

# Grayway



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## MAXIMIZING OPERATIONS FOR A SAFER FOOD SUPPLY

FSMA & TRACEABILITY BEST PRACTICES

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Stephen Gray  
President &  
Chief Executive Officer

## WELCOME

While the United States has one of the safest food supplies in the world, the recent demand for rapid growth in food and beverage calls for more efficient methods of safety in the manufacturing of our food supply.

In this issue of the GrayWay, we discuss both the improvements made and the ongoing challenges in food safety today. By looking closely at the Food Safety Modernization Act (FSMA), we see a shift to a proactive approach to our food. We also examine traceability and recall best practices to ensure that food safety is not compromised for consumers today and into the future.

A handwritten signature in white ink, appearing to read 'Stephen Gray'.



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Gray practices methods which protect our environment.

# REACTION BECOMES PREVENTION IN FOOD SAFETY



## INSIDE THIS ISSUE



### FSMA: STRENGTHENING FOOD SAFETY

Food Safety Modernization Act propels action, not reaction



### TRACEABILITY AND RECALL BEST PRACTICES

New tools for a new food safety landscape



### THE NEW FACE OF MANUFACTURING

GraySolutions



### GRAY... WE'RE BUILDING

Maruchan Virginia Inc.  
Chesterfield, Va.



# FSMA: STRENGTHENING FOOD SAFETY

Food Safety Modernization Act  
propels action, not reaction

**Each year, the U.S. Food and Drug Administration estimates that 48 million people in the U.S. get sick from a foodborne illness, 128,000 are hospitalized and 3,000 die. Highly publicized cases of food safety and recall issues have resulted in huge legal settlements that significantly damage consumer confidence, not to mention the affected brands.**

Recent actions are trying to change this. Enacted in 2011, the Food Safety Modernization Act (FSMA) continues moving the food processing industry from traditionally reactive to increasingly proactive when it comes to food safety.



Jeff Van Pelt  
Food and Beverage  
Industry Principal  
OSIsoft

Jeff Van Pelt, food and beverage industry principal with OSIsoft, a real-time data management software provider, says he has noticed a shift in how processors are approaching FSMA.

“I’ve seen the manufacturing community work more closely with the FDA—more closely than I thought they would—and I think it’s for

the benefit of the consumer,” he said. “Back in 2011, it wasn’t a case of collaboration, it was,

‘Here comes the government pushing paperwork down our throats.’ But they realized ultimately this process is going to benefit them in relation to protecting their brands.”

Specifically, he points to trends like clean labels and source of origin identification, as well as organic and non-GMO ingredients, explaining, “A lot of things consumers are asking for is what FSMA is asking processors to do as well. A lot of the work processors did is actually providing them brand benefit when they go out to the marketplace.”

Still, it’s important to understand that FSMA compliance is not going to be a one and done exercise. Compliance, and how to efficiently achieve and document it, will be a learning process both for food firms and the FDA.

“Most of the early deadlines focused on things like creating a plan, infrastructure

improvements and documentation. But the next wave of deadlines will focus on the full supply chain, prevention and food defense, particularly having the ability to predict when something's going to go wrong," Van Pelt adds.



Gayan Hettiarachchi  
Director of Food Safety  
Champion Petfoods

### Protecting Humans and Animals

Gayan Hettiarachchi, director of food safety at Champion Petfoods in Edmonton, Alberta, agrees. Responsible for building his company's food safety program, he points out FSMA requires improvements to the food safety culture beyond compliance from pet food manufacturers as well as human food processors. "We have to be in a position of always understanding any risks and hazards that could come through our ingredients or any of our processors, and effectively prevent such risks in our products," he says.

Lack of FSMA awareness and regulatory guidance were some early FSMA challenges. "We began training about 20 team members, what we call PCQIs – Preventive Control Qualified Individuals," Hettiarachchi describes. The application of the food safety tools, ingredient and process risk assessment helped to design, develop and improve Champion Petfoods' food safety program, addressing the FSMA regulations – both the animal food preventive control rule and the foreign supplier verification rule.

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Champion Petfoods is dedicated to serving pet lovers who want the best for their dogs and cats, insist on the freshest and most nourishing ingredients and expect the highest food safety standards.

Establishing current good manufacturing practices and preventive controls for food safety also played a part in Champion's recent DogStar® Kitchens in Auburn, Ky. The 371,000 s.f. kitchen was designed and built to help Champion meet the same food safety standards that are required for the manufacturing of human foods. As a result of continuous improvements to the food safety system



In 2016, Champion began cooking Biologically Appropriate™ pet food at DogStar® Kitchens in the U.S. in response to increasing demand for its award-winning foods.



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Gayan Hettiarachchi  
Director of Food Safety, Champion Petfoods

and the Safe Quality Food (SQF) certification leveraging Global Markets Programme, Champion Petfoods was recognized as the first-ever recipient of the Global Markets Awards by the Global Food Safety Initiative in 2017.

### **The Government IS Here to Help**

There are tools available for helping understand FSMA better. The FDA’s Food Safety Plan Builder (FSPB) can assist owners/operators of food facilities with developing food safety plans specific to their facilities that meet current good manufacturing practices, hazard analysis and risk-based preventive controls for human food regulation.

Although the content of the Food Safety Plan Builder is consistent with the FDA’s existing guidance and regulations, use of the Food Safety Plan Builder by owners and operators

of food facilities is optional and does not mean their food safety plan and procedures comply with FDA requirements. In such cases, obtaining expert help is often the best case.

The FDA’s goal, through better communication, smart regulation and enhanced use of technology, is to shift our food system from one that reacts to problems to one that prevents them from happening in the first place, in the words of FDA Commissioner Scott Gottlieb. “While the United States has one of the safest food supplies in the world, recent outbreaks continue to highlight the all-too-real consequences of foodborne illness, and the need to ensure that the goals of FSMA are fully achieved. Food safety needs to be priority number one from the farm to table.”

