Achieving an effective food hygiene culture: the next step in assuring excellence

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Despite developments in technology, HACCP, training and auditing, deadly outbreaks of food poisoning and contamination still occur.

In 2008 and 2009 in the USA the Peanut Corporation of America (PCA) (bankrupted) was held responsible for a salmonella outbreak which affected hundreds of companies, hundreds of people suffered food poisoning, nine people died, the largest food products recall in US history and a fall in peanut butter sales affected the entire industry.

They had been given a high rating by a third party assurance firm. The company failed to act on test results indicating salmonella and shipped out contaminated products.

In 2010 pig and poultry feed in Germany was found to contain dioxins above legal limits. A batch of industrial fats got mixed with fat for the production of feed so that it contained higher levels of dioxin than allowed by EU law. The batch was delivered to a feed fat producing company and then onto compound feed manufacturers.

Upon discovery thousands of farms were closed, thousands of animals were slaughtered, egg and pork prices dropped in Germany, with losses estimated in the region of €100m.

To hide the increased levels of dioxin, the supplier had diluted the feed fats or declared these in the control laboratory as technical fats. The supplier had certification for its major processing unit, but the contaminated fats were processed at an unaudited location.

The evidence from past incidents shows that people systematically violate safety rules despite training and some organisations or parts of organisations knowingly and continually violate safety rules, ignore evidence of unsafe practices and warnings about potentially catastrophic events. Against this background, the Food Standards Agency commissioned Greenstreet Berman Ltd to develop a tool to assess food safety culture and behaviours and link this to advice on food safety culture improvement.

Breaking hygiene rules

Whilst some incidents involve criminal intent, in most cases people neither intend nor believe that their actions or inactions will cause harm. Few people break rules believing that they will harm people and bankrupt the business! Behaviour is influenced by the interaction of individual and group perceptions, social norms and expectations.

● **Perceptions:** If someone feels that a procedure is not justified by the potential risk of harm, they are less likely to feel they need to comply with that procedure, especially if it is awkward or time consuming.

● **Feedback about priorities:** If people get positive feedback when they break a hygiene rule, such as in order to get food orders out on time, this may suggest to the individual that the business' 'real' priority is performance rather than food hygiene.

● **Social norms:** If colleagues knowingly and openly disregard hygiene rules, such as for personal cleanliness, and say things that legitimise this, such as downplaying the risk, this can be seen to be the norm.

● **Inappropriate experience:** If someone feels that their experience and expertise allows them to complete a task in a better way this may combine with over confidence to cause them to short cut procedures because 'they know better'.

Food safety culture

The question of what is safety culture has been explored in the field of occupational health and safety, the conclusion of which is applicable to food hygiene. The Health and Safety Commission (1993) stated: "The safety culture of an organisation is the product of the individual and group values, attitudes, competencies and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organisation's health and safety programs. Organisations with a positive safety culture are characterised by communications founded on mutual trust, by shared perceptions of the importance of safety, and by confidence in the efficacy of preventative measures."

Assess hygiene culture

If you wish to reduce the incidence of non-compliance, you need to understand the causes of non-compliance, in order to identify solutions. Our work for the Food Standards Agency found that culture can be characterised in two ways:
● By assessing the type of culture, such as reactive versus proactive.
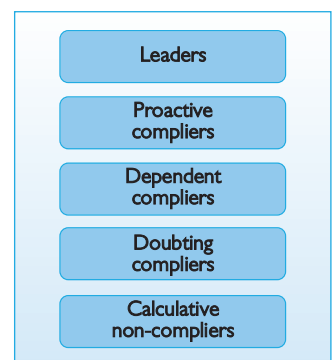● By assessing each element of a culture, such as leadership.

Fig. 2. Grading for food safety and hygiene culture.

The elements are shown in Fig. 1, such as the extent to which people perceive food hygiene requirements to be valid and effective, whether there is clear and visible management commitment and leadership of food safety and hygiene.

