

# GFSI Compliance and Automated Food Safety Management Systems: A Harmonized Risk-based Solution for Food Safety

- ▶ Food safety management—Integrated systems versus point solutions.
- ▶ A process-based approach to integrating systems, focusing on the end users.
- ▶ Tools to effectively incorporate risk management into the process.

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Technology is playing a major part in industry compliance with food safety regulations and standards such as Global Food Safety Initiative (GFSI)-benchmarked food safety schemes. More and more companies are adopting consolidated food safety management systems (FSMS) to manage these and other processes in one system; this eases the burden on the end user and helps to streamline the process of compliance. Food safety initiatives set the standards for a safe, quality product, but the FSMS sets the tone for ease of compliance and usability.

The food and beverage industries are increasingly adopting food safety initiatives, such as GFSI compliance, as their standard for food quality and safety. In fact, many leading organizations today will only work with vendors who are GFSI compliant. GFSI-benchmarked food safety schemes (e.g., Safe Quality Food Institute [SQF], British Retail Consortium [BRC], and International Food Standard [IFS]) coupled with regulatory oversight are driving organizations to seek methods of enhancing the visibility of their quality and

safety operations. One method is the use of an automated FSMS.

An FSMS can help to ensure compliance with food safety initiatives and to streamline the processes related to food safety. It also connects these processes with other areas that may be integral to the enterprise (e.g., ISO 9000 and ISO 14001) and enhances the visibility of an organization's processes. In today's fast-paced environment, maintaining a high level of visibility within compliance and management systems is necessary to achieve global harmonization across the enterprise—it is vital for the organization as a whole to be on the same page.

## **Paving the Way for an Integrated System**

Integration is the key to maintaining quality across the entire organization. Today, point solutions are often used; however, these types of systems typically have been put into place separately and developed as a need for them arose. The result is the use of a multitude of different systems, e.g., document control, corrective and preventive action (CAPA), and employee training. Challenges often arise from these types of point solution systems, including siloed compliance initiatives, reporting overlap, increased employee burden.

**Siloed Compliance Initiatives.** Because point solution systems are not linked, an organization is left with limited communication capabilities. These systems do not

“talk” to each other and, therefore, cannot share information. This results in siloed compliance initiatives and processes. An integrated system enables users to consolidate multiple requirements into a single source, resulting in enhanced visibility.

**Reporting Overlap.** Much like double entry of data, siloed systems often overlap in their ability to report on critical safety data. This occurs because many similar issues are reported for each system. Integration of the silos facilitates the consolidation of the data into one report, making it easier to review and trend on data.

**Employee Burden.** Employees, the users of the system, could be looked at as the catalyst for integration. A multitude of systems often results in an employee having to utilize and train on a number of systems just to complete their tasks. Integration into a single harmonized solution enables employees to save time and increase productivity by utilizing and training on a single system.

To address these challenges and help make the process run more smoothly, we need to think in terms of integrating processes.

## **A Process-based Approach**

When integrating systems, the ideal approach is to start from the perspective of the end users. What processes are end

users performing in various systems that could be completed in just one? Where are the integration points, and how are they going to help simplify the end user's job? When planning to integrate, the employees should be taken into consideration, and instead of looking at integration from a system architecture perspective, it should be looked at from a process perspective—which processes overlap and can they be combined? The key here is to focus on the end users of the system, with the ultimate goal of using fewer systems. Using a process-based approach when integrating management systems can result in many benefits.

**Centralized, Harmonized Processes.**

In a siloed system, employees often have to use different systems for tasks that could be combined into one process. In an integrated system, they can perform all the necessary tasks for a process in one location, eliminating the need to jump from system to system. For example, using an integrated system a CAPA could be launched by the employee regardless of whether the event stems from a safety, quality, inspection, environmental, or other discipline. In a point solution system, the user would need to jump from system to system depending on the discipline from which the event is derived.