# TRACEABILITY AND RECALL BEST PRACTICES

## New tools for a new food safety landscape

**Food availability is not just a trip to the grocery store any more. Membership-based meal delivery firms will ship ready-to-prepare meals to your door. Amazon manages millions of communications daily on shipping food effectively to customers. As the food availability landscape changes, what tools are emerging to keep it safe?**

When an FDA-regulated product is either defective or potentially harmful, recalling that product is the most effective means for protecting the public. Recalls are almost always voluntary. Sometimes a company discovers a problem and recalls a product on its own. Other times a company recalls a product after the FDA raises concerns. Only in rare cases will the FDA request a recall. But in every case, the FDA's role is to oversee a company's strategy and assess the adequacy of the recall.

Effective recalls rely on traceability, and the food industry is stepping up in providing resources. One is the Global Food Traceability Center (GFTC), developed by the Institute of Food Technologists (IFT). Deliverables include online courses, podcasts, journal articles and other knowledge items on such topics as creating interoperable, full-chain food traceability. "The main idea of traceability is to record relevant information (referred to as KDEs [key data elements]) associated with the physical goods ('traceable entities') as they move through specific steps (CTEs [critical tracking events]) in the supply chain," said a GFTC spokesperson. "Therefore, the architecture and the components that will enable it to function must be suited to manage big data while simultaneously providing granular insights as required."





In the modern food landscape, technological advancements enable consumers to trace their food back to the farm in which it originated.



Amazon launched its grocery delivery program called AmazonFresh in 2017 to provide consumers with a convenient yet safe food source.

Plex, a leading provider of cloud-based enterprise resource planning (ERP), is among the latest software platforms. It has identified the following as big data “must-haves” for food and beverage manufacturers:

1. One-up/one-back traceability both for ingredients and finished goods.
2. Real-time tracking and conformance/corrective strategies.
3. Batch recipe management, including clear alerts for every ingredient in every product, particularly allergens and other data.
4. Data access and storage – traceable, complete and user-friendly.
5. Customization and flexibility, such as adding product-specific labeling and barcoding features easily.

### How Amazon Uses Technology for Monitoring Customer Feedback



Carletta Ooton  
Vice President of  
Health Sustainability,  
Security and  
Compliance  
Amazon

At this year’s Food Safety Summit, keynote speaker Carletta Ooton, vice president of health, sustainability, security and compliance at Amazon, described how a visionary company applies new tools for food safety.

Heartbeat, an Amazon built tool, enables the company to sift through over 20 million pieces of customer feedback per week to identify text

specific to safety concerns. “These interactions [from customers] include publicly available data like product reviews and detail page ‘ask an owner’ correspondence as well as internal data like customer return comments, CS chat and machine-transcribed CS calls,” Ooton says. “The scale alone is not the issue. Our challenge is extracting relevant and actionable meaning from the interactions.”

“To do this, we rely primarily on Natural Language Processing (NLP),” Ooton says. “NLP is a broad field of computer science that focuses on applying machine learning to understanding language. One of the key differences between NLP and general keyword searching is the understanding of context, sentiment and sentence structure. By doing so, we are able to surface true safety-related concerns about products to subject matter expert teams for investigation and subsequent needed actions.”

On December 1, 2017, Amazon detected several food safety concerns on a dietary supplement. They removed the product from the website the same day and initiated an investigation with the manufacturer. Almost two months later, the product was officially recalled due to undisclosed allergens—and the side effects listed in the official recall nearly exactly matched Amazon’s detected feedback.

“We design safety into every process touch, and then we audit to ensure that the process is maintained,” she said. “In the rare occasion when a key performance indicator (KPI) and a customer anecdote disagree, the customer is nearly always right. These customer signals are a rare gift we obsessively seek.”

# THE NEW FACE OF MANUFACTURING

## GraySolutions

GraySolutions, a full-service automation, operations and information services firm focused on helping customers with smart manufacturing, launched earlier this year as a new company within Gray.

“Just as Gray Construction can do it all, from site analysis to engineering, design and construction, GraySolutions is uniquely positioned to support new and existing customers with best-in-class automation, operations consulting and information services,” says Walker Mattox, president.

“And unlike conventional manufacturing production, where there is a shakeout period of weeks or months to establish a baseline, streamlining information sources through GraySolutions means pushing the button and optimizing performance from day one,” adds Mattox.

All industries are experiencing rapid transformations through new process and information technologies, and no industry is under more pressure from consumers for speedy change than the Food and Beverage sector. Specialized expertise within GraySolutions allows customers to have access to expertise for any size project, from large greenfields to small line upgrades or data capture projects.

“Our Food and Beverage customers are under immense pressure to continually provide new products to consumers, and they must be able to respond and adapt quickly. The team at GraySolutions brings an outcome-focused approach to solving our customers’ unique challenges,” says Randolph Wilson, vice president, strategy & innovation.



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# MARUCHAN VIRGINIA INC.

## CHESTERFIELD, VA.

**Maruchan Virginia Inc., a global leader in ramen cups, bowls and a wide variety of noodles and flavors, recently broke ground on a manufacturing expansion to its Chesterfield, Va., campus.**

Gray Construction was Maruchan's choice to design and build a highly automated, two-story 60,000-s.f. production and packaging facility known as the "Soup Room Expansion." The project is scheduled for completion in the fall of 2019.

Maruchan Virginia Inc. is a subsidiary of Tokyo-based Toyo Suisan Kaisha Ltd. The company has four Ramen noodle manufacturing facilities in the U.S. and produces 3.6 billion packages of Ramen Noodle Soup a year.



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