome/behavior based training validation program, delineated performance standards) (based on skillsoft) PEOPLE VISION AND MISSION ADAPTABILITY</p>	<p>Either no trust or actively discouraged from reporting concerns. e.g. evident poor awareness of food safety among staff/evident fear of reporting – 'more than my job's worth'. Focus is on continually reducing expenses versus ensuring performance. HUMAN RESOURCES is frequently among the first to suffer in a cost-containment initiative. There is no predetermined commitment to talent at a certain percentage of payroll or revenues. Talent acquisition and performance management are typically not automated processes due to lack of desire to invest in modernizing them. Budget for learning and talent is far below industry benchmarks.</p>	<p>Employees not encouraged to report poor food safety. Very little communication about food safety. e.g. staff left to get on with the job and work around any issues. Funding processes are not uniform and when times are tight, learning investments are often among the first sacrificed. Not all training spend is visible to the corporate Human Resources organization because considerable "shadow training" investments are made at the departmental levels. Procurement may get engaged to resolve duplicative investments across certain cost categories. Outside of those key investment consolidation projects, funding decisions are commonly federated and often not connected. Budget planning occasionally takes industry benchmarks into account.</p>	<p>Communication about food safety is derogatory of the requirements. Reported concerns remain unattended e.g. 'I suppose we'd better do x /we have to do x because the Inspector said so'. No action taken when issues are reported or actions taken are not timely/staff have to raise issues several times to get a response. The larger rationalization effort is typically coordinated with the expertise of procurement and finance. The cohesion really begins when the first significant centralised funding and platform decisions are made through the consensus of the committee. While the cross-functional steering committee is formed, several opportunities for alignment to the business or elimination of duplication may be missed because this new group is early in its establishment. Budget targets begin to take industry benchmarks into account</p>	<p>Communications focus on promoting food safety in line with regulation. Staff are encouraged to report examples of poor food safety practice to ensure compliance. e.g. staff indicate they can influence food safety practice within the business. People are regarded as investments that directly influence the organization's agility so funding is reliably in place and investments are aggressive to retain and attract top talent. With the lion's share of rationalization opportunities achieved, the focus now is on capitalizing on nascent opportunities to enhance enterprise performance. Budget targets are parallel with industry benchmark best-in-class companies.</p>	<p>Employees feel completely free to report issues and trust management to respond positively. e.g. evident communication of food safety matters e.g. staff 'noticeboard' -display of any complaints and actions taken. Management receptive to suggestions for improvement. Involvement of staff in resolving issues and providing support in taking agreed actions. People development is an integral part of the enterprise brand, so funding per capita is the highest. Any capital investments for new systems or considerable increases in staff are expressed in payoff to the business. Organizations at this level are often envied, their methods may be shared with the extended enterprise or to others on a consulting basis. Budget is typically significantly above industry benchmarks because it is based on the organization's Key Process Indicators and Return on Investment goals.</p>



	<p>Minimal overarching learning and talent strategy directs the Human Resources team's efforts. The Human Resources team is largely reactive to the business stakeholders with respect to independent processes (acquisition, training, succession, compliance, etc.) The scope of HUMAN RESOURCES's roles and structure hold the function back from understanding the business and the employees. Several HUMAN RESOURCES systems may be manual. HUMAN RESOURCES perceives employees as passive about progressing their development and careers. Many of the training needs are compulsory; Learning and Development typically mandates direction. Value of learning and talent is largely from the organization's point of view, not the employee's point of view.</p>	<p>Strategies regarding critical talent and learning functions (talent acquisition, development and performance management) are project managed and process-driven, but they are not integrated. There may also be differing degrees of maturity within talent and learning. HUMAN RESOURCES & Learning and Development begin to engage more proactively with the business to ensure alignment, but efforts are not consistent and change tends to happen slowly. Greater appreciation for employee ownership of development and career starts to emerge. HUMAN RESOURCES recognizes that staff members are initiating their own development, with or without Learning and Development. Select managers are proponents of learning within their teams and they take a more active role in career counselling.</p>	<p>Practices among key learning and talent processes start to become integrated as the organization recognizes the need for greater adaptability. Performance consulting is applied to ensure better alignment between the HUMAN RESOURCES strategies and the business strategies. The cascading of organizational goals as a way to guide individual and team objectives and development begins to become pervasive. Employees are more visibly accountable for steering their development and careers, and HUMAN RESOURCES begins to design an enabling environment for that to flourish. Developing talent from within is well recognized so clear development paths exist for most roles. Reward systems start to be tied to talent and learning.</p>	<p>All aspects (talent attraction, development, promotion, mobility, engagement and rewards) are connected to one another in order to heighten the output of the enterprise. Internal talent mining becomes more adept. The business strategies are routinely translated into talent strategies so the HUMAN RESOURCES team remains in-step with the enterprise. Employees demonstrate strong accountability to take advantage of what the organization provides and HUMAN RESOURCES is focused on clearing their paths. Top talent is actively nurtured. Sophisticated systems and social rewards celebrate employee knowledge and skills (badging, micro-credentials, etc.).</p>	<p>Highly sophisticated and integrated near and long-term HUMAN RESOURCES strategies exist. Strategic objectives, which are typically cross-organizational, require HUMAN RESOURCES leaders to collaborate cross functionally, creating shared goals and actions. Collectively these behaviors drive outcomes. The strategy is continually reviewed to ensure it is on track with the business and averting risk. When necessary, the strategy is rapidly altered based on data-driven inputs to stay at the fore. Employees are drawn to this organization due to its strong people brand and reputation for a Human Resourcesing, diverse culture. Employees are provided real-time performance feedback so they can take immediate steps to adapt. Employees actively encourage one another to engage in learning. Managers are people-developers.</p>
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Appendix 6: Hazard and Risk Curriculum

