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Food and Beverage Distribution: Information Integration Advantages



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Executive Summary

The food and beverage industry faces many challenges — ensuring food safety, keeping up with regulatory and compliance mandates, managing constantly shifting customer demands, and squeezing margins from complex distribution networks. The key to success in tackling these challenges is information — capturing data up and down the supply chain and providing access for analysis so that executives can make rapid, informed decisions. For most companies and supply chains of scale (i.e., mid-market or larger), this type of sophisticated information management requires a common, integrated information technology platform.

Food and Beverage Distribution: Information Integration Advantages highlights current obstacles to performance faced by food and beverage companies, as well as solutions based on improved access to accurate and timely information. This paper also explores how many food and beverage companies fail to invest enough in tools that would boost their supply-chain performance. At the same time, *Food and Beverage Distribution: Information Integration Advantages* details how an integrated enterprise resourcing planning (ERP) solution can help food and beverage companies bring goods from growers to consumers more safely and more profitably.

Few industries confront the complex distribution challenges that face food and beverage companies. Coordinating the safe and profitable delivery of tomorrow's meals across a supply chain that includes far-flung farms, factories, and stores is a difficult, high-risk activity that invites regulatory scrutiny and disastrous publicity when distribution processes and supply chains fail (contaminated products, product recalls — or worse). Distribution and supply-chain management in this industry are tougher than ever due to rapidly changing markets and customer demands (such as new food trends, promotion-driven purchasing, shifting consumer preferences), supply fluctuations (such as logistics delays, crop failures, product embargoes), and evolving food-safety standards and regulations.

All these external events, trends and activities represent vast amounts of data that *should* inform decision-making — if the information is available in real time, so that the *right* goods of high quality move to the *right* destinations (processors, packaging plants, warehouses, restaurants, customers). Just as importantly, this external information must be viewed within a context of internal data from sales departments, warehouses, processing facilities, etc. This can't be done with spreadsheets alone; making information available and actionable within a variety of companies, locations, and software applications requires the advanced functionality of an integrated, easy-to-use IT platform.

A good example of how data is frequently *not* managed well across a food and beverage supply chain was the peanut butter salmonella outbreak in 2008. The first signs of a salmonella problem appeared in late summer, but it wasn't until fall 2008 that salmonella cases were confirmed — although officials still hadn't identified the source. An investigation of a cluster of cases at a Minnesota nursing home pointed to a peanut butter manufacturer, and on January 9, 2009 the manufacturer's product tested positive for *salmonella typhimurium*. "At that point the FDA became involved, actually going to the plant where the peanut butter was made in addition to some distributions points along the way; at that point we initiated a recall," recalls Dr. Stephen Sundlof, director of the FDA's Center for Food Safety and Applied Nutrition. On January 10, 2009 the peanut butter was recalled, but the originating source of the salmonella still hadn't been found. The investigation moved up the supply chain, ending at a Peanut Corp. of America (PCA) facility in Blakely, Georgia. Because most of PCA's peanut products — peanut paste, etc. — go into other products, and because PCA had more than 300 customers (with hundreds of customers of their own), the recall quickly became massive, including an array of peanut-related products.¹

Tracking the distribution of food and beverages is difficult, especially as supply chains grow. Yet tracking is core to food safety and brand reputation. Jorge Hernandez, senior VP of food safety and quality assurance for U.S. Foodservice (USF), one of the largest broadline U.S. distributors with about 250,000 customers and 3,000 suppliers, lists five areas of unique challenges facing food safety today:

- Food industry distribution (number and fragmentation of foodservice distributors, infrastructure capabilities, food safety knowledge)
- Management systems (receipt, unloading/loading, storage, rotation, trucks, drops)
- Distribution practices (cross-docking, merger-in-transit, backhauling)
- Food handling (rework, repack, rebox)
- Traceability through the supply chain (e.g., a single tomato can go from the field, to a packing house, to value-add processor, to a broker, to a grocer, and finally to the consumer)ⁱⁱ

