

The Easy Path to Food Traceability

The easy path to food traceability is closer than you think, and its value stretches far beyond what's required by the FDA's FSMA 204. In this whitepaper, you'll learn about how food traceability stands to revolutionize the food supply chain industry, as well as how your company can benefit from adopting traceability practices now.

- Consumers want transparency. They want to know where their food comes from for many reasons – from sustainable sourcing and growing practices, to being in-the-know when a product is recalled.
- The industry needs a faster, easier and less expensive way to do recalls. Today's processes take months, when they could take minutes.
- Sustainability and food waste are becoming more important issues for the industry. More visibility to expiration/sell-by dates is critical in reducing food waste and saving the cost and labor associated with managing food that goes unsold.



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CHAPTER 1: FSMA 204 Then and Now



Ripple effects on the extended food supply chain that only enhanced data management can address

The landmark Food Safety Modernization Act (FSMA) of 2011 both increased the regulatory requirements for food handling, transport and sourcing, and refocused the industry's attention on traumatic events like recalls.

During the past decade, federal regulators have worked to implement rules for each of FSMA's seven major rules, including:

- Safe standards for fruit and vegetables
- Mitigation strategies against intentional adulterations
- Preventative controls and best practices
- Sanitary transportation
- Accredited third party certification
- Foreign supplier verification program
- Voluntary qualified importer program

The FDA is ordered by consent decree to implement FSMA 204 in its entirety by November 2022, making food traceability a top priority for CEOs in the food supply chain industry. The wheels are turning, and efforts are advancing to increase product visibility throughout the food supply chain and bolster the health and safety of all Americans.

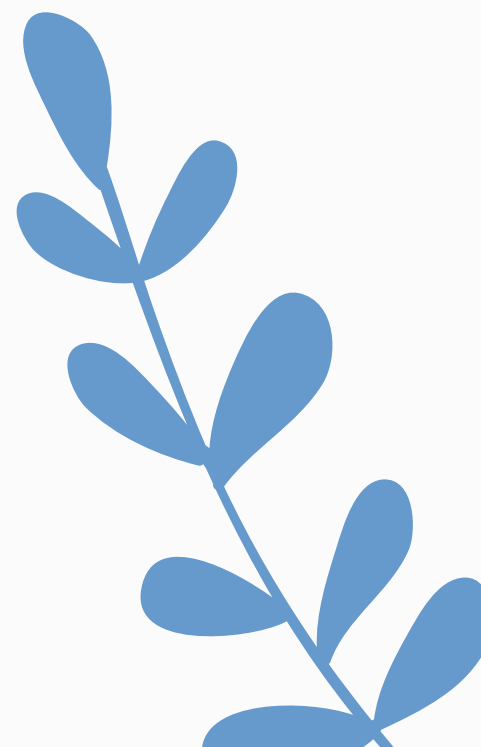


New FSMA 204 Requirements

According to FDA regulations, FSMA 204 establishes “additional traceability recordkeeping requirements (beyond what is already required in existing regulations) for persons who manufacture, process, pack, or hold foods the Agency has designated for inclusion on the Food Traceability List.” The proposed rule, “Requirements for Additional Traceability Records for Certain Foods” (Food Traceability Proposed Rule) is a key component of the FDA’s New Era of Smarter Food Safety Blueprint... The proposed requirements would help the FDA rapidly and effectively identify recipients of those foods to prevent or mitigate foodborne illness outbreaks and address credible threats of serious adverse health consequences or death.”

At the heart of FSMA 204 is a “requirement for those who manufacture, process, pack or hold foods on the Food Traceability List (FTL) to establish and maintain records containing Key Data Elements (KDEs) associated with different Critical Tracking Events (CTEs). While the proposed requirements would only apply to those foods on the FTL, they were designed to be suitable for all FDA-regulated food products. **FDA would encourage the voluntary adoption of these practices industry wide.**”

Right now, the FTL includes most cheeses, peanut butter, most fruits and vegetables, finfish, shellfish and ready-to-eat deli salads. But this is only the beginning. It’s clear from the language used by the FDA that the same rules will soon apply to much of the foods found in a typical grocery store.



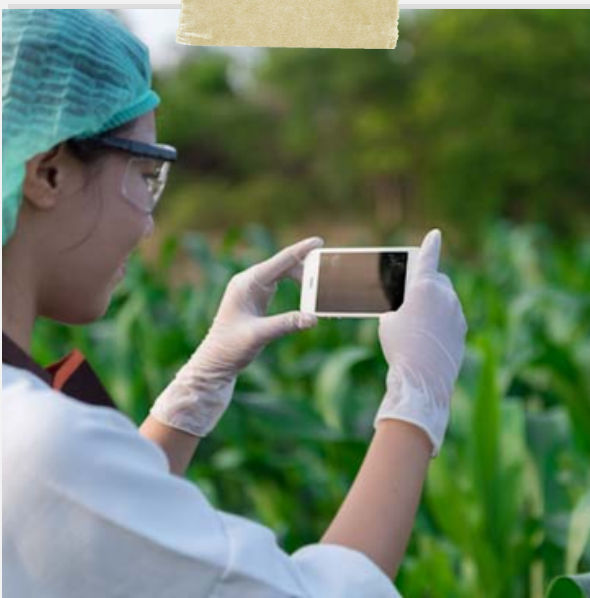
Tech and Traceability

The new rule moves the industry beyond the “one-forward, one-back” traceability that required all trading partners to record where product came from and where they are going to. This is the first component of the FDA’s New Era of Smarter Food Safety initiative, which includes four core elements:

1. Tech-enabled Traceability
2. Smarter Tools and Approaches for Prevention and Outbreak Response
3. New Business Models and Retail Modernization
4. Food Safety Culture

These components cover the range of technologies, analytics, business models, modernization and values that are its building blocks. The FDA says they help create a safer and more digital, traceable food system.

“Smarter Food Safety to me means always looking to the future. Our destination -- safe food for our families, our children, and our animals -- is unchanged. But how do we get there more quickly and effectively using modern tools as the world transforms around us?,” said FDA Commissioner Stephen Hahn.



The stated goal of tech-enabled traceability is to “help protect consumers from contaminated products by doing rapid tracebacks, identifying specific sources and helping to remove products from the marketplace as quickly as possible when necessary.” The FDA views FSMA Section 204 rulemaking as harmonizing the key data elements and critical tracking events required for enhanced traceability.



This approach to traceability, the FDA states, enables trading partners to deploy new digitally-enabled technologies and data sharing that greatly reduces the time required to detect and report food safety issues. It also creates the transparency needed to anticipate and help prevent supply chain disruptions in a public health emergency.

The goal is end-to-end traceability throughout the supply chain. The FDA wants to encourage firms to voluntarily adopt tracing technologies and ways to harmonize tracing activities, which will support interoperability across a variety of technology solutions. This will be accomplished through incentives for the adoption of better tools and through data standardization that will create greater visibility into the supply chain and detect challenges sooner and more accurately.

FSMA 204 governs all food traceability requirements and is expected to cover what products are included, which data elements must be recorded and any exemptions that may apply. The rule does not require electronic records, but given that the FDA expects the data to be available within 24 hours of a request, paper records are not likely feasible for most trading partners, requiring them to keep electronic traceability program records in order to fulfill these requests.





CHAPTER 2: What FSMA 204 Means for Retailers and Suppliers

The new rules significantly increase cost for all trading partners by:

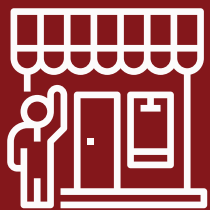
- Requiring new technologies to capture the lot code, production information, traceability glossary, products shipped to/received from, etc.,
- Generating enormous amounts of data, and
- Causing warehouse expansions to manage and track products in the DC by batch/lot.

As an example of the impact of FSMA 204 on trading partners, product receiving at the DC or store level is a Critical Tracking Event (CTE), which alone has eight required Key Data Elements (KDEs). Almost every step in the supply chain adds another CTE with its own unique KDEs.

As product moves through the supply chain, every node in the process must record and store KDEs at each CTE, and then pass the required KDEs on to their customer. From an industry perspective, the 16 categories initially targeted will impact thousands of products.

As food moves from field to fork, there are billions of CTEs that require the recording, retention and exchange of tens of billions of KDEs. Most importantly, the data must be secure, accurate and readily available as the Traceability Rule requires that companies provide the FDA with required data within 24 hours in a sortable spreadsheet when they ask.

An average 100-store retailer with 400 suppliers delivering 1 SKU to 2 DCs per week results in 4.1 million KDEs per year.



100 Store Retailer



2 DCs



40 manufacturers



10 suppliers

FSMA 204 creates an opportunity for retailers and wholesalers to create more transparent and safer supply chains.

The proactive and responsible approach is to promote compliance throughout the supply chain which minimizes financial and brand risk. Retailers and suppliers cannot trust that everyone in their supply chain will do the right thing and need to promote the right behaviors. Systems that promote and encourage full supply chain compliance and transparency build consumer confidence, which benefits retailers and wholesalers.



The only alternative is to continuously validate the compliance of each node in the supply chain, including their direct suppliers and all the suppliers above them. Each shipment received requires that the documentation for each node has been properly created and stored. It is nearly impossible as there are potentially millions of points to validate in the supply chain. Failure to validate traceability compliance introduces financial and brand risk and potential legal liability for both suppliers and retailers

There are currently several ways of tracking products through a supply chain. The old way of doing business— is manually recording each product transfers into a spreadsheet or similar data collection device. As with most things not automated, this process is laborious and ripe for errors. Newer technologies, including line-of