**Ease of Compliance with Multiple Standards.** An integrated system makes it easier to comply with multiple standards because multiple requirements are consolidated into a single source, enhancing visibility.

**Trending.** When processes are integrated, it is easier see how individual issues affect other areas of the enterprise. This enhanced visibility leads to the ability to trend across the enterprise and come up with a holistic report that can more effectively identify points that require change throughout the organization.

**Enhanced Employee Training.** Another benefit of integrated systems is that the training process is greatly simplified. In a point solution system, employees must be trained in each and every system separately. In an integrated solution system, employees can be trained in all processes and all disciplines at once, streamlining the training process and making it less time-consuming.

**Scalability.** One challenge faced when using point solutions is that each facility has its own set of solutions. The difficulty lies in making these various point solutions interact with each other. An integrated holistic system allows for a common standardized solution across the enterprise that is scalable and effective.

A potential deterrent to the use of an integrated system may be concerns about the accessibility of data to all who use the system. In an integrated system, however, employees only see the information that is relevant to their department. They may be sharing a system, but they cannot access data from other departments unless the system enables it. They are working in their own part of a system that encompasses much more—essentially seeing only their piece of the pie. One common system provides the best of both worlds. Users have access to the information they need, and the organization has easy access to all the data across all processes and operational areas. Although an organization can reap the benefits of integration and increased visibility, this increase in visibility may bring its own challenges.

**Conquering the Data Paralysis Conundrum**

With newfound visibility into all events, data from all multiple point solutions are fed through a single system. As a result, the organization may undergo a “data paralysis”—there is so much information coming

in, they don't know where to begin. How does an organization begin to sort through the multitude of data and adverse events to find those most critical to the business? They need to prioritize and filter these events using a systematic and quantitative method.

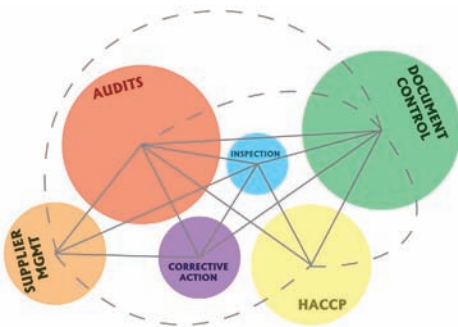
**Quantitative Risk Tools as a Filtering Agent.** CAPA, the heart of a holistic FSMS, allows an organization to take action on adverse events in the system. However, with a much wider range of visibility into the data, the ability to discern critical adverse events from noncritical events becomes a challenge. Quantitative risk management is key in effectively categorizing and filtering this information.

Quantitative risk management enables an organization to assign a risk ranking to an adverse event using quantitative scales like severity and frequency. This provides a systematic and repeatable method for determining how critical an event is. Traditionally, any event would become a corrective action. This would result in a multitude of CAPAs ranging widely in severity. The most critical events are essentially lost in the pile, like “needles in a haystack.” Quantitative risk tools essentially filter the needles from the haystack, enabling an organization to immediately correct minor events and focus on those most critical to the business. Only the most critical adverse events will become CAPAs, effectively reducing the degree of data paralysis in the system.

In an integrated system in which all quality and safety data are visible, risk assessment is a valuable tool that can help organizations categorize and prioritize events. It fosters better decision-making and streamlines the process by focusing on the events that pose the most risk to an organization.

Although filtering events in an integrated system helps to reduce the degree of data paralysis, not having an enterprise reporting system in place can hinder the ability of an organization to view and analyze the data coming into the system.

**Enterprise Reporting.** Enterprise reporting is helpful in overcoming data paralysis because it consolidates data into a single environment, a centralized location within the integrated system. This makes it possible for an organization to more effectively draw correlations between events across the enterprise, promoting efficient trending and continuous improvement. Using enterprise reporting, an organization can increase the visibility into the data by receiving the information in a more manageable format. This makes it easier to digest the information and decreases the chances of experiencing data paralysis.



