

# supply chain strategy

A newsletter from the MIT Center for Transportation & Logistics

## Delivering a Safer Food Supply Chain

McLane's model for a secure food supply

**T**HE SAFETY OF THE FOOD SUPPLY CHAIN IS UNDER SCRUTINY following incidents such as the recent outbreak of salmonella in peanut butter. Tighter regulation seems likely, although what the impact will be on the management of supply chains is unclear.

The \$30 billion grocery and food service supply chain services company McLane has invested more than \$1 billion in a nationwide supply chain infrastructure. Headquartered in Temple, Texas, McLane Co. Inc. claims that its custom cold-chain solution is an industry first.

The highly integrated solution is not a blueprint for food distribution in the United States. However, the system points the way to the kinds of supply chain solutions that the food industry could be forced to adopt to improve safety standards.

### New Regulations

In March 2009, the Food Safety Modernization Act was introduced in the U.S. Senate by Dick Durbin (D-Ill.) and Judd Gregg (R-N.H.). The proposed legislation would give the U.S. Food and Drug Administration (FDA) mandatory authority to recall tainted foods and require companies in the food supply chain to specify the measures they have taken to identify and prevent safety problems. The act also proposes a pilot program to test an improved product tracing system.

The legislation breaks with the industry tradition of self-regulation and has gained some notable industry supporters, including manufacturers such as Kraft Foods. A number of food companies suffered losses as a result of the recent pea-

nut butter contamination incident, which led to the recall of a number of well-known brands.

More stringent regulation is widely anticipated in the industry, and this is likely to add cost to supply chains, particularly for small to midsize companies that might have to invest in more sophisticated monitoring and safety systems. On the other hand, recalls can do immense damage to the food business, and as has been demonstrated in other areas such as security, investments in improved track-and-trace capabilities can deliver efficiencies that more than defray the original cost.

### Advanced Cold Chain

McLane has already made the commitment to more comprehensive safety practices with its billion-dollar supply chain investment. As part of this effort, a custom cold chain solution for convenience store retailers called Fresh on the Go has been created. The specialized service is supported by an upgraded and expanded network of 20 distribution centers that provides more than 2.5 million combined square feet of refrigerated and frozen space.

#### [Key Takeaways]

- » A spate of high-profile food contamination incidents has raised the specter of a more tightly regulated food supply chain in the United States. Pending legislation would give the FDA more policing powers.
- » Supply chain services company McLane has already made big investments in a custom cold chain that provides the kind of integrated network that raises the safety bar.

## Delivering a Safer Food Supply Chain (continued)

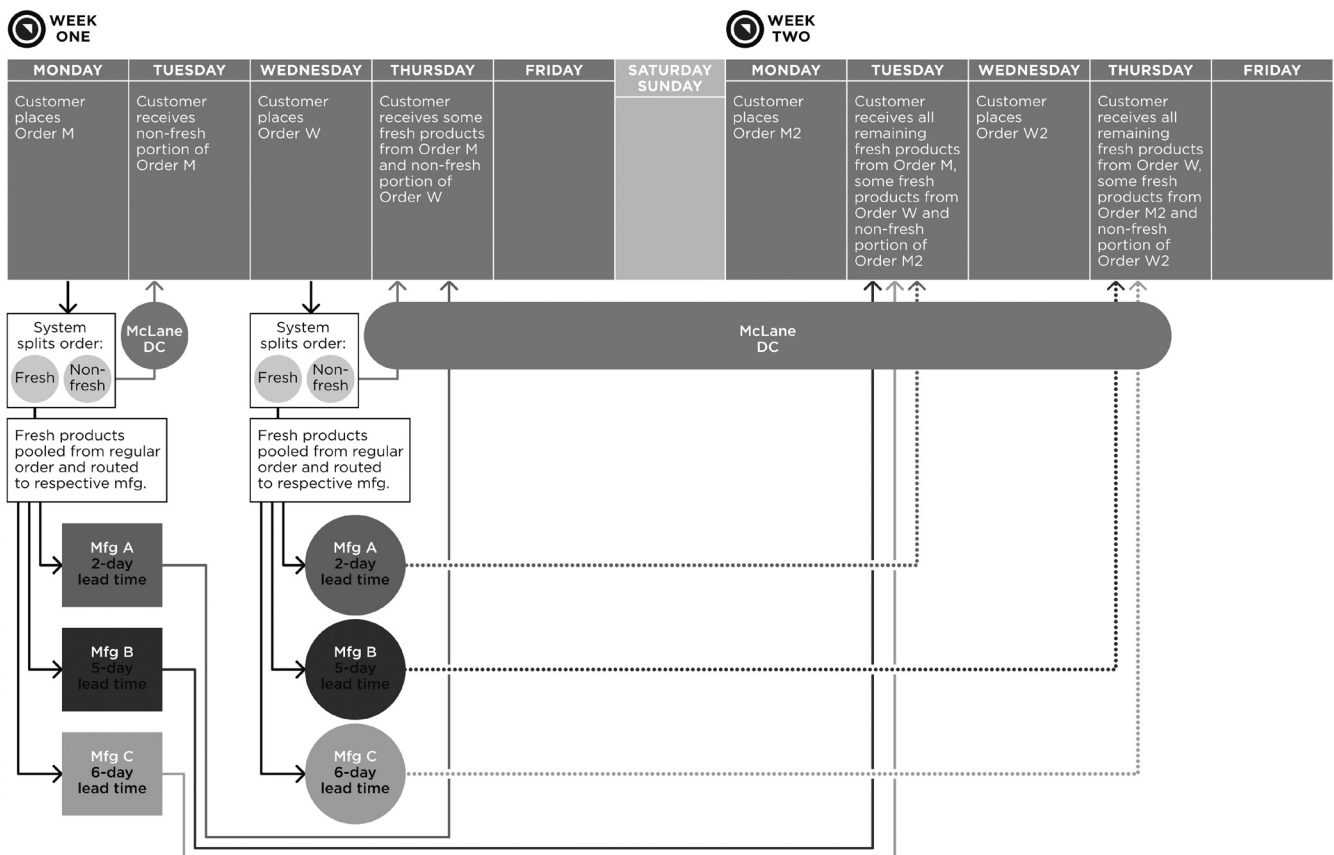
At the heart of the solution is McLane’s Strict Order procurement system, which is unique to Fresh on the Go, and was designed to work with various procurement platforms, and on behalf of all trade channels serviced by the company: convenience, military, mass, and drug. The procurement system was developed by the company over a period of about 18 months and introduced at the end of 2008. “We developed the program to work in-house and to interface with our customers,” said Grant Demers, product director, perishables and foodservice.

