Food and Beverage Traceability

Understanding food and beverage manufacturing compliance and traceability

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Surviving a total recall— your biggest threat to food and beverage profitability

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According to global law firm Clyde & Co, there's an increasing number of food product alerts. Looking at EU data, it discovered food alerts had risen from 10 in 1995, to 519 serious alerts in 2013.

There's a rising trend in recalls and an increasingly high level of government interest. Clyde & Co has attributed this to a range of factors, including an improved ability to detect food contamination and persistent issues with undeclared allergens in food.

There are good reasons for recalls

Food safety is at the heart of every successful food and beverage manufacturer. These businesses are responsible for producing safe food and drink that contain the ingredients and nutrition they promise. It's of particular importance to production, because consumers must trust that the products they've bought are totally safe.

Giving consumers accurate information allows them to make informed choices about what they consume. No surprise then that throughout the world there are regulatory bodies and food standards that ensure food and beverage businesses do right by consumers.

Necessary regulatory pressure

Food and beverage businesses have high regulatory pressure because of the repercussions food contamination can bring from customers and the media. Public authority punishments are also harsh, and include seizures, product recall or destruction, fines, and even criminal charges.

Consumers might be the biggest factor driving this change. For example, many millennials want the businesses they buy food and drink from to be socially responsible and ethical. Thus, they're asking more questions about where products are produced, and how.
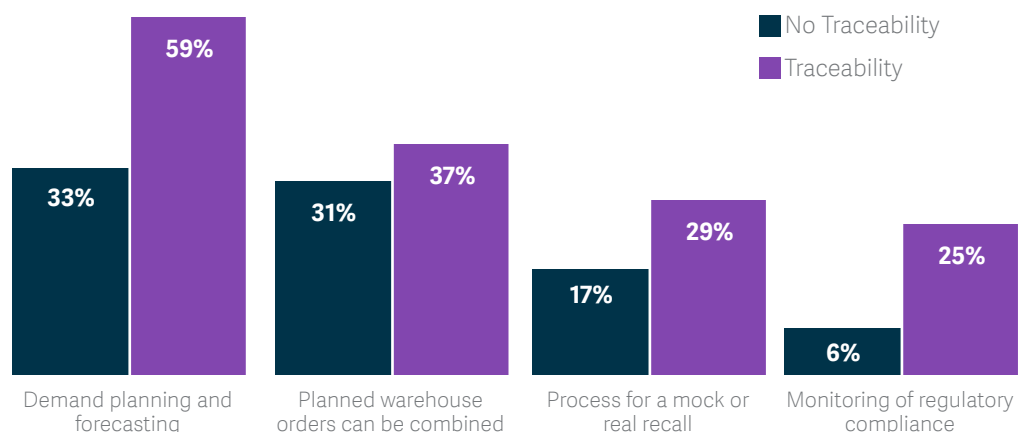
The importance of traceability

It is one of the biggest nightmares for a business in this industry to have products contaminated by an unknown source. In 2013, there was a massive incident in Europe in which foods advertised as beef were found to contain undeclared or improperly declared horse meat—as much as 100% in some cases. The issue came to light when it was reported that horse DNA was discovered in frozen beef burgers sold in some British and Irish supermarkets.

This event highlights the importance of traceability for food and beverage manufacturers, which need the ability to trace products as they pass through the often long and complex supply chain. Modern Enterprise Resource Planning (ERP) gives it full transparency—crucial for documenting and reporting on compliance.

Traceability allows businesses to verify the history and location of a product through documented, recorded verification, and it helps manufacturers significantly improve their operations. Leaders with traceability are four times more likely than followers to monitor for regulatory compliance, which gives them an ability as process manufacturers to recall products.

With the vital information traceability provides, food and beverage manufacturers can also:
- Promote efficiency and improve decision making.
- Manage materials and logistics smarter.
- Arrange better supplier terms.
- Achieve optimal demand planning.
- Ensure fresh product, while keeping costs low.