Some of these elements are particularly relevant to the cited incidents, including openness to challenge safety failings, willingness of people to openly discuss concerns, knowing and understanding the risks associated with the business's practices and the role of top management in creating and maintaining food safety culture.

Food safety and hygiene culture can be graded as follows:
● Leaders who view food hygiene as a critical business issue that they must tightly manage and offers potential business benefits.
● Proactive compliers who encourage compliance for sake of good business but may not go beyond 'good practice'.
● Dependent compliers who await upon instruction from regulators and others.
● Doubting compliers who doubt the risk posed by food hygiene and do not promote compliance other than for legal purposes.
● Calculative non compliers: who intentionally breach regulations for the sake of financial gain, disputing or disregarding risk to people.

By profiling an organisation's culture, you can help communicate its current performance and encapsu-

Fig. 1. Elements of food safety and hygiene culture.
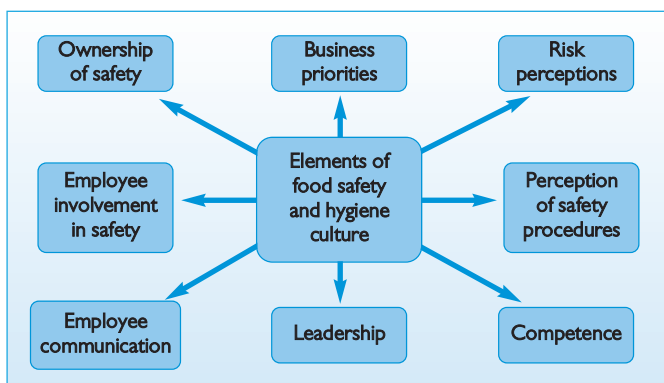
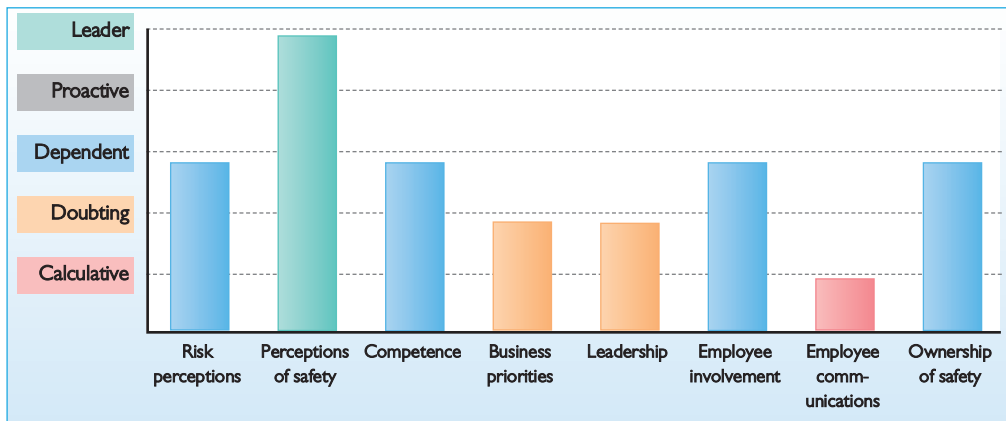**Fig. 3. Food safety and hygiene culture assessment.**

late the type of culture it may aspire to.

In practice an organisation's culture is assessed by a combination of questionnaires for staff, reviewing organisational arrangements, workshops and reviews of management response to critical incidents.

Typical questions include:
● If businesses like yours did not comply with food hygiene requirements, do you think that this would create a significant possibility of customers getting food poisoning?
● What do you do to ensure you set a good example in following food hygiene and safety rules?

Having understood management and worker attitudes and behaviours, these can then be compared with benchmarks to provide a measure of behavioural performance and a profile of the organisation's food safety and hygiene culture.

