



Measuring for Change: Practical Steps for Strengthening your Food Safety Culture

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2:00 – 3:00 p.m. Eastern

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Today's Speakers



*Ben Miller, Ph.D., MPH
Vice President of Scientific and Regulatory Affairs
The Acheson Group (TAG)*

- Epidemiologist and Foodborne Outbreak Investigation
- Led State of MN Human and Animal Food Regulatory Programs
- Served on the FDA's IFT Task Order 6 - Pilot Projects for Improving Product Tracing along the Food Supply System
- Ph.D. Thesis - The use of critical tracking events and key data elements to improve the traceability of food throughout the supply chain to reduce the burden of foodborne illnesses



*Chris Gindorff
Group Vice President of Compliance & Food Protection
Hy-Vee*

- Leads compliance and food protection efforts for almost 500 Hy-Vee locations across eight states
- Vice Chair of Minnesota's Food Safety & Defense Task Force
- Served as Chair of Food Marketing Institute's Food Protection Committee
- Collaborated on the FDA's IFT Task Order 6 - Pilot Projects for Improving Product Tracing along the Food Supply System

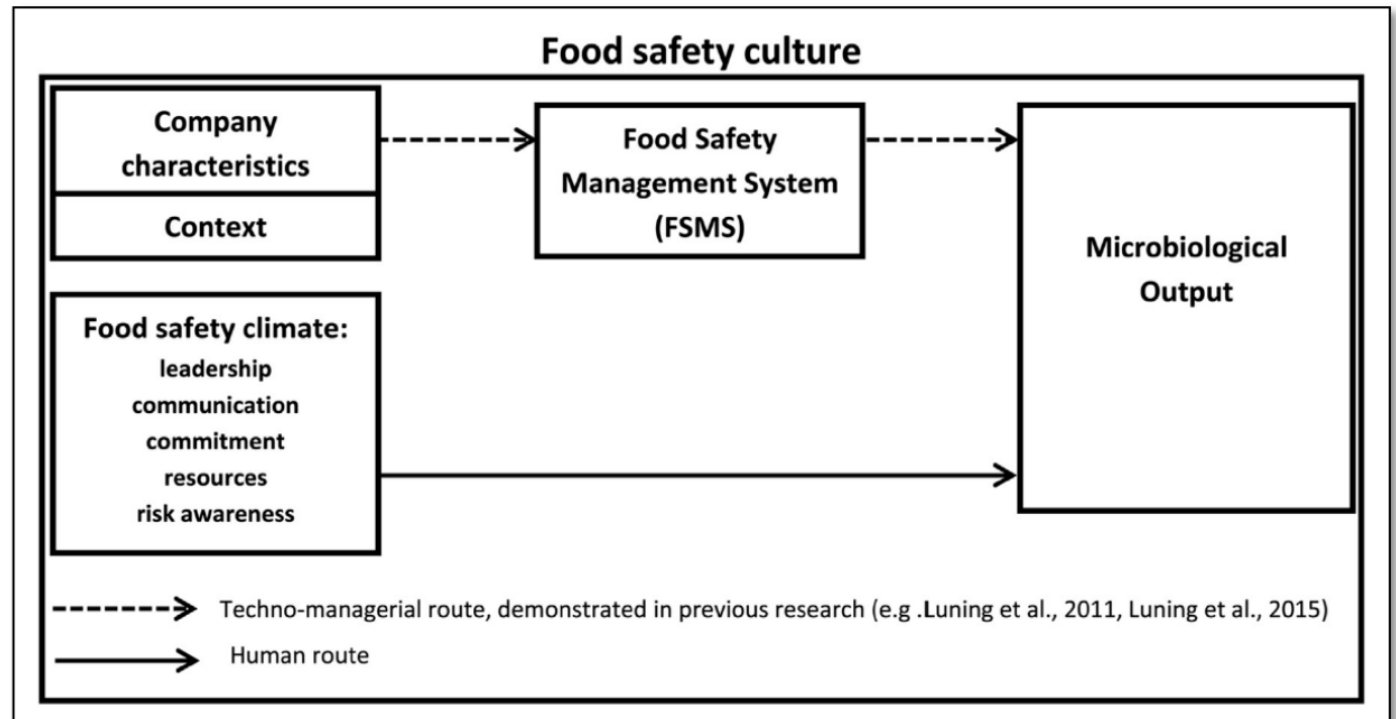
What is Food Safety Culture?

- Several definitions from the literature
- Two most commonly cited definitions:
 1. Griffith, et al. (2010) – *“The aggregation and prevailing, relatively constant, learned, shared attitudes, values and beliefs contributing to the hygiene behaviors used within a particular food handling environment.”*
 2. GFSI whitepaper (2018) – *“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.”*

Is there a difference between culture and climate?

De Boeck, et al. (2015) - Food Safety Culture Conceptual Model

- Climate is associated with attitudes and perceptions of individuals at a point in time.
- Food Safety Management Systems (FSMS) are a part of culture (considered Techno-managerial)



Is there a standard way to classify or measure Food Safety Culture?

- No standard or consistent classification system in literature or industry practice
 - Examples:
 - Positive to negative (Griffith, et al. – 2010)
 - Reactive, active, or proactive (Nyarugwe, et al. – 2018)
 - Maturity – doubt, react to, know of, predict, internalize (Jespersen et al. – 2017)
 - Food Safety Culture Maturity Models are derived from literature on worker safety and organizational development

How is Food Safety Culture created?

Generally recognized key elements:

1. Leadership
2. Communication
3. Commitment to food safety
4. Risk awareness
5. Environment
6. Accountability
7. Employee knowledge, attitudes, behaviors and values



How strong is your company's Food Safety Culture?

What are some challenges to developing a strong Food Safety Culture?