Legend: ■ No Traceability ■ Traceability

Demand planning and forecasting: 33% / 59%
Planned warehouse orders can be combined: 31% / 37%
Process for a mock or real recall: 17% / 29%
Monitoring of regulatory compliance: 6% / 25%

Source: "Use real-time product traceability to eliminate waste and delight customers," Aberdeen Group, August 2017; % of respondents n = 85

How technology can improve your traceability

There are new and emerging technologies that allow your food and beverage businesses to log in transactional and product data. The insights that come out of this data are at the core of traceability.

Here are three ways to achieve traceability as a business objective:

1. **The Internet of Things**
   Through the Internet of Things (IoT), devices can be connected anywhere, at any time. Using labeling technology such as radio-frequency identification (RFID) and quick response (QR) codes allow data to be collected that tracks your product's full journey through the supply chain. Anything can be recorded—from the temperature during transport to the source of ingredients.

2. **Big data analytics**
   Using big data analytics, your food and beverage businesses can see where a problem has occurred and stop it from continuing through the supply chain. With unplanned events and potential crises such as contaminated products in the supply chain, you can respond quickly, having identified, tracked and traced everything.

3. **The cloud**
   Your food and beverage businesses can now take advantage of cloud solutions, with software managing aspects such as system infrastructure, operating system, database and applications. This allows you to spend less time and energy on repetitive admin-heavy tasks and focus more on important operations.

Traceability equals visibility
To achieve full visibility of traceability in the supply chain, IoT, big data analytics and the cloud must be integrated into your ERP systems. They should be designed with the food and beverage manufacturer in mind—broad enough to log transactions across the supply chain, yet deep enough to offer you industry-specific functionality. These include logging of source materials, results analysis, a way to conduct preventative actions, and adherence to strict regulations.

What to do in the event of a food recall

Legislation has given government agencies more power to intervene with a food and beverage manufacturer's operation. Demanding consumers can react quickly and publicly if they are unsatisfied through communications technology. As a result, product recalls have become more commonplace in the food and beverage industry.

Here are five supply chain tips for dealing with a product recall:

1. Stay on top of changing regulations

Product safety regulations are complex, vary among different countries, and change frequently—almost always becoming stricter. This means that when your food and beverage business expands into different countries, compliance burdens will grow, as well as the likelihood and complexity of product recall.

Modern ERP with a central regulatory repository must support food and beverage businesses to comply with existing regulations and to implement new ones. This will provide a solid frame of reference to keep you on the right side of the law, wherever you operate.

2. Maintain strong, up-to-the-minute supply chain visibility

When a product is identified as defective, whether by consumers or higher up in the supply chain, it's essential that you identify the potential extent of the contamination, asking these questions:

- Which product batches were faulty?
- What raw materials were involved?
- Which other batches shared the same raw material, or passed through the same production facilities?
- Is this problem new, or has it been happening for some time?

Having up-to-the-minute data to answer these questions, you can quickly identify exactly where the problem lies, and address the issue with confidence, provide market reassurance and mitigate recall cost.

To gain data access in real time, you must store data centrally, allowing data to be tracked from the furthest reaches of the supply chain, through the production process, and from customers.

Sometimes, food and beverage businesses don't have lot codes that are specific enough. Rather than break up production into discrete lot codes so the scope of recalls is limited, they run the same lot code for many production runs.

Regulators will expect you to connect ingredients and customers through complex, multi-production processes. The result of not having these processes in place can be a massive recall that could bankrupt a company.

3. Be totally transparent

Information travels fast. Consumers can access potential food and beverage product problems as quickly as anybody publishes it. A badly handled product recall can damage the reputation of your business—sometimes irreparably—so you need to control the narrative.

The safest and best strategy is for your food and beverage business to communicate with authenticity that you're in control of the situation, and that you have the right solutions in place. So as not to lose consumer trust, never make statements that you don't know for certain to be completely true, especially when the pressure is on during a product recall.