Fig. 3 illustrates the typical form of assessment result. The figure indicates a good score (Leader) for Perceptions of Food Safety and Hygiene Procedures but a low score (doubting) for the elements of Leadership and Business Priorities.

A key lesson learnt from occupational health and safety concerns the validity of the behaviours being measured.

Some oil and gas firms focused on 'easy to observe' occupational safety behaviours, such as the use of personal protective equipment. Whilst this helped to reduce 'everyday' occupational accidents, some firms subsequently experienced major accidents. Their low occupational accident rates were found to have led to a false confidence in their safety performance.

The lesson learnt is to be careful that assessment does not focus on everyday observable behaviours of workers, whilst omitting less observable behaviours, such as management response to the discovery of adverse test results.

Implementation

Having appraised a business, a suite of food safety and hygiene culture and behavioural techniques can be identified and implemented. This is illustrated in Fig. 4, where assessment leads to a diagnosis of behavioural issues and organisational types, which leads to a set of organisation specific food safety behavioural techniques.

A bespoke approach should be adopted to identifying solutions that match the specific behavioural and cultural issues in an organisation. For

example, if managers or supervisors lack confidence in how to provide positive feedback to staff suitable training in effective hygiene leadership may be appropriate.

If workers do not feel that they can report hygiene problems without fear of reprimand, then consideration may need to be awarded to communicating a new ethos of openness.

Changing behaviour

Whilst pulling solutions off a menu runs the risk of a simplistic one size fits all approach, effective safety culture programs tend to share a number of core elements. There is immense experience with behavioural change techniques in the field of occupational health and safety that can be drawn on, with a record of major improvements in safety performance following on from these methods. As noted in Fig. 4, these techniques tend to include:
● **Defining behavioural expectations:**
This typically involves drawing on risk assessment to identify risks and desired behaviours for managers and workers. These may cover day to day hygiene practices and how to respond to problems and incidents.

● **Communicating behavioural expectations:**
This typically involves directors and managers giving out a consistent message in daily communication about behavioural standards, the importance of hygiene and how to respond to incidents and manage problems.
● **Reinforcing expectations:**
This may take the form of informal feedback from supervisors to workers on a day to day basis or a more formal system of coaching and mentoring, as well as award and incentive schemes.
● **Enabling appropriate behaviours:**
This often takes the form of revising rules, systems of work and procedures to ensure they are practical, as well as training and effective supervision.
● **Risk education:**
This typically takes the form of explaining a hazard and how a hygiene procedure helps to control the hazard, often with information and examples to convey the risks created by non-compliance and provide a risk rationale for compliance.
● **Engaging people:**
This can include joint worker-management improvement teams, ad hoc joint communication and review sessions and other arrangements.

Conclusion

By introducing a positive food safety and hygiene culture people will have a common view of the importance and validity of hygiene requirements as well as the motivation and shared values to effectively manage hygiene risks. An appropriate set of attitudes, norms and behaviours underpin and support good management, training, technology and procedures.

It is the culture of the organisation and the people within it that ensures that people will apply their training and follow procedures and thereby achieve high standards of hygiene performance. ■

Fig. 4. Matching solutions to assessment.

Assessing food safety and hygiene culture	Benchmarking & diagnosing food safety & hygiene culture		Food safety and hygiene culture and behavioural toolkit
	Behavioural issues	Organisational type	
Staff survey	Conflicting messages about business priorities		Food safety leadership skills for managers and directors
			Food safety leadership skills for supervisors
	Wrong balance of priorities		Defining hygiene behavioural expectations
Management review	Unclear behavioural expectations		Communicating hygiene behavioural expectations
	Consider rules impractical	Doubting complier	Developing practical hygiene rules and procedures
	Lack hazard understanding		Self awareness and self assessment
Incident review	Underestimate risks		Risk based training and hazard education
	Not my job culture		Engaging staff in food hygiene
	Inappropriate group norms		Challenging group hygiene norms