THE ROI OF FOOD SAFETY

By leveraging new food safety solutions such as mobile devices, the cloud, sensors and more, you can better protect your customers while also gaining a tangible ROI. Take advantage of this whitepaper to understand how these savings can be utilized in your organization.

Wherever consumers purchase and shop for food today, they are likely to find a larger selection than ever before. From the bread aisle to the cheese counter to the produce section, food options and manufacturing processes today are more diverse than ever.

While variety is positive on a consumer and cultural level, it can creates challenges for food safety.

COMPLEXITY LEADS TO FOOD SAFETY ERRORS

A diversified food chain is inevitably more complex to protect. As the insurer Swiss Re noted in its report *Food Safety in a Globalised World:* "Greater complexity leads to more interfaces, which increases the chance for error."[1]

When contaminated food reaches consumers the results can range from a mild case of cramps to outright loss of life. According to the U.S. Department of Agriculture (USDA's) Economic Research Service, foodborne illnesses cause 53,245 hospitalizations in America each year, and take the lives of 2,377 people. According to the USDA, these incidents result in a loss of $15.6 billion a year for the organizations responsible - not counting the millions of dollars in recovery costs and loss of brand reputation incurred by companies caught up in these outbreaks.[2]

[1] Swiss Re, 2015: Food Safety in a Globalised World annually/#.V494yjXN5cw
[2] Food Safety News, http://www.foodsafetynews.com/2014/10/foodborne-illnesses-cost-usa-15-6-billion-

Consider the E.coli outbreak that recently enveloped Chipotle, resulting in a food safety crisis that sickened hundred of its patrons.

- Business across the Chipotle chain immediately decreased and remained that way, even months after the outbreak comparable-store sales were still down by more than a fifth.
- The company spent millions of dollars to determine the cause of the outbreak; from testing the fresh produce for contamination, on promotional food giveaways to win back customers, and on an intensive advertising campaign (the largest in its history) designed to restore its brand.

Despite the multitude of efforts, company officials report that up to 7% of its customer base will not return, and Wall Street analysts have determined Chipotle won't obtain any earnings growth for three years.[3]

FOOD RECALLS AND CONSUMER TRUST

Costly episodes like that of Chipotle grab headlines, yet they don't entirely capture the full extent of food safety issues today. For a more informative view, examine food recalls. Since recalls are mandated by regulatory requirements, they prevent human and financial disasters that would have occurred otherwise. According to Food Safety Magazine, the amount of food recalls has steadily increased each year, resulting in 626 food recalls in 2015.

The impact of those food recalls is widespread and costly. In a survey of 36 major International food companies by the Grocery Manufacturers Association (GMA), more than half (55%) reported experiencing a product recall in the five years prior, with the cost of many of these recalls reaching well into the tens of millions, some even costing more than $100 million.[4]

Behind these numbers lurks a bigger problem for which there is no accurate financial estimate: loss of consumer trust. Recent surveys, such as the 2015 Food Value Equation Survey by Deloitte Consulting LLP,[5] find consumers are seeking more reassurance about their food. There are a significant amount of inquiries placed on the amount of information regarding where food is being manufactured and distributed. Failure to meet these changing consumer expectations can result in serious consequences, and impact a business's brand through negative public exploitation on far-reaching social media platforms.

[3] economics-the-cost-of-a-sick-customer; USA Today; http://www.usatoday.com/story/money/2016/04/14/chipotle-food-crisis-cost-company-three-years-of-economics-the-cost-of-a-sick-customer

[4] Fortune, Why Our Food Keeps Making Us Sick, http://fortune.com/food-contamination/com/2016/02/123246/#.V497KDXN5cw

[5] Food Safety News, Consumer survey shows changing definition of food safety, http://www.foodsafetynews.

According to a study by the advertising agency Sullivan, Higdon & Sink, only about a third of consumers trust food companies to provide them with the right information. However, the level of trust has increased one-fifth in 2012, which SHS says is due to industry initiatives to educate the public.[6]

FSMA—A NEW ERA IN FOOD SAFETY

Concerns over food safety are growing. No food company or distributor wants to be linked to or associated with an outbreak, and guidelines regarding cleanliness and proper preparation exist to protect consumers and business owners alike. However, as a result of the Food Safety Modernization Act (FSMA) of 2011, a new era in food safety is now well underway.

FSMA has been a catalyst for the food industry; posing challenges, but also presenting opportunities for using new mobile and IoT technologies. This new era of technology enhances safety, quality and operational performance in ways that generate a palpable Return on Investment (ROI).

The FSMA requires food companies to follow a far more systematic approach to food safety by institutionalizing procedures known as HACCP—Hazard Analysis and Critical Control Points. Food companies are now obligated by law to identify potential "hazards" in the production process, monitor the "critical control points" where a lapse could occur and document that those checkpoints are compliant with established guidelines for food facilities.

In food preparation areas, detailed lists of items being prepared on a particular day, paired with safety checklists that identify the critical control points are examples of FSMA implementation. At each control point, from the gathering of ingredients, to preparation and cooking, to presentation and storage—the food is inspected and compliance is verified.

[6] http://wehatesheep.com/foodthink/whitepaper/evolving-trust-food-industry/

LIMITATIONS OF MANUAL, PAPER-BASED APPROACHES

To enforce FSMA's HAACP procedures, many organizations turn to traditional manual paper-based methodologies, assigning employees the job of maintaining logs. It's a seemingly inexpensive approach, requiring minimal capital investment.

