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THE FUTURE OF THE
SUPPLY CHAIN:

6 Cloud-based Trends Shaping Food and Beverage Manufacturing

BRAND STUDIO

THE FOOD AND BEVERAGE INDUSTRY IS RIPE FOR CHANGE. On top of shortened product lifecycles and slimmer margins, manufacturers have to contend with new safety standards that result in hundreds of recalls, withdrawals and safety alerts each year.

The FDA registered 253 recalls in the first half of 2014 alone, and social media has turned them into multi-platform, front-page news that spreads at a wildfire pace. Due to the innately personal nature of outlets like Facebook and Twitter, food safety stories can be distorted by unrelated anecdotes and uninformed speculation. This can cause real damage to brands that aren't able to respond swiftly and authoritatively.

It is now a business imperative for manufacturers to be able to quickly track products on a granular level: from a specific ingredient's point of origin, to other ingredients it may have come in contact with, and even where each batch currently resides in a warehouse or on a distributor's shelves.

Modern cloud-based Enterprise Resource Planning (ERP) systems are emerging to help manufacturers solve these challenges, providing intuitive software that connects the supply chain to the factory floor and management. In essence, these systems strive to streamline safety and compliance first and foremost, while helping cut costs, ensure inventory accuracy and save time.

INVENTORY CONTROL

Inventory accuracy is critical for food and beverage manufacturers, who require the right raw materials on hand in order to maximize the efficiency of production and eliminate disruptions. Unlike discrete manufacturers, food and beverage companies need to ensure they are consuming the right inventory at the right time and for the right customer, while working with perishable raw materials and various customer and government compliance standards. For Steve Goodger, CFO of Green Flash Brewing Company, having on-point inventory accuracy by using a cloud-based ERP has helped immensely. "We've decreased the dumping of beer due to code date issues," he says.

Green Flash Brewing's cloud-based ERP system tracks each aspect of inventory at the lot or container level, while keeping a detailed audit at every step of the manufacturing process. Using bar coding and labels, human error is greatly reduced or eliminated, and inventory is tracked at every stage of receiving, production and shipping.

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This ability to locate inventory at every touchpoint has been key for Nicolas Jones, corporate operations at Aaron Thomas Company (ATCO), a full service corporate contract packager specializing in warehouse club and food packaging services. "Previously, a search for a lost item would be initiated by physically searching the item's last known location and moving outward from there," he says.

It was a clumsy process always mired by a major hurdle: the company has a 250,000 square foot warehouse, so a search could take anywhere from 20 minutes to an hour – or more. The cloud-based ERP system allowed him to make that same search in just five minutes.

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- Nicolas Jones, Corporate Operations at ATCO

QUALITY OVERSIGHT

Food and beverage companies must be able to quickly track and manage quality – both from a government food safety perspective as well as individual customer quality standards. And, as more companies source ingredients from global suppliers, rework, scrap and product recalls become a higher risk.

Prior to moving to a cloud-based ERP, the biggest obstacle for Jones was ensuring the proper quality checks were being executed at the necessary times by the appropriate entities. "Anyone can put whatever they want on paper," he says. "Things could be fudged or changed."

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— **Tom Nessen,** Manager of Solution Engineering at Plex

Since implementing their ERP, the company has standardized quality control and compliance processes in the cloud. This has allowed them to instantly monitor and review which internal and external audits have been completed, when they were preformed and by whom.

"Allergen management and segregation is an important part of inventory management for food and beverage companies," notes Tom Nessen, manager of Solution Engineering at Plex, a cloud-based

ERP provider. "ERP software plays a big role in ensuring raw materials are properly segregated in production facilities that produce products with known allergens." In the event of an issue, manufactures can review the problem from any location, in turn, enabling them to dispatch corrective measures both quickly and seamlessly.

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RECALL READY

As the food and beverage industry becomes more globalized, visibility into the supply chain and relationship management with value-chain partners becomes all the more challenging. In many instances, this leads to a siloed process that can leave manufactures vulnerable to potential product recalls. In the event of an audit, food and beverage manufacturers need to be able to track every movement of raw material, production and finished goods both inside and outside of their facilities.

Recalls are an outcome companies want to prevent at all costs. "A recall would represent a major black eye for the brand," says Goodger. "In addition, it would be a significant distraction and disruption of normal operations."

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How companies prepare for recalls is evolving – and manufacturers are looking to cloud-based ERP systems improve process transparency. Prior to implementing such a system, the ATCO relied on a slapdash hodgepodge of paper and DOS-based systems to execute recalls like many other food and beverage manufacturers. It was a time consuming process plagued with errors. Though the company has yet to execute a recall for one of its clients (they do not manufacture the products they package), they have conducted mock trials using the new software. The latest test showed the company had a full traceability report in seven minutes and were able to communicate that information back to the customers within 15 minutes – all but eliminating the awkward, mistake-prone leaps between systems and delayed reporting they experienced with their previous system.