Overreliance on Food Safety Management Systems

- Well written programs may miss hazards if employees don't understand the "why" behind food safety risks

Prioritization of cost-savings or production

- Prevention constantly competes with production for limited resources

Organization size

- Small orgs may have limited space and resources
- Larger orgs may have a variety of cultures across/within multiple locations

Staff turnover

- Continuous turnover can be detrimental to risk awareness and accountability
- Hard to create a healthy culture if no one is there long enough to embody it

Optimistic bias

- We've never had a problem before!
- We're the best in the industry...

What can be done to promote a strong Food Safety Culture?

- FSC should be promoted as a necessary and critical business issue for *all* employees
- Organizations should brand their commitment to FSC and promote it everywhere
 - To be effective, messaging should be simple, communicate the desired behavior, be placed where the behavior should occur, and changed often
- Promote the “owner mentality” concept
 - Built on a concept of “we” and inspire to problem solve and assume ownership of their role in food safety and brand protection
 - Need to speak the language of their employee
- Also includes promotion in the supply chain
 - Open communication and expectation around food safety
 - Better buy in when customers can help suppliers improve their FSC and overall performance



How do you measure Food Safety Culture inside of your organization today?

How is Food Safety Culture Assessed?

Multimodal assessment tools:

- Survey instruments
 - Align with the “key areas” of FSC already discussed
 - Designed to help organizations understand why employees may or may not perform safe food handling practices
 - Survey personnel at different levels in the organization
 - Upper management, middle management, and food handlers
- Third party audits
- Verifications of certain kinds of data
- Focus groups
- Observations of employee behavior

What is an example of a “Maturity Model”?

	Phases of Food Safety Culture Maturity				
TAG Maturity Levels	Phase 1 - Emerging	Phase 2 - Managing	Phase 3 - Involving	Phase 4 - Cooperating	Phase 5 - Continually Improving
Bradley Curve (adapted to Food Safety Culture)	Reactive <i>Driven by natural instincts of what constitutes food safety. Minimum fulfillment of legal standards with no/little engagement of management.</i>	Dependent <i>Food safety is controlled at management level with use of procedure and discipline. Some training is available.</i>		Independent <i>Food safety aspects well-known to all members of the organization. Adoption and attention to best practices. The organization includes food safety in cooperation with third parties.</i>	Interdependent <i>Team driven food safety actions. Creation of best practice. Food safety drives all goals in the organization. The organization motivates others to improve food safety.</i>
General Stages of Food Safety Maturity	Food safety is defined in terms of technical and procedural solutions and compliance with regulations. Food safety is not seen as a key business risk and the food safety / quality assurance department is perceived to have primary responsibility for food safety. Many incidents are seen as unavoidable and as part of the job. Most frontline staff are uninterested in food safety and may only use food safety as the basis for other arguments, such as changes in shift systems.	The organization's food safety incident rate is average for its industrial sector but they tend to have more serious incidents than average. Food safety is seen as a business risk and management time and effort is put into incident prevention. Food safety is solely defined in terms of adherence to rules and procedures and engineering controls. Incidents are seen as preventable. Managers perceive that the majority of incidents are solely caused by the behavior of front-line staff. Food safety performance is measured in terms of lagging indicators and incentives are based on reduced incident rates. Senior managers are reactive in their involvement in food safety (i.e. they use punishment when incident rates increase).	Incident rates are relatively low, but they have reached a plateau. The organization is convinced that the involvement of the frontline employee in food safety is critical, if future improvements are going to be achieved. Managers recognize that a wide range of factors cause food safety incidents and the root causes often originate from management decisions. A significant proportion of frontline employees are willing to work with management to improve food safety. The majority of staff accept personal responsibility for their role in food safety. Food safety performance is actively monitored and the data is used effectively.	The majority of staff in the organization are convinced that food safety is important from both a moral and economic point of view. Managers and frontline staff recognize that a wide range of factors cause food safety incidents and the root causes are likely to come back to management decisions. Frontline staff accept personal responsibility for their own role in preventing food safety incidents. The importance of all employees feeling valued and treated fairly is recognized. The organization puts significant effort into proactive measures to prevent food safety incidents. Food safety performance is actively monitored using all data available.	The prevention of all food safety incidents is a core company value. The organization has had a sustained period (years) without a recordable incident, but there is no feeling of complacency. They live with the paranoia that their next incident is just around the corner. The organization uses a range of indicators to monitor performance but it is not performance-driven, as it has confidence in its food safety processes. The organization is constantly striving to be better and find better ways of improving hazard control mechanisms. All employees share the belief that food safety is a critical aspect of their job and accept that the prevention of food safety incidents is important.

This table represents a partial example of the TAG Maturity Model. Levels of maturity have been defined for each of the GFSI dimensions (Vision and Mission, People, Adaptability, Consistency, and Risk and Hazard Awareness).

How has developing a stronger Food Safety Culture affected food safety?

- Currently, fewer than 10 peer-reviewed papers that measure outcomes associated with having a strong FSC
- However, case studies of large foodborne outbreaks have identified a weak FSC as the primary cause (including Peanut Corporation of America)
- Some outcomes that have been studied:
 - Pathogen presence on food/equipment
 - Handwashing
 - Violations of food safety regulations
 - Economic impacts

How has developing a stronger Food Safety Culture affected food safety?

- These studies were conducted in delis, restaurants, food manufacturers and processors
- Outcomes associated with a strong FSC:
 - Managerial commitment increased employee handwashing
 - Positive changes in FSC maturity could lead to potential economic gains
 - Positive climate assessments directly and indirectly affect food safety behaviors
 - Mixed data on the relationship between FSC and microbiological hygiene
 - Fewer food safety violations



THANK YOU!

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