- Introduction to Hazards
 - Microbiological
 - Chemical
 - Physical
- Case studies, including examples of failures in food safety programmes
- Instructions on minimising food safety risks throughout the company and across the supply chain
- Examples of risk-based preventive control measures, the overarching principles of HACCP, and the risks of relying solely on inspection and testing
- Information on how food safety roles and responsibilities fit within each job task
- Information regarding regulatory and customer expectations and the role of GFSI
- Materials providing consumer perspectives and perceptions of food safety risk
- Briefings on the importance of sustaining and improving food safety management
- Information on the role of a supportive food safety



Appendix 7: Vision and Mission – Things to Look For

There are several ways to judge food safety's value within a company, and the related credibility of its messaging:

- Where does food safety rate in corporate decision-making?
 - Are food safety decisions risk-based, profit-based, reputation-based, consumer-centric, or more appropriately seen as standard business procedure?
- How do people demonstrate food safety ownership?
 - Is ownership evident in the ways they do their work?
- Is food safety messaging accepted and embraced?
- Is there evidence of “unconscious competence,” i.e. where food safety practices appear to be second nature and do not require a lot of active thought?
- Are there indications of success or failure in food safety initiatives?
- Are good behaviours in food safety reinforced and recognised?
- Conversely, are there consequences and accountability for bad behaviours?
- Is food safety measured frequently to track its “pulse”?
- Is messaging changed frequently to keep it fresh?



Appendix 8: Consistency – Things to Look For

Things to look for	Focus on	How to assess/measure	Guiding questions
<p>Clear priorities and direction - food safety/ risk based</p>	<ul style="list-style-type: none"> • Systematic prioritization of food risks/ hazards aligned to strategy • Understanding your business, problems, challenges, opportunities and food risks 	<ul style="list-style-type: none"> • Methodology employed (e.g. SWOT) • Horizon scanning to identify and anticipate to systemic risks 	<ul style="list-style-type: none"> • How are food risks (emerging) assessed? • How do you prioritize the food safety strategy based on food risks?
<p>Alignment of investment – people, process, technology, physical (plant, premises)</p>	<ul style="list-style-type: none"> • Food safety considerations in all functions when capital spend/ investment i.e. design, change, purchasing, procurement, R&D (across all departments) • Suitable prioritization of FS decision making • create an enabling environment for FS • compliance 	<ul style="list-style-type: none"> • Through checking records and interviews 	<ul style="list-style-type: none"> • How are food safety considerations taken into account for the different functions (investment / design/ change/ procurement / R&D)? • How are food safety priorities set? Are they aligned with the FS Policy goals?
<p>Systematic Reinforcement - essential mechanisms to achieve food safety culture</p>	<ul style="list-style-type: none"> • Accountability and metrics: including KPIs • Rewards • Recognition of adequate behaviour • Consequences to failure • Actions match the words 	<ul style="list-style-type: none"> • Through observations, interviews and records 	<ul style="list-style-type: none"> • How do you make people accountable for their FS tasks? • How do you recognise/ reward good FS behaviours? • How do you deal with FS failures and their consequences?