**Siloed Approach to Food Safety Management**



**Integrated Approach to Food Safety Management**



Beyond visibility, enterprise reporting allows an organization to roll data from various systems into one holistic report. This not only decreases the number of reports that will need to be generated, it also ensures efficient analysis and decision-making. Another benefit of enterprise reporting is that trends can be detected more easily. Trending enables an organization to uncover similarities in events that occur in separate sites or departments, which allows them to pinpoint the root cause of the issue. The organization can then take preventive measures to prevent adverse events from recurring.

Although visibility enhances functions within the integrated system, it is also important to increase visibility outside of a company's four walls. With this in mind, integration can also be used to benefit the supply chain.

### Looking Ahead: Extending Integration Outside a Company's Four Walls

Suppliers can be considered the backbone of the food and beverage industries. With GFSI and other initiatives putting an even stronger emphasis on high-quality products, the ability to ensure that a supplier is in fact providing the highest quality for an organization is essential. To do this, it is beneficial for an organization to integrate suppliers into their existing safety processes. The goal of supplier management is to enable suppliers to participate in the process, while keeping information secure. Through the use of integration tools, an organization can facilitate supplier interaction in the process, while built-in security tools limit the level of interaction to only those areas relevant to the supplier. Providing suppliers with this level of visibility allows them to participate in the process by feeding information directly into the management system. This ability helps reduce the time it takes to receive and correct quality issues in the supply chain. Similarly, security tools help to protect in-

formation that needs to stay within an organization's four walls.

Integration to this level ensures that suppliers are fully in step with the enterprise, which helps create a level of visibility that promotes a common and cooperative quality and safety process down the supply chain.

### Conclusions

Safety and quality are the most important ingredients in the food and beverage industries. Companies utilize food safety initiatives to help promote a high level of compliance within the food chain. To ensure this compliance, a system that integrates all relevant processes across the enterprise is key. Whether complying with regulatory requirements or implementing GFSI food safety initiatives, use of a holistic, integrated management system greatly enhances an organization's ability to produce the highest quality goods.

An integrated FSMS provides the framework for consolidating common processes, improving employee productivity and creating visibility across multiple quality and safety disciplines. With this increased visibility, it is important to also have a method to systematically prioritize and categorize data. Risk-based filtering tools enable an organization to focus on those events that pose the highest risk to the business by helping to conquer data paralysis. Enterprise reporting helps to consolidate all information to better trend and analyze data across the enterprise.

Organizations can take quality to the next level by incorporating risk management within the supply chain. By extending the food safety system to suppliers, an organization can identify top supplier risks and enable suppliers to collaborate in its quality and safety processes. At the end of the day, an integrated system can connect the food and supply chains and create a window into global compliance for an organization.

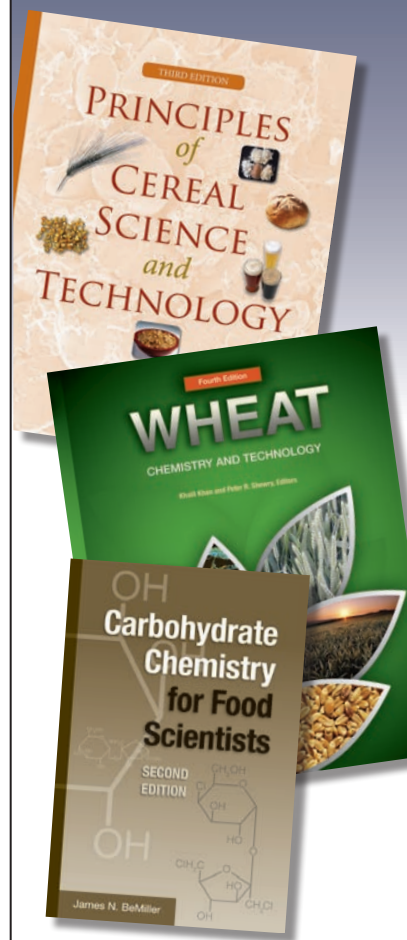


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