



Zest Fresh for Restaurants and Food Service

Monitoring the Safety and Quality of Fresh, Frozen and Processed Foods

Solution Benefits:

- Complete fresh and frozen food supply chain visibility – from grower or manufacturer to DC to the restaurant/food service provider to ensure food safety, quality and on-time, in full deliveries
- Autonomously monitor and manage the temperature and condition of fresh, frozen and processed foods
- Integrated blockchain support to improve traceability and prevent or address recalls
- Reduces waste and out-of-stocks due to rejected deliveries, spoilage or improper storage and handling
- On-demand information through cloud-based apps for real-time decision making
- Works with existing systems and processes
- Improves customer satisfaction, loyalty, brand value and revenues



Zest Fresh™ for Restaurant and Food Service Providers delivers the ability to monitor and manage the safety and quality of fresh, frozen and processed foods from the grower or manufacturer through distribution to the restaurant or food service facility. It provides autonomous end-to-end fresh and frozen food supply chain visibility of the product’s waypoint location and condition history throughout the supply chain — without unpacking pallets and containers or unloading a trailer. This reduces the risk of food borne illnesses and ensures food safety, improves “on time, in full” (OTIF) deliveries, ensures quality, increases customer satisfaction and protects brand value.

The Need for Freshness Management

Restaurants and food service providers need complete supply chain visibility. For food service providers, the safety, quality and freshness of the food they serve is of paramount importance. Food borne illness outbreaks or out-of-stock items can devastate your business. Increasingly complex menus, vast numbers of food service suppliers from domestic and international locations, and government regulations make it ever more critical to ensure that fresh, frozen and processed foods have been stored and handled properly throughout the supply chain. Products could sit on loading docks and experience high temperatures that can reduce quality and potentially lead to increased risks of harmful bacteria and food borne illnesses. Meat, seafood, poultry, french fries and other items can thaw and be refrozen, reducing quality and creating risk. Dairy products exposed to high or low temperatures can easily spoil. Safety and quality is a function of proper temperature management throughout the cold chain. Without accurate information, food service providers rely on third party logistics companies and are often forced to accept products with inadequate information about how they were stored, handled and transported. Legacy tracking and temperature monitoring technologies limit in-transit visibility, traceability and effective decision making.

The Challenge

Increasingly complicated supply chains make ensuring the proper storage and handling of fresh, frozen and processed foods imperative. But most restaurants and food service companies outsource their distribution and lack complete supply chain visibility. Improper temperature management or storage at any step in the fresh and frozen food supply chain can immediately impact quality and food safety, leading to public health

risks and potentially decimating brand value — locally and globally. To ensure quality, the storage temperature and condition of meats, seafood, dairy, processed foods and produce needs to be consistently and accurately monitored at the carton or pallet level at every point in the supply chain. Simply monitoring the ambient temperature inside a trailer or warehouse is vastly inadequate as temperatures can fluctuate significantly at the pallet- or package-level depending on the storage location. Even if the product arrives at its destination at the proper temperature, it's difficult to determine if it has been consistently stored and handled properly. Distributors and food service providers need to be able to quickly and easily assess the condition and waypoint history of each pallet and container to ensure it has been handled properly. With limited supply chain visibility and lack of temperature and condition data, food service providers are left to accept or reject shipments with little knowledge of the handling conditions that directly impact the products' quality and value — increasing the risk of food safety and quality issues and out-of-stock items.

The Solution

Zest Fresh provides complete supply chain visibility. It delivers the ability to manage and monitor the temperature and condition of fresh, frozen and processed foods throughout the supply chain from producer or manufacturer to food service provider. Zest Fresh is an autonomous, cloud-based freshness management solution providing true transparency between growers, producers, manufacturers, distributors and restaurants. It improves real-time decision making, helps ensure product quality and safety, promotes “on-time and in-full” deliveries to avoid out-of-stocks, provides traceability, and enhances brand protection and loyalty.

With Zest Fresh, cost-effective, wireless, re-usable and food safe IoT temperature and condition sensors are placed inside each pallet or carton in the field or at the factory. The sensors collect a complete temperature and waypoint history of the products, through the entire fresh and frozen food supply chain, and can be autonomously read at any point without unpacking the pallet or opening packages. This data, along with the Zest Intelligent Pallet Routing Code (ZIPR Code), enables real-time decision making. Restaurant and food service operators gain the ability to accept or reject specific pallets and cartons — instead of entire shipments — and ensure that the products have been properly stored and handled throughout distribution, measuring the food's quality and safety uniformly across all restaurants. Zest Fresh, with integrated blockchain support, provides a detailed history of the product from production to distribution for improved traceability to further enhance food safety.

Our solutions are designed to integrate with your existing applications and networks or be used standalone without the need for complex back-end systems. Flexible application options make it simple to use the system.

Zest Fresh Solution

- Ensures compliance to the restaurant or food service provider's processes for proper storage, handling and distribution
- The Zest Intelligent Pallet Routing Code provides the ability to measure quality uniformly across all restaurants and food service operations
- Utilizes autonomous, wireless, and food safe IoT sensors that don't require changes to processes or increase labor costs
- Utilizes AI and machine learning to calculate a freshness metric of the quality and freshness for each pallet
- Can be used for fresh produce, and fresh and frozen meats, poultry, seafood as well as dairy and other frozen products such as french fries
- Exception-driven management with real-time notifications sent for line, warehouse and distribution staff to initiate corrective or preventative action
- Complete track-and-trace data stored in the blockchain-enabled Zest Fresh Cloud to quickly address food safety and recalls
- Real-time dashboards for computer and mobile applications for easy management and use
- Open APIs for integration into enterprise systems including ERP and WMS

For More Information

To learn more, please visit our website or contact us directly. We look forward to hearing from you.

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