HELIX Programme Technical Conference | 28 January 2026

Food Safety Culture: From Insight to Industry Obligation

What we know, what has changed, and what now defines credibility
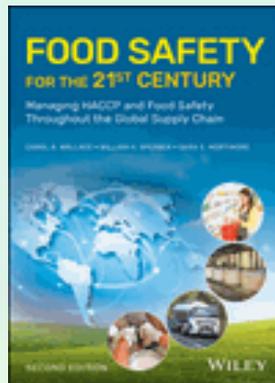
Food safety culture has moved rapidly from concept to expectation. It now sits alongside HACCP and risk-based food safety management as a fundamental pillar of the industry. This session provides a concise status update on where we are and where we're heading.

Carol Wallace
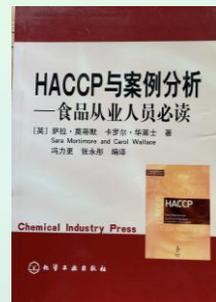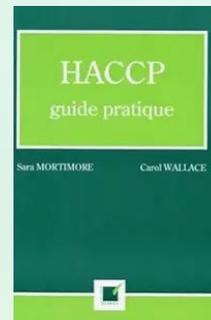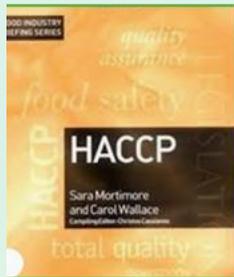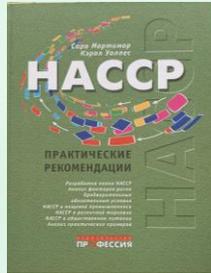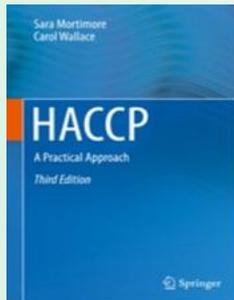
- Emeritus Professor of Food Safety Management at University of Lancashire, UK
- Principal Consultant at Wallace MacMillan Associates
- >40 years food safety experience; >19 in industry, >21 in academia
- Researcher in HACCP effectiveness and food safety culture
- Supervised 5 PhDs and examined 8 PhDs in food safety culture
- Founding Chair of the Food Safety Culture Science Academic
- Network, Salus

- Author of several HACCP and food safety books in multiple languages and numerous academic papers

Why Food Safety Systems Alone Were Never Enough

The Designed Controls

HACCP and prerequisite programmes focus on engineered systems and documented procedures. They provide the framework for food safety management.

- Standardised control points
- Critical limits and monitoring
- Documented procedures

The Human Reality

Food safety failures are often linked to human and organisational factors that systems alone cannot address.

- Behavioural inconsistencies
- Leadership influence
- Organisational norms

The Critical Gap

Same systems, different outcomes across businesses.
Culture explains the gap between documented systems and real practice.

The Evolution from HACCP Effectiveness to Organizational Behaviour

Food safety culture didn't emerge in isolation—it evolved from critical questions about why identical systems produced different results.
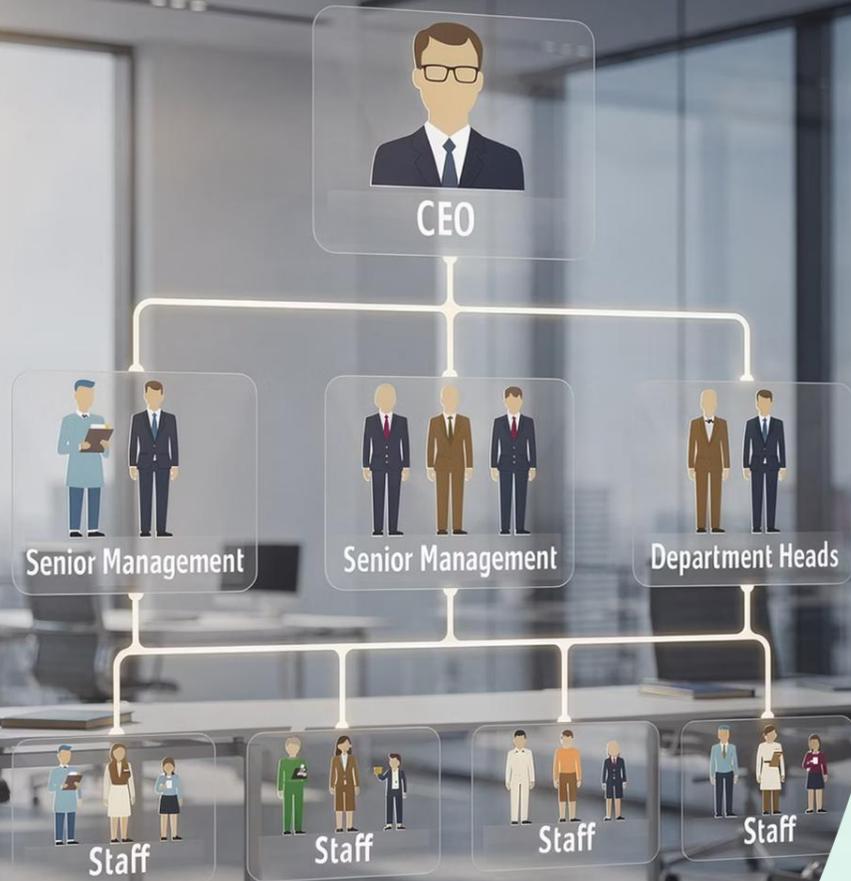
1 **Early Research Questions**
Researchers began questioning HACCP effectiveness in practice, noting gaps between design and implementation.