In addition to the problem-prevention and safety aspects of real-time product tracking, product data also can be leveraged for competitive advantage. Belgian frozen vegetables producer Pasfrost NV, which operates in 65 countries, tracks its products from field to consumer, relying on an integrated ERP system to maintain and share accurate inventory data. Data capture has been integrated with the company's measuring and labeling points. For example, truckloads of produce are weighed, with the information passed to production planning systems. Vegetables are processed, then palleted and barcoded; the barcodes allow Pasfrost to trace the goods back to individual suppliers as they move downstream to customers. Accurate product data improves warehouse efficiency and helps ensure compliance to strict safety standards, such as the British Retail Consortium standard for traceability.ⁱⁱⁱ

Pasfrost reports that "thanks to our efficient, computerized tracing system we know exactly when and where a vegetable was grown, and the work we did on it." Pasfrost pursues management standards that are stricter than those applied by the Belgian and European authorities. "This is also why we continue to make significant investments in technology and people."^{iv}

JJ Food Service, a U.K.-based food distributor, similarly invested in technology to gain a competitive advantage through improved productivity, installing a new call-center and business-management system. Through better scheduling, the company was able to improve distribution times and handle an extra £31 million (approximately U.S.\$46 million) of business a year with the same resources.^v Mushtaque Ahmed, JJ Food Service senior business operations manager, said, "We wanted to maintain our leading position in the market by gaining competitive advantage. There were several new areas we wanted to plan ahead for, such as online ordering, handling multiple storage sites, home working to offer flexibility for workers, and mobile technology for our delivery team. Of course we had to address our existing challenges as well, increasing efficiencies without losing focus on customer service."^{vi}

Lack of Supply-Chain Perspective

Food-borne illness outbreaks highlight the risks in food distribution, while best practices, such as those at Pasfrost and JJ Food, demonstrate the benefits of a well-monitored supply chain. All these examples underscore the business reasons for tracking food distribution, which can make the difference between a company's success or failure in getting goods swiftly and safely to market. Yet many food and beverage distributors haven't invested in the tools to help them monitor their supply-chain data and navigate disruptions to their supply chains.

Food and beverage companies, by the nature and perishability of their products, are more susceptible to problems throughout their distribution channels. For example, a study by RSM McGladrey asked distribution and manufacturing executives to assess their company's level of risk from supply-chain disruptions. Companies in the food and beverage industry report high levels of risk more frequently than other industry segments (*Table 1*).^{vii}

Table 1
Supply-Chain Risks by Industry Segment

	High risk	Low risk
Transportation disruptions	Food and beverage 52%	Industrial equipment 25% Transportation equipment 25%
Supplier disruptions	Food and beverage 57% Transportation equipment 56%	Printing and publishing 39% Electronics 37%
Climate change (weather)	Food and beverage 33%	Industrial equipment 2%
Licensing and regulation	Food and beverage 38%	Industrial equipment 7% Printing and publishing 6%
Poor quality supply	Food and beverage 47%	Chemicals 20%

Source: 2009 Wholesale Distribution and Manufacturing National Survey

Despite the risks and safety issues posed by supply-chain disruptions and problems, many food and beverage companies fail to adequately monitor and measure their supply-chain activities, losing opportunities to identify and resolve issues, leverage market opportunities, and find new ways to enhance quality, safety and customer value. For example, 27 percent of food and beverage companies have no measurement systems or reviews in place to track return from their supply-chain management and collaboration, and another 29 percent have only ad hoc monitoring and reviews. Conversely, among food and beverage firms at or near world-class supply-chain management and collaboration, 65 percent have more than ad hoc monitoring or reviews.^{viii}

Food Safety Magazine's Shaun Kennedy writes that an active supply-chain verification program that identifies and resolves small issues can strengthen the overall supply chain to avoid food safety issues. "These actions also improve the company's ability to avoid or respond to food defense concerns. While there is always going to [be] a cost associated with an actively managed supply-chain verification program, it may often be offset by more favorable insurance rates. More importantly, its utility in allowing a firm to more rapidly respond to an event will reduce the much larger costs associated with an accidental or intentional contamination that does get through."^{ix}

Benefits of an Integrated Platform

To safely and cost-effectively speed products from ranchers and growers to store shelves and restaurants, food and beverage companies need tools that help them remove waste, ensure safety and regulatory compliance, and connect demand signals to production and logistics schedules. And as these food and beverage firms grow into midmarket and larger organizations, an integrated ERP solution becomes a necessity, supporting the following benefits.