It's here where having strong visibility of your supply chain is crucial, because it allows you to be authentic about the potential extent of problems and quickly pinpoint the cause, essential to protecting your reputation.

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4. Reduce the risk and impact of a product recall

Prevention is better than cure, and while it's impossible to eliminate the chance of a food and beverage recall entirely, there are steps to reduce its likelihood and mitigate consequences:

- Streamline and thin product lines and packing options.
- Be ultra-precise and narrow with the lot coding system.
- Hold on to samples from product batches to quickly test for defects.
- Reduce batch quantities to make it easier to isolate faulty products.
- Maintain strong communication with everyone in your supply chain.
- Continually analyze and improve supply chain processes to minimize risk.
- Monitor customer feedback, including social media, to identify defects immediately.
- Maintain a dedicated crisis management team.

5. Have an emergency-ready crisis management plan

Time is of the essence with a food and beverage product safety issue. It's also advisable, and very possibly legally necessary, to have a pre-determined crisis management plan in place to ensure you are permanently crisis ready.

An effective food and beverage crisis management plan might include some or all of these points:

- Determine the severity of the risk.
- Identify the extent of contamination, and isolate affected batches.
- Notify distributors and retailers as quickly as possible.
- Put tried-and-tested product recall procedures into action.
- Report the product issue to the relevant authority.
- Publish transparent information on the recall to customers.

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Compliance is crucial

In the US and EU, reviews of certain aspects of consumer product recall systems have taken place.

For example, in the UK, the Food Standards Agency is engaged in a major review of food withdrawal and recall processes, while in the US, there's been concerns about manufacturers not giving timely notice to the authorities upon discovering possible product defects. This has resulted in multi-million-dollar fines.

The compliance bar's been raised in many countries. In the US, there's the Food Safety Modernization Act (FSMA), which has significantly lifted the levels of compliance, performance, and quality that businesses need to achieve.

To avoid a compliance nightmare your food and beverage businesses can:

- Build compliance and traceability into your processes.

- Implement a central repository of relevant compliance laws and regulations to stay current with regulatory changes, accessible to employers, regulators and partners.

- Digitize document management processes to keep up with regulations, which provide timely, unified information to decision makers.

- Implement enterprise systems that build the foundation for process control and automation, and ensure they're integrated and interoperable to avoid data silos.

- Keep software tools up to date, so they can handle regulation reporting requirements and ensure compliance.

Having one version of the truth is crucial. This will make sure your whole business works to current requirements with tightly integrated and interoperable systems. This is where ERP comes in.
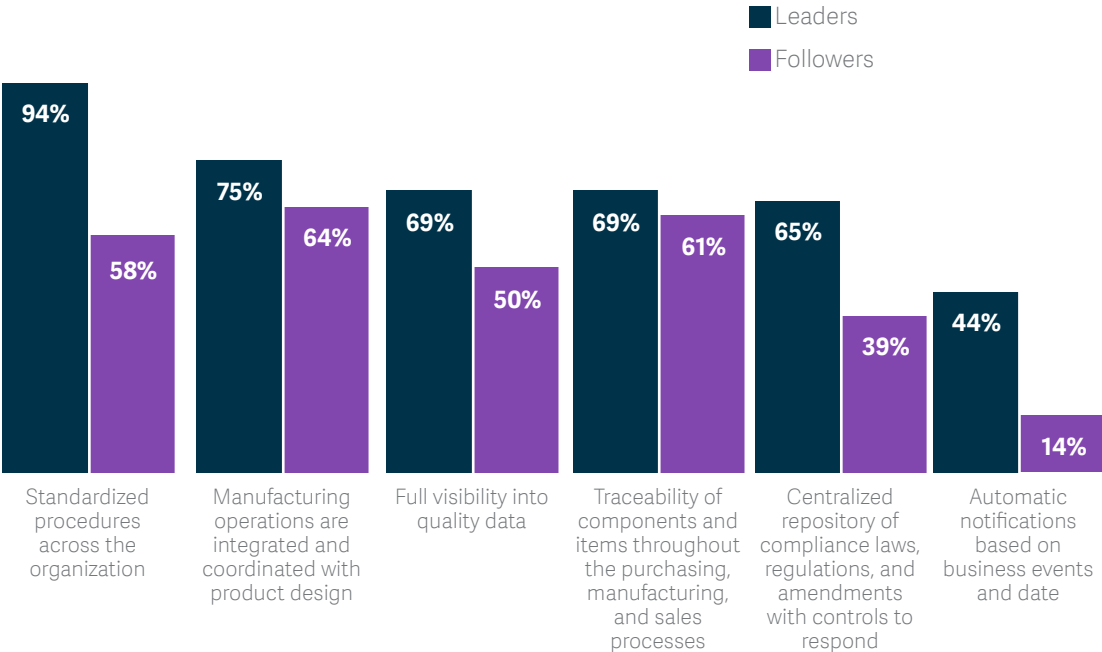
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Critical food and beverage manufacturing capabilities through ERP