2 **Cross-Industry Influence**
Safety culture thinking from high-risk industries like aviation and nuclear power provided frameworks and insights.

3 **Recognition of Human Factors**
Growing recognition of leadership, behaviours, and organisational norms as critical success factors.

4 **Complementary Framework**
Food safety culture emerged as a complement to systems, not a replacement—strengthening rather than replacing HACCP.

Key Milestones: How Systems, Standards, and Science Converged

1990s: Foundation Era

Codex HACCP Principles established and global adoption begins across food industries worldwide.

2000s: Standards Expansion

Expansion of private standards and third-party certification schemes creates new quality benchmarks.

2009–2010: Research Acceleration

Seminal publications accelerate academic and industry interest in food safety culture concepts.

2015–2023: Formal Recognition

Codex review and formal guidance on food safety culture establishes it as a global priority.

2018: Industry Position

GFSI Food Safety Culture Position Paper provides unified framework for global implementation.

The Evidence Base: From Concept to Critical Mass

The research trajectory reveals a field that has matured rapidly, moving from theoretical exploration to rigorous empirical investigation.

Early Phase

Literature was largely conceptual and exploratory, establishing definitions and frameworks.

Current State

Rapid increase in empirical studies post-2015 has created a robust, multidisciplinary evidence base.

Key Research Focus Areas

- Measurement methodologies and maturity models
- Leadership influence and behavioural drivers
- Direct links between culture and food safety outcomes
- Cross-cultural and international comparative studies

The evidence base is now broad, international, and multidisciplinary—spanning food science, organizational psychology, and management studies.

GFSI's Role in Formalizing Food Safety Culture

01 Recognition of Need

Food safety culture was gaining traction without consistent guidance or unified approach.

02 Multi-Stakeholder Collaboration

GFSI Board initiated a global working group bringing together industry, academia, and regulators.

03 2018 Position Paper

Defined core organizational dimensions and positioned culture as part of food safety maturity.

04 Sustainable Framework

Emphasized sustainability over short-term fixes, creating lasting organizational change.

The GFSI Position Paper transformed food safety culture from an emerging idea to a global industry standard with clear expectations and frameworks.

Food Safety Culture Enters Regulation and Standards

From guidance to expectation

Codex Alimentarius (2023)
Explicit recognition of food safety culture in international food safety guidance

Private Standards
Cultural requirements now incorporated into certification schemes and audit protocols

Regulatory Guidance
Increasing references to behavioural factors in national food safety frameworks

Assessment Impact
Culture influences how food safety management is interpreted, verified, and assessed

Persistent Challenges and Misinterpretations

Despite progress, food safety culture remains difficult to assess and sustain. Understanding these challenges is critical for meaningful implementation.

Superficial Compliance
Risk of 'tick-box' approaches that satisfy auditors without driving genuine cultural change or behavioral shifts.

Survey Over-Reliance
Over-dependence on surveys without contextual understanding or follow-up action to address findings.

Conceptual Confusion
Persistent confusion between culture, climate, and compliance—three related but distinct concepts.

Standardization Tension
Inherent tension between standardized assessment requirements and organisational diversity across sectors.

What Happens Next for Food Safety Culture

The emerging direction for business and regulators signals a shift from adoption to accountability.

Credibility & Evidence
Greater emphasis on demonstrable evidence rather than stated intentions or policy documents.

Risk-Based Alignment
Stronger integration with risk-based food safety management systems and decision-making.

Leadership Scrutiny
Increased focus on leadership behaviors and governance signals as culture indicators.

Outcome Focus
Shift towards outcome-focused regulatory and scheme assessment– assessing the results of integrated food safety management and culture.

Key Takeaways

What food safety culture now represents in practice

Rapid Maturation
Food safety culture has evolved quickly from academic concept to industry expectation

Embedded Expectations
Now firmly embedded in standards, regulatory guidance, and certification requirements

Interpretation Challenge
The challenge has shifted from definition to *meaningful interpretation* and application

Systems Strengthening
Culture should strengthen, not distract from, core food safety management systems

The future of food safety culture lies in credible implementation, evidence-based assessment, and genuine integration with risk-based food safety management.