Enterprise Information Management for the Food and Beverage Industry

Integrate information across systems, functions, and the supply chain

Today’s global business and regulatory environments are too complex to leave information management to chance, especially for multi-sector industries like Food and Beverage. The Food and Beverage industry—with its complex global supply chains and multiple sectors and sub-sectors—is particularly vulnerable and, within this evolving landscape, effective, holistic information management is critical to holding and sharpening your competitive edge.
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Food and Beverage Industry Complexity Demands New Thinking Around Enterprise Information Management

The global business environment continues to shift rapidly, and all industries are challenged to adapt to a multitude of changes, including rising competition, higher commodity prices, tighter profit margins, growing import penetration, extensive new regulations, and a range of issues related to globalization itself. The Food & Beverage (F&B) industry—with its complex global supply chains and multiple sectors and sub-sectors—is particularly vulnerable and, within this evolving landscape, effective, holistic information management is critical to holding and sharpening your competitive edge. F&B companies must manage and leverage vast amounts of information to ensure not only the efficiency of day-to-day processes and operations (leading to cost savings) but also to adhere to a range of new global industry standards and government regulations (leading to cost avoidance through compliance).

For example, U.S. product recalls have increased in number, complexity, and severity,1 leading the government to substantially update regulations around food safety. The recent Food Safety Modernization Act (FSMA) introduces significant new rules for prevention, inspection and compliance, imported food safety, recall response requirements, and collaboration within food safety agencies. To consistently comply with these regulations, F&B companies must enhance their ability to coordinate food safety-related information across the supply chain and retrieve that information on-demand when preventative or responsive action is required or when the Food and Drug Administration (FDA) requests access.

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In the past, it has simply taken too long to address recall issues and trace food contaminants, and the FDA is serious about change. Beyond the FSMA itself, the FDA is conducting two extensive studies designed to see what methods can most quickly trace a variety of foods back to a common source of contamination. It’s clear that fast access to accurate information will be a critical part of such processes once they are practically applied in the industry. This means that F&B companies must develop both accountability and auditability throughout their own processes. They must not only manage information and records efficiently; they must also ensure there’s a clear electronic information trail linking all relevant information, allowing it to be recalled, correlated, and distributed in near-real time.

Companies that do not take steps to adapt face a range of potential negative consequences, such as declining shareholder value, financial loss, brand impact, customer fear, undue media focus, and regulatory reaction. Forward-looking companies, however, understand that saving costs through improved day-to-day operations, while avoiding the costs related to regulatory risk, can only be accomplished by integrating data and content across shared processes and throughout the supply chain.

**You can’t escape complexity by following a paper trail**

Most F&B organizations have long moved on from managing supply chain information with written ledgers and laborious tracing processes. However, vestiges of that unwieldy, siloed approach remain. While most companies have IT-based digital applications in place to handle data, many still take a piecemeal approach, purchasing multiple systems to address specific pain points in different functions or for different supply chain processes. Content management activities such as creating/capturing, preserving/destroying, storing/securing, accessing/distributing, and reviewing/collaborating often remain discrete and disconnected.

Given how complex today’s F&B industry is, this approach is inevitably problematic. Just-in-time inventory management, for example, is becoming standard practice in lean organizations, but it requires on-demand exchange and coordination of information. Whether managing suppliers, product quality control, or product traceability, in such an environment, an organizational view that looks into and out from a single point of truth remains out of reach without an overall integrated approach to Enterprise Information Management (EIM).
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<td>The FDA has broader authority to review company records to reduce gaps in recorded content and documents critical to compliance regulations.</td>
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<td>IMPORT AND THIRD-PARTY CERTIFICATIONS</td>
<td>New provisions require importers to verify compliance with U.S. requirements; the FDA has authority to inspect foreign facilities, which will change the landscape of accreditation and audit procedures.</td>
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<td>ALLERGEN MANAGEMENT</td>
<td>The FDA is required to develop a voluntary allergen management program. Companies may face a significant challenge if the FDA begins to validate allergen management programs and sanitation programs supporting product labeling.</td>
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<td>FOOD DEFENSE</td>
<td>New regulations specific to adulteration may affect current food defense plans and add requirements related to intentionally introduced hazards.</td>
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<td>TRACK AND TRACE</td>
<td>FSMA provides for traceability pilot programs, which will lead to additional traceability and record-keeping requirements for high-risk foods and a mandated FDA system.</td>
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<td>RECALL EXECUTION</td>
<td>The FDA possesses mandatory recall authority and may review current recall and replacement strategies to ensure products can be identified and removed in a timely manner.</td>
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<td>HAZARD ANALYSIS AND RISK-BASED PREVENTIVE CONTROLS</td>
<td>Hazard Analysis and Critical Control Point (HACCP)-based programs will now be required for most companies throughout their supply chains and must be updated regularly. Prevention and prerequisite programs have gained importance.</td>
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Developing an Integrated Approach to EIM