ERP provides essential capabilities that allow leading food and beverage manufacturers to deal with a challenging regulatory outlook, as the chart below from Aberdeen Group illustrates.

In addition to centralized repository and automatic notifications, ERP will also support standardized processes, manufacturing alignment with product design, and full visibility into quality data.

■ Leaders
■ Followers

	Leaders	Followers
Standardized procedures across the organization	94%	58%
Manufacturing operations are integrated and coordinated with product design	75%	64%
Full visibility into quality data	69%	50%
Traceability of components and items throughout the purchasing, manufacturing, and sales processes	69%	61%
Centralized repository of compliance laws, regulations, and amendments with controls to respond	65%	39%
Automatic notifications based on business events and date	44%	14%

Source: "How ERP addresses the critical needs of food and beverage companies," Aberdeen Group, November 2017

Quality ERP acts as your assistant

ERP maintains the same composition and flavor of products.

Your businesses should minimize, and ideally eliminate, any unknown variables that might affect compliance. Standardization breeds consistency across the organization, leading to automation opportunities when processes are documented and standardized.

ERP integrates manufacturing operations with product design.

This can cut costly processes that require customized equipment and controls to manufacture the product and maintain consistent quality levels. Innovation can be fostered from both sides of your product development process, from design to manufacturing, and back again.

ERP equals quality management.

Having full visibility into all data can provide an early warning to potential deviations or out-of-tolerance conditions at the equipment or product level, potentially avoiding a quality problem. Having visibility in real-time requires system integration between all your enterprise applications.

ERP offers full visibility into quality data.

When records are maintained manually, it becomes very difficult to manage recalls properly. ERP systems need to keep records in a central database that allows easy updating and automated data collection. Dynamic documentation would update records automatically in the event of a change in supplier or ingredient, for example.

The issue with legacy ERP

ERP has a problem. According to the 2016 Report on ERP Systems and Enterprise Software, Panorama Consulting Solutions said only 12% of corporate executives were "very satisfied" with their current ERP solution, and that 59% of global companies were "burdened" by them.

ERP is designed to move them away from working with Excel and spreadsheets for basic finance and accounting. It's also meant to provide a centralized system that controls all relevant business processes, providing actionable data and insight.
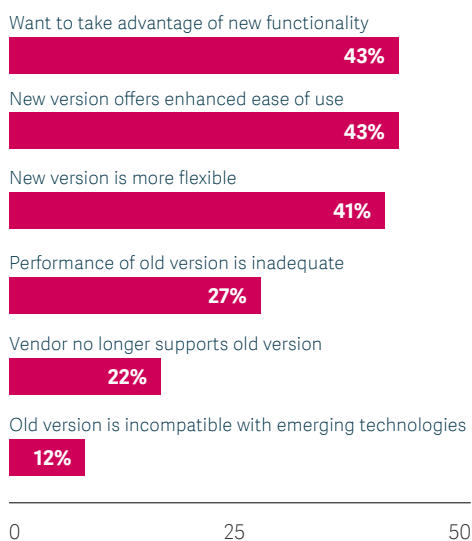
Different sectors, same problems