Operations and logistics effectiveness

Opportunities to increase food-distribution productivity can be found all along the chain that brings products to market, but improving overall performance (and not just the individual performances of specific locations such as warehouses or production lines) requires a big-picture perspective.

Most logistics best practices (delivery-route planning, coordinating cross-docking efforts, logistics-optimization techniques such as truck-space optimization, catch weight accuracy, minimizing transfer perishability) demand detailed shipment tracking and management capabilities accessed by multiple companies and applications. In addition, automated data collection systems connect buy-and-sell data and ensure that financial actions (invoice, payment) occur in a timely and accurate manner.

Compliance

It's not sufficient for a food and beverage company to prove its products are safe, high-quality, or compliant with regulatory and labeling requirements (e.g., organic, sustainability). The peanut butter salmonella case illustrates how companies must also ensure that their supplier's products (and their supplier's suppliers' products) adhere to these criteria well.

Grant Thornton partner Steve Lyman writes that food and beverage manufacturers are looking to suppliers and distributors for more proof of product quality. "In light of recent food-safety events, many food and beverage manufacturers indicate that they have changed their positions with suppliers, becoming 'tougher' with 'intensified testing.' One executive said, 'We are more concerned with the ingredients we purchase and require more detailed testing for the best.' Many are requiring more documentation from the suppliers they're working with, and they're reconsidering the location of those suppliers: 'More emphasis on proof of HACCP [Hazard Analysis and Critical Control Point], [National] Food Safety programs, and less reliance on off-shore sources.'"¹⁰

An integrated solution can help a food and beverage company to automate product tracing, tracking products and providing details that partners (packagers, manufacturers/producers, retailers) in food-industry supply chains expect.

Market agility

Emerging food categories force food and beverage companies and their supply chains to move quickly. Trends such as organic foods or private-labeling can require reconfigurations of supplier sourcing, ingredients, branding, logistics and marketing messages. An integrated solution helps to align messaging with these trends, coordinating marketing campaigns with changing market dynamics.

In addition, detailed business reports help food and beverage companies analyze the distribution channels available to them (grocer, restaurant, institutional, etc.) on an ongoing basis, offering a deeper understanding of the delivery and value-add requirements within each channel.

Customer demand management

The best distribution system to bring products from suppliers to market is meaningless if those products aren't what customers want now. And not just *what* they want, but *how* they want it (quantity, package, serving size, level of processing).

Integrated solutions enable accurate demand forecasting (preparing a food and beverage company's supply chain for anticipated demand) and help growers and processors to meet actual customer consumption (scheduling processing and delivery more precisely).

Does your food and beverage company use these distribution and supply-chain strategies to manage quality, compliance and profitability? Does your company have an integrated information platform sophisticated and flexible enough to meet today's challenges and leverage tomorrow's opportunities? If not, it's time to reassess your supply-chain strategies, processes, and supporting business systems and then implement an action plan to improve your company's ability to get goods to market safely and on time by turning product data into a competitive advantage.

ⁱ "Anatomy of an Outbreak," CDCStreamingHealth, February 10, 2009.

ⁱⁱ *Food Safety in the 21st Century Marketplace, Distribution Challenges*, Jorge Hernandez.

ⁱⁱⁱ "Pasfrost Tracks Produce from Field to Consumer with Business Management Solution," Microsoft, November 2004.

^{iv} Pasfront corporate information, www.pasfrost.be.

^v Tash Shifrin, "Food Firm Gets Productive with Call Centre Tools," *Computer Weekly*, August 22, 2006.

^{vi} "JJ Food Service Retains Competitive Edge with Streamlined Operations," eBECs and Microsoft Dynamics, 2006.

^{vii} "2009 Wholesale Distribution and Manufacturing National Survey," RSM McGladrey, 2009.

^{viii} Next Generation Manufacturing Study, The MPI Group, 2009.

^{ix} Shaun Kennedy, "Supply Chain Verification to Improve Product Recall and Crisis Management Plans," October/November 2008, *Food Safety Magazine*.

^x Steve Lyman, "Finding the Right Mix of Opportunities," *Fast Facts on Food Processing*, Grant Thornton Food & Beverage Practice, 2009.

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