



## Building a technology framework for improved recall effectiveness.

To ensure that your organization is effectively prepared for a recall, you need to assemble a framework around the five key processes:

### 1. Prevention.

The idiom, “an ounce of prevention is worth a pound of cure,” is one that food manufacturers and distributors should heed. Implementing ample preventative measures can go a long way toward avoiding many contaminants, such as:

- Agrochemicals
- Allergens
- Carcinogens
- Environmental contaminants
- Human contamination
- Parasites
- Pathogens
- Pesticides
- Processing contaminants

Contaminants can come from many sources, including:

- High humidity
- Improper pH
- Labeling errors
- Manufacturing errors
- Plant safety problems
- Tampering
- Temperature fluctuations
- Unapproved ingredients

Some of the processes and systems that you can put in place to minimize contamination include:



**Supplier compliance**—Your suppliers present a high area of potential risk. You can improve product safety by integrating more supplier data and interacting with your suppliers more often. Based on the supplier, commodity, item quality, and compliance/risk rating, you can enforce the appropriate level of material disclosure, supplier in-line or in-process quality testing and certification, and internal testing and certification.

As you process requests for information (RFIs), requests for proposal (RFPs), and plant certifications, integrated material disclosure can streamline processes for low-risk and high-quality suppliers, and provide additional scrutiny for higher-risk suppliers, materials, and plant certifications. Materials disclosure and screening processes can proactively identify issues, protect product safety, and reduce process lead times and costs.

**Global recipes**—Implementing global recipes can prevent the use of unapproved ingredients in your products. This doesn't mean, though, that the recipes are precisely the same from country to country—it means that you have global control over the recipes. Certain additives and ingredients that are permitted in one country, might not be allowed in others. Additionally, label and health claims that are valid for one country, could be forbidden in others. For example, claims such as “low fat,” “high fiber,” or “helps lower cholesterol” are all subject to country and regional laws. Failure to comply with these local laws can result in a recall.

**Quality assurance integrated into production systems**—You can proactively protect product safety and improve the value of your end product by integrating quality assurance all the way from advanced shipment notices through inventory, production, shipping, and logistics. By proactively monitoring to identify risks and issues, you can stop a suspect lot from being used or shipped. You can proactively monitor from initial shipment through inventory, production, and distribution. Not only do you ensure safety, you improve the value of your end product.

**Asset maintenance practices**—Improper changeover procedures, poor sanitation measures, leaky pipes or roofs, metal shavings that fall into packaging processes, and other asset maintenance issues have led to several high-profile recalls. These recalls could have been prevented. Preventive maintenance safeguards product quality, reduces safety risks, and boosts asset availability and longevity. Additionally, using alerting technologies that warn when conditions change that may compromise food safety (such as when the temperature is too low or the humidity is too high) can also significantly reduce the risks for contamination. By practicing preventive maintenance and refusing to operate under out-of-tolerance conditions, you proactively improve product safety, minimize write-offs, and improve fill rates.

**Label compliance**—Nearly 20% of recalls are due to labeling errors. There are two key areas where label compliance can be an issue. The first is ensuring that the listed ingredients match what is actually in the product, in regards to completeness and correct order. Failure to disclose all ingredients, especially if there is potential for allergic reactions, can result in a recall. Secondly, a product label's nutritional and health claims must be accurate and comply with government standards. Due to changes in formulas, as well as raw material fluctuations, food manufacturers must have a means to make sure that the product they produce matches the label they are using. Infor Optiva is designed specifically to address this—none of the customers who use it have ever had a labeling-related recall.



**Institutionalize practices**—Don't wait for trouble; perform "fire drills" of recalls and assign employees well-defined roles. Push your concern for traceability back into your supply chain. Demand timely and accurate feedback from your suppliers as to the history of the raw materials, and keep their answers on record. Food safety and quality issues can be managed more readily if each partner in the supply chain can identify the direct source and direct recipient of traceable items. A healthful food supply depends upon a sound supply chain.

**Supplier risk assessment**—You can analyze performance to more accurately rate supplier, material, and production quality. By using supplier scorecards, which are generated from the data collected to create risk ratings, you can help drive purchase order volumes to more reliable suppliers—and also reduce safety risks. Since many suppliers are not staffed to implement advanced quality and compliance programs, you can move from just auditing to value-added education. You can use supply chain planning to perform what-if analysis if specific suppliers were to be affected. By improving supplier quality, you can help reduce your costs—and your suppliers' costs—while improving product quality and consistency.

## 2. Identification.

In 2007, USDA officials made the Topps Meat Company of Elizabeth, New Jersey, recall a year's worth (21.7 million pounds) of beef products because of potential *E. coli* contamination. That, combined with the company being served with a "notice of intended enforcement" by the USDA for "inadequate process controls," was enough to put the Topps Meat Company out of business.<sup>8</sup>

What put Topps Meat Company out of business was not the few hundred *E. coli*-tainted hamburger patties that made people sick; it was the company's inability to prove that its production was safe for the year leading up to the contamination. They didn't have the records. When they couldn't trace the problem to certain lots and dates, they were forced to recall and destroy everything. In addition, the problem went on too long. According to the Centers for Disease Control and Prevention (CDC), it typically takes two to three weeks from the time a person falls ill from food poisoning to confirm that the case is part of an *E. coli* outbreak.<sup>9</sup>

The more precise data you have, the more you can limit the consequences of a product recall or products withheld from market. Traceability solutions add so much visibility and transparency that you can execute a product recall within hours and with high precision. The alternative—manual or semi-manual trace-back—is a time-consuming, step-by-step process. Being unable to prove what lots were involved results in recalling more products than you need to, for a margin of safety.