While a paper-based approach can meet the standards of the FSMA, as a long-term strategy for enhancing overall safety and operational performance, it's likely to come up short:

- With a large variety of checkpoints that need to be consistently monitored, the number of data points being gathered grows exponentially, making a manual, paper-based approach inadequate.
- Noting down each inspection by hand is time consuming, and lessens the value of the initial capital investment of pencil and paper, while increasing the likelihood of human error.
- The FSMA requires food facilities to keep the records for at least two years, and daily paper logs are likely to pose a costly ongoing storage management issue.

DIGITAL STRATEGIES FOR FOOD SAFETY

By making food safety more systematic and data-driven, the FSMA all but requires automated, digital approaches from newer technologies to successfully meet standards.

Food companies are investigating options to equip their employees with mobile technologies with multiple input devices such as temperature probes, RFID readers, and bar-code scanners to name a few, that ensure compliance with FSMA-based, HACCP checklists when utilized properly.

One such device is PAR Technology's SureCheck® Advantage, an all- in- one food safety solution, encompassing the industry's need for a digital approach.

SureCheck® Advantage is a mobile, hand-held digital device, equipped with three temperature-measuring modes: a traditional thermometer probe, infrared (for checking the actual temperature of cooking surfaces) and RFID (which can track both temperature and read bar codes to get additional information, such as where a package of food originated, the sell by date, how the food has been handled and stored, etc.)

For HAACP compliance purposes, the SureCheck® Advantage displays the relevant checklist of tasks, prompts when a task needs to be completed, keeps track of safety and recall alerts, flags missed steps and violations, delivers a complete audit trail (broken down by operator name, location verification and timestamp) and stores all of the information it gathers in the cloud. It's designed to be used in any and all food handling and preparation processes.

GETTING A RETURN ON INVESTMENT

While SureCheck® was designed specifically for meeting FSMA compliance, PAR Technology worked closely with users to ensure that the solution could be adapted to a variety of environments and individual employees.

Food preparation spaces share many commonalities, yet there is a wide variation in layout and day-to-day operations. Through its combination of adaptability and rigorous adherence to FSMA standards, SureCheck® opens the doors to a wide range of benefits that can generate a significant ROI.

Reducing the Potential for an Outbreak:
While nothing can completely prevent the growth of the bacteria that leads to foodborne illnesses, organizations disciplined in implementing proper food handling procedures can dramatically reduce their chances of an outbreak. By prompting users to take accurate readings and generate task reminders, a solution such as SureCheck® instills discipline into users, and mitigates the risk of contamination exposure.

Simplifying FSMA Compliance:

FSMA compliance is now a daily, ongoing operational challenge. SureCheck® is designed to simplify and streamline the entire process for both management and employees. Menus can be easily entered in the system, mobile devices can be updated with current checklists to set employees up for success, and management can quickly and easily gain access to information at any time, from any device, via the cloud.

Supplier Responsibility and Traceability:

As an example, an all-in-one digital solution such as SureCheck® would be advantageous in the following scenario: a shipment of turkeys is received at a local grocer before Thanksgiving. An employee at the loading dock used paper and pencil to check off that the turkeys had arrived. Comparatively, the SureCheck® solution equipped with an RFID reader would have analyzed the bar code on the shipment and determined how long the turkeys had been in transit, whether the temperature had been properly maintained, and much more. The SureCheck® technology and software would efficiently address any and all transgressions that may have resulted in a foodborne outbreak and a loss of product.

Payroll and Storage Costs:

FSMA involves copious amounts of record keeping. Reducing the amount of time devoted to maintaining and storing checklists is just one example of how SureCheck® can improve operational efficiency. PAR Technology demonstrates up to 60% savings earned by SureCheck® users- from increasing payroll savings to lowering storage costs (See the sidebar calculating FSMA compliance savings.)

Eliminating the Need for Third-Party Inspection Services:

As part of FSMA, food companies undergo regular FDA inspections. To prepare, food related enterprises often employ third-party inspection companies to examine their facilities; often spending large amounts on such services. By establishing the checklists needed for FDA compliance and ensuring adherence, SureCheck® can eliminate the need for continuous third-party inspections.

Eliminating the Need for Customized HAACP Programs:

Companies unsure of how to properly abide by FDA regulated HACCP compliance often turn to custom HACCP programs. These programs may cost anywhere from $5,000-$15,000 to create, and since FSMA and HACCP regulations are constantly changing, these tailored programs

need to be continually updated. SureCheck® adapts to the needs of any food environment, and as a cloud-based solution has the ability to provide up-to-date regulations to the user, thus eliminating the need for expensive custom programs.

Quality:
SureCheck® is focused on gathering information for safety compliance, yet it can also be used for quality assurance purposes. Analyzing cooking and storage temperatures can provide valuable insights into preparation procedures that can significantly impact customer satisfaction and revenue driving activities.

Reporting and Analysis:
By maintaining a central database of safety and quality data, SureCheck® utilizes comprehensive reporting and analysis to optimize performance:

- Quickly and effectively respond to customer complaints, with historical proof of compliance. This facilitates customer confidence and can increase sales.

- Understanding which suppliers have the highest and lowest risk helps direct food safety efforts in the right areas.

- Gaining insight regarding quality control issues improves operations, and provides measurable results for analysis.

FOOD SAFETY: PART OF YOUR MISSION

Food safety procedures are often viewed as a form of insurance which can prevent disasters of brand identity and consumer health.

Given the evolving nature of food safety, remaining FSMA compliant and meeting consumer expectations must now be viewed as the central focus of any organization.

By leveraging new food safety solutions such as SureCheck®, business owners will benefit from tangible returns, allowing them to better protect their customers and brand, while enabling them to amass larger amounts of revenue. The execution of this strategy should be on the forefront of operational methodologies.