Unfortunately, enterprises in a wide range of industries have had the same challenges with ERP, and there are numerous implementation horror stories. With the enterprise software market complex and expensive, lawsuits and litigation over failed rollouts are a genuine risk.
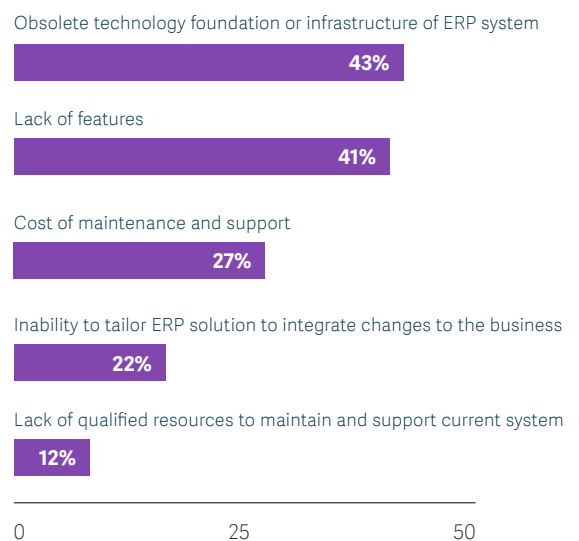
Businesses in general have found they're not achieving value from their ERP solutions. Understanding the full benefits of having a more modern solution, they seek a partner who helps them with business innovation, as well as industry best practice and technology, to help them scale.

Even if businesses are happy with the ERP solution they have, many are looking at new solutions that provide upgraded functionality, are easier to use, and provide support for emerging technologies.

More reasons to update or replace ERP

Want to take advantage of new functionality
43%

New version offers enhanced ease of use
43%

New version is more flexible
41%

Performance of old version is inadequate
27%

Vendor no longer supports old version
22%

Old version is incompatible with emerging technologies
12%

0   25   50

Why aren't existing ERP solutions working?

Obsolete technology foundation or infrastructure of ERP system
43%

Lack of features
41%

Cost of maintenance and support
27%

Inability to tailor ERP solution to integrate changes to the business
22%

Lack of qualified resources to maintain and support current system
12%

0   25   50

Source: "The Cost of Doing Nothing: Why you can't afford to sit on an ERP software decision," Aberdeen Group, March 2017; % of Respondents, n=231

How Sage X3 will help you

Sage X3 offers you a comprehensive, real-time solution that delivers accurate, up-to-date data that identifies and mitigates the consequences of product recalls and other supply chain issues.

With our solution, your food and beverage businesses can:

- Rapidly implement and comply with new regulatory requirements and stay on the right side of them with all teams.

- Run insightful reports that can be used within the business—and for suppliers, customers and regulators—from a single source of centralized data that includes information from the entire distribution chain.

- Identify the root cause of product defects and the extent of supply chain contamination as quickly as possible.

- Communicate effectively with stakeholders, customers, and the rest of the supply chain during product recalls.

- Systematically conduct additional efforts to prevent product recalls and mitigate their consequences.

- Maintain and execute crisis management plans.

With Sage X3, your food and beverage business will have a faster, simpler and flexible way to keep the costs and reputational damage of recalls to a minimum.

Why Sage, why now?
Sage is the global leader in business management with:

- Over 3 million customers, active in 25 countries.

- More than 38 years of financial software experience.

- Dedicated success coaches and online customer community.

- A global partner network that offers world-class support.

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