To meet the challenges of operational complexity and regulatory compliance, it is becoming critical to adopt a substantially enhanced level of information integration across systems, functions, and the extended supply chain—moving from R&D through sourcing, manufacturing, storage and distribution, and consumer interaction.

No matter what type of F&B-related business you run—from farming to a successful multinational product brand—you need to marshal your information and resources to improve performance around five common objectives:

- Governance and compliance
- Internal and external communication
- Efficient document access
- Recall management
- Auditable and defensible information

An effective EIM system can help drive each of these objectives at every stage of the supply chain by improving information integration, access speed, and cross-silo coordination.

Specific areas of potential supply chain improvement include:

**R&D**
- Product design
- Product specification
- Allergen and label management
- Usage scenarios and human factor analysis
- Safety innovation and market trends

**Sourcing**
- Supplier selection
- Import verification
- Raw material traceability
- Hazardous and non-conforming material management
- Audit management

**Manufacturing**
- Safety instructions and warnings
- Quality control
- Contract manufacturing
- HACCP management
- Sanitation

**Storage and distribution**
- Storage display
- Product traceability
- Retailer reporting
- Transportation management

**Consumer interaction**
- Reputation and brand management
- Messaging and product communication
- Consumer intelligence
- Counterfeits and product liability
- Consumer service and support

Your EIM solution should not only be able to integrate information across the organization; it should also integrate with your other enterprise applications, particularly SAP® Enterprise Resource Planning (ERP). With so many organizations running SAP, seamless integration with its core processes can yield cost savings by reducing redundancy, enhancing collaboration, improving resource efficiency, and providing better access to compliance-related information housed in various business functions.
The right information strategy delivers real advantages

The implications of FSMA, combined with other global regulations and the overall business demands of the global supply chain, mandate a change in thinking around EIM. For those who do realign their strategies and systems by implementing a more holistic approach, the advantages can be striking:

- Reduce cost and complexity of access to unstructured information
- Improve operational efficiencies
- Rapidly respond to business needs
- Automate and improve relevant business processes
- Increase the impact of customer communications
- Mitigate risk and improve compliance
- Reduce business disruption and improve productivity
- Reduce costs and complexity of systems and storage
- Integrate with SAP® business processes

Information management must parallel industry complexity

Today’s global business and regulatory environments are too complex to leave information management to chance, especially for multi-sector industries like Food and Beverage. Those who don’t improve their information management posture may soon be watching faster-acting organizations seize the competitive advantage and pull away. To compound the lost profits this scenario entails, those who are unable to fulfill FSMA requirements, take preventative and responsive action during serious food safety events, or produce FDA-requested materials on-demand risk non-compliance fines and penalties that can sometimes be crippling.

F&B companies need a holistic approach to information management. One-off solutions simply can’t account for the extent of information companies generate in-house and across their vast supply chains. Rather, a holistic EIM solution—one that incorporates Enterprise Content Management, Business Process Management, Customer Experience Management, Information Exchange, and Discovery solutions—provides a platform that’s organically suited to today’s evolving industry.

To learn more about how integrated EIM can help your organization improve day-to-day operations across the supply chain while enhancing compliance capabilities, please email Fern White; fwhite@opentext.com, to arrange a personal, face-to-face consultation.

The broad authority of the FDA could introduce challenges for companies with loose records management policies and practices. Companies should take a proactive approach to eliminate gaps in records content, access, and errors, while evaluating how to compartmentalize records to protect confidential commercial information.²