Pacific Salmon

Sell By

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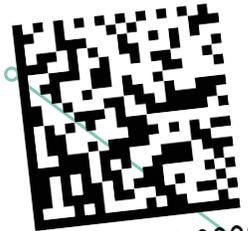
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NORTH AMERICA

EXECUTIVE SUMMARY OF
AUTOMATIC IDENTIFICATION AND DATA CAPTURE (AIDC) ON FOOD SAFETY

"The Food Supply Chain relies on RFID and barcodes as the primary AIDC enablers"

Automatic Identification and Data Capture (AIDC) technologies, also called **Automatic Identification Technologies (AIT)** are all around us. Our modern economy wouldn't and probably couldn't function without it. Retail stores and food establishments everywhere rely on AIDC and it has become so ubiquitous that even the casual user of the technology recognizes its benefits. Nearly everyone at one time or another has used AIDC whether trying to speed their grocery store exit through the self-checkout line; using an e-boarding pass by scanning a barcode displayed on their smartphone or has utilized a keyless entry system in their home, hotel or place of employment.

CDC estimates that each year **48 million** people get sick from a foodborne illness, **128,000** are hospitalized, and **3,000** die[5].

That is **1 in every 6** Americans for an annual cost of **$152 Billion** in healthcare, workplace and other economic losses[6]

FSMA – Food Safety Moderization Act of 2011 -

The FDA Food Safety Modernization Act (FSMA), the most sweeping reform of our food safety laws in more than 70 years, was signed into law by President Obama on January 4, 2011. It aims to ensure the U.S. food supply is safe by shifting the focus from responding to contamination to preventing it.

The scope of the requirements in the FSMA rules "Preventive Controls for Human Food" and "Foreign Supplier Verification Programs" assign food manufacturers responsibilities for implementing robust controls both for their suppliers and customers.

The origins of the food we consume used to be pretty murky.

Beyond the supply chain function, it seemed like virtually no one cared. Of course, all that's changed. Consumers, governments, and companies are demanding details about the systems and sources that deliver the goods. They worry about quality, safety, ethics, and environmental impact. AIDC is the technology enabling this change.   A Visible Supply Chain is the capacity of the supply chain to have a view of a product's conception to consumption or disposal. The aim of visibility is to foster planning, control and agility of operations associated with the product and to improve customer experience of the product. "Tracking" is the term used to describe identity and state of a product, while "tracing" is use to discern the product's path and history through the supply chain. This requires capturing using a standardize data content containing the product components and state for each crticial event of the supply chain where the product either changes states or owners.

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Track and Trace enables the elimination of undesirable activities within the supply chain from illegal harvesting of fish to counterfeiting of high value food. Within the Visible Supply Chain both suppliers and consumers can be confident of safe and legitimate products entering the marketplace. And in the event of a product safety concern the ability to locate and remove the product from the supply chain is greatly enhanced by the use of AIDC. Studies have shown the average consumer expects to be informed within 48 hours after purchasing a contaminated food product and that without AIDC the typical food recall can take in excess of 2-3 weeks.

Treating farmers and laborers fairly

and humanely is a prerequisite when supplying food to large multinational corporations and traceability is a conduit for this transparency. Improved traceability encourages and promotes the consumption of domestically produced products. At the same time, better traceability also helps facilitate international trade by taking the domestically produced food to markets outside the region and creating a demand for it.

There is a growing movement around the world on sourcing locally and buying locally. This can be traced to a growing concern on the impacts of food product on the environment as well as the consumer's desire for transparency. As more consumers

demand local, sustainable, organic, non-genetically modified (non-GMO) foods, traceability is the vehicle that can prove to the consumers what they are in fact purchasing and consuming.

There are numerous reasons why every stakeholder in the global food supply needs to be thinking about traceability and why it's important to them. When most people think of traceability they think about regulatory compliance. However there are significant business benefits to traceability. Business benefits fall into one of three primary categories: operational efficiency, market access and risk mitigation in the case of intentional and unintentional adulteration of food products.

U.S. Food Loss and Waste 2030 Champions

The staggering amount of wasted food in the United States has far-reaching impacts on food security, resource efficiency and the environment. U.S. Food Loss and Waste 2030 Champions are businesses and organizations that have made a public commitment to reduce food loss and waste in their own operations in the United States by 50 percent by the year 2030.

https://www.usda.gov/oce/foodwaste/Champions/index.htm

OPERATIONAL EFFICIENCY FOR A SUBSTAINABLE FOOD SUPPLY CHAIN

Per the USDA in the United States transport of food from farm to table accounts for 50 percent of land use, 10 percent of total energy consumption, and 80 percent of all freshwater used. [1]Despite these inputs, only 60 percent of the food produced in the US is actually eaten, with 52 percent of fruits and vegetables thrown out. This equates to $165 billion of food waste each year. With one in eight Americans lacking proper food security and one out of four calories produced never eaten, it is vital to increase the efficiency of food systems in all steps of the production chain. Supporting a visible supply chain through AIDC will assist in meeting the United States 2030 Food Loss and Waste Reductions Goals to reduce food loss and waste by 50%[2].

MARKET ACCESS

As the retailers and foodservice providers continue to adopt the visible supply chain, AIDC technologies will enable small producers to gain market access for their products. There is this underlying assumption that AIDC is reserved for the big players; this is not true. AIDC programs can be implemented and marketed to smaller producers enabling them to participate in the Visible Supply Chain. This is an important consideration. Without programs being put into place to enable market access for small producers they could be relegated to lower margin markets.

INTENTIONAL AND UNINTENTIONAL FOOD ADULTERATION

As today's food supply chain is made up domestic and imported products, food fraud – or the economically-motivated intentional adulteration or substitution of food products – is an important factor in ensuring food security. The unintentional adulteration of food can be traced to a number of sources including by the use of contaminated water and/or improper handling and transportation.   A number of agencies – including the US Food and Drug Administration (FDA) – are responsible for maintaining the supply of safe food products. The use of AIDC in enabling the Visible Supply Chain provides track and traceability of food from production to consumption. While this in itself does not eliminated adulterated food it does provide for a streamlined process of source identification and root cause analysis.

HOW AIM NORTH AMERICA CAN HELP

The AIM North America Public Policy Committee is a group of automatic identification data capture (AIDC) technology suppliers and manufacturers dedicated to raising the awareness about AIDC and encouraging AIDC policies within U.S. government agencies. Our members may be competitors in the marketplace, but each of our members is a patriot and American taxpayer, dedicated to helping the U.S. government and FDA improve the way they do business by adopting AIDC.

We welcome the opportunity to provide independent advice on policy, technology, or business process improvement case studies.

AIM North America
www.aim.na.org

1 http://www.ers.usda.gov/dataproducts.aspx
2 https://www.usda.gov/oce/foodwaste/Champions/index20161108.htm
3 https://www.nrdc.org/sites/default/files/wasted-food-IP.pdf
4 https://www.fda.gov/food/guidanceregulation/fsma/
5 https://www.cdc.gov/foodborneburden/estimates-overview.html
6 http://www.pewtrusts.org/en/foodborne-illness-costs-nation-$152-billion
7 https://www.fda.gov/food/guidanceregulation/fsma/

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