Lot traceability is a core component in the food safety concept. Use the lot recall analysis capabilities of your own enterprise resource planning (ERP) system to manage what happens in your supply chain and processing operations. This should allow you to identify where the raw materials and packaging came from, how you have transformed them, how the raw materials were consumed, and where you shipped the finished product. Additionally, product lifecycle management (PLM) tools can help you identify other recipes that might contain the same contaminant.

<sup>8</sup> Ken Belson and Kareem Fahim, "After Extensive Beef Recall, Topps Goes Out of Business," *The New York Times* ([www.nytimes.com/2007/10/06/us/06topps.html?\\_r=2](http://www.nytimes.com/2007/10/06/us/06topps.html?_r=2)), October 6, 2007.

<sup>9</sup> Timeline for Reporting of *E. coli* Cases, Center for Disease Control and Prevention ([www.cdc.gov/ecoli/reportingtimeline.htm](http://www.cdc.gov/ecoli/reportingtimeline.htm)), September 19, 2006.



Real-time transactional data collection is the foundation of traceability. It can be used proactively in the interests of efficiency, as well as reactively in the event of a product recall. Proactive use allows you to test and verify the traceability of supply chain input as a continuous part of operations. Increasingly, food safety regulations include standards for recall speed; organizations must prove that they can find and withdraw all potentially contaminated food from the supply chain within a specified time.

### 3. Notification.

As soon as you identify a bad lot, you need to notify your affected customers. They need to remove the products from their shelves (if they are retailers) or notify their customers (if they are distributors). It's not enough, however, to just communicate the problem down the supply chain; you also need to make sure all of your affected suppliers are notified as well, so they can identify and rectify the cause of contamination.

The Recall Execution Effectiveness study indicates that companies are effective at notifying regulatory agencies: "72% of manufacturers surveyed notify the FDA and/or USDA of a recall in eight hours or less."<sup>10</sup> That effectiveness, however, does not carry over to notifying affected customers: "This study indicates that surveyed manufacturers at times can take from one to five days to notify direct customers."<sup>11</sup> Often this delay is a result of companies not having ready access to their customer contact information, or the information is not current. Maintaining accurate customer contact information is essential for an effective recall. You also need a feedback system to confirm that your customers received the notification.

The longer it takes to make affected customers aware of the problem, the longer those bad lots will stay on the shelves. Not only does this create a potential increased health issue, but it can also damage your brand. By performing regular "fire drills," you can have recall notification templates already in place, based on potential issues. Using the collaborative capabilities of your ERP or customer relationship management (CRM) systems, you can quickly get notifications out to the right people.

Quickly notifying your customers is only part of the equation. What you communicate to your customers is equally important. The more information you provide, the more effective the customer can be at identifying the affected products and removing them from the shelves. This information should include all of the original order details, including:

- Product description
- Lot codes
- Size or weight
- UPC codes
- Recall reason
- Plant number
- When shipped
- Recall coordinator contact information
- Quantity shipped
- Customer instructions
- Image of the product

<sup>10</sup> FMI, GMA, GS1 US, and Deloitte; p. 20.

<sup>11</sup> FMI, GMA, GS1 US, and Deloitte; p. 23.



## Technical Paper

# Food safety and compliance

### 4. Removal.

The natural response for retailers is to pull everything of yours off the shelves—not just the affected lots—in an attempt to protect consumers and their brands. This can make an already costly undertaking even more expensive. The Recall Execution Effectiveness study reports that removal and destruction of recalled products for manufacturers “accounts for 67 percent of the total cost of a product recall; for retailers, the cost is 53 percent of the total.”<sup>12</sup>

The better the information you can provide on the actual lots affected, the more you can minimize the cost of the recall. This can help limit the extent to which retailers remove products outside of the scope of the affected lots from the shelves. During recall notification, 70% of manufacturers provide the affected lot numbers to their customers.<sup>13</sup>

But only 12% of retailers have access to technology that allows them to track lot numbers. The Recall Execution Effectiveness study states that “the moment a national brand product reaches a customer warehouse, manufacturer lot information is often lost and not cross-referenced with the retailer’s/wholesaler’s internal codes.” This leaves UPC numbers as the primary means for retailers to track recalled products. “85% of the surveyed retailers have the technology to track UPC numbers of products at store level.”<sup>14</sup>

### 5. Replenishment.

According to the Recall Execution Effectiveness study, replacing recalled products “takes anywhere from 1 to 30 days depending on whether they have unaffected product available at their stores or distribution centers.” The longer it takes to replenish products on retailers shelves means more lost revenue—12% in lost sales for manufacturers, and 27% for retailers. And to make matters worse for manufacturers, 42% of retailers fill empty shelves with products from competitors.<sup>15</sup>

The key to minimizing the time it takes to refill stocks and shelves is effectively collaborating with your suppliers and customers using supply chain management (SCM) solutions, such as an advanced planning tool. This will allow you to assess exactly how to estimate resources and costs and make maximum use of your production capacity, while still meeting demand for your other products. You can even use the advanced planning tool’s what-if analysis to model replenishment scenarios during “fire drills” and to help build contingency plans.

**Coming next week:** Essential guidance and conclusion

<sup>12</sup> FMI, GMA, GS1 US, and Deloitte; p. 27.

<sup>13</sup> FMI, GMA, GS1 US, and Deloitte; p. 27.

<sup>14</sup> FMI, GMA, GS1 US, and Deloitte; p. 27.

<sup>15</sup> FMI, GMA, GS1 US, and Deloitte; p. 32.