The Strict Order system takes a standard customer order for all products and systematically recognizes fresh items, explained Demers. Details of the fresh food order are relayed directly to respective manufacturers for processing. An order due date is also sent that allows for the manufacturer’s lead time and the customer’s delivery schedule, which cannot extend beyond one week. “An easier way to look at it is that our customers are preordering fresh products that have a short shelf life a week in advance,” said Demers.

That allows McLane to “negotiate with the manufacturers to ensure we are receiving as many deliveries per week as is economically feasible for them, turning that product within a couple days.” As a result, the product will leave McLane’s facility within a certain number of hours with no carryover. At the end of the day’s billing, McLane will have shipped all of the preallocated loads to its retailer customers, and no inventory is left on the floor. The system removes the “potential fallibility of human interaction placing orders based on historical demand,” Demers said.

Many of its customers use smart handheld units introduced a few years ago to place orders by scanning product barcodes. The units have become the preferred order placement vehicle for most of McLane’s customers who do not already have their own electronic data interchange or point-of-sale system. Retailers can enter item numbers, and the unit can also recommend orders based on historical demand. The handheld is then placed on a docking station so the orders can be uploaded to McLane’s system.

### McLane’s Cold Chain Solution in Action



(Source: McLane Co. Inc.)

The diagram gives a visual representation of the strict order process. In this case, the order placed on Monday (M) is assumed to have been transmitted to McLane (by the customer) prior to a predetermined deadline (e.g., 10 a.m.). In the example, the two-day lead time for Mfg A would include the date the order was received by the manufacturer; thus, delivery to McLane would occur on Wednesday evening, just in time for Thursday's outbound deliveries. The template also assumes one customer with the following billing and delivery schedule: Monday for Tuesday delivery and Wednesday for Thursday delivery.

This scenario may fluctuate by supplier, customer, and McLane division. In fact, the most common scenario is reflected by Mfg B and Mfg C, wherein their lead time to McLane extends beyond the customer's second delivery. Therefore, the same customer who places its regular orders

on Monday and Wednesday will receive its weekly produce on the following Tuesday and Thursday, respectively.

Strategic supplier partnerships with large manufacturers such as Chiquita and Dole are an integral part of the system. For example, Dole acts as McLane's billing agent and expert in certain fresh produce items, Demers said.

The cold chain also incorporates measures to keep an eye on the status of loads and distribution facilities. McLane has implemented what it said is the industry's first independent audit of a cold chain facility to ensure the highest degrees of efficiency and food safety. The auditors visit each of McLane's 20 distribution centers once a year. The company is working with Silliker, a global food testing and consulting firm, to conduct the inspections. "The audits are a given for any distributor that is involved in fresh products," said Demers. ♦

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