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SAVE TIME AND MONEY

One of the goals of cloud-based ERP is to cut down on waste at every level in an effort to achieve ultra-lean manufacturing. "Whether that's OEE reporting to identify changes in manufacturing efficiency or COGS reports to break down all the costs that contribute to a product or product family," says Rob Bois, director of Product Marketing at Plex.

"Without a single, integrated system that tracks every aspect of the plant operation at the 'manufacturing moment,' it can be difficult or even impossible to get a single unified view of the truth across the system. And, because Plex was built for cloud delivery, our customers don't need to rely on expensive IT infrastructure, manage complex regular upgrades, or get locked into an outdated version of the application. Plex customers are always on the latest release, never have to perform upgrades, and can focus their attention on running their manufacturing business rather than IT projects," says Bois.

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ERP systems have the ability to cut down on time spent devoted to customer interactions as well. "It reduces the number of calls we get exponentially," says Aaron Bacon, sales and marketing representative for ATCO. "Customer portals allow clients to manage their inventory offsite and do their ERP planning based on our inventories, production schedules and finished goods. They now have access [to] a majority of information they would have once gotten from a sales rep directly through the system."

Because of this increased access to information for customers, the system allowed ATCO to handle three times as many clients than they did prior to adopting the cloud-based ERP – but with the same number of employees.

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- Aaron Bacon, Sales and Marketing Rep for ATCO

ADAPTIVE, INTUITIVE MOBILE TECHNOLOGY

Cloud-based ERP is almost infinitely configurable so it can constantly be conformed to a food and beverage manufacturer's unique needs. "There are thousands of little 'switches' inside the program I can tweak to make sure it's operating optimally for our needs," says Bacon.

With the proper training, the software is designed to be intuitive and easy to use, even for employees who are not highly computer literate, says Bacon. Training modules within the program allow managers to track training and set competency levels, which means employees are blocked from using portions of the system they aren't certified in. "That way we can ensure that the right people can use the right tools," adds Bacon. "Now employees can't get in over their heads, which can have negative consequences."

The company's quality control department has gone paperless with the adaption of the cloud-based ERP. Now they execute most of their work exclusively on tablets, though the software is available on any device with an Internet connection.

GO NATIVE AND STAY SECURE

Many ERP systems are built for finance and accounting, and depend on "bolt-on" tools and technologies to handle quality management, inventory or cost management from a manufactures' local hardware and servers. In a world where hacking scandals and data breaches have become disturbingly commonplace, impenetrable cyber defenses surrounding a company's systems are key. A localized ERP system can have severe time and budget ramifications hiking up costs and time, as on-site IT teams are needed to manage and secure the system. This can lead to accessibility issues for staff when there is a spike in use as well as extensive lapses in downtime when performance upgrades are needed.

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A cloud-based ERP system on the other hand, is hosted, managed and secured by the provider, offering clear advantages in accessibility, deployment speed and resource management. Built to serve an entire customer base, the ERPs infrastructure is secured by teams of engineers dedicated to hardening the technology, both physically and virtually, through regular compliance auditing, advanced firewalls, and monitoring and disaster planning. These are measures that no one single customer can afford to implement nor manage in-house. "The cloud offers economies of scale that bring the best enterprise-grade technologies to customers with limited or no IT capabilities internally," says Bois. "Plex ERP was built from the plant floor up and natively includes these capabilities within the platform. In fact, a customer hired an ex-CIA employee to spend a month trying to break into the system. He failed."

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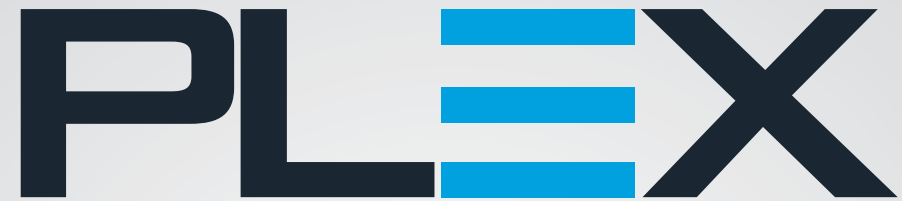
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LOOKING AHEAD

Cloud ERP is evolving, and food and beverage manufactures are noticing. According to research conducted by the Gartner Group, 12 percent of all ERP systems sold today are cloud-based. That number is expected to rise to 17 percent by 2017.

Investors are already ahead of this trend. According to a study published late last year by PricewaterhouseCoopers, "Beyond ERP: New technology, new options," overall investment in such cloud-based solutions will double to $78 billion dollars. Meanwhile, investment in traditional ERP systems will decline to less than $30 billion. Revenues for traditional ERP systems show a similar decline, dropping sharply since 2013 to a level that is now surpassed by global revenue from cloud-based solutions.

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THE MANUFACTURING CLOUD

The Plex Manufacturing Cloud delivers robust ERP manufacturing software solutions developed by manufacturing experts obsessed with continuous innovation and customer success. Plex connects every manufacturing operation in the cloud to give you complete visibility and control over the entire manufacturing process.

See more at:

http://www.plex.com/industries-and-solutions/food-and-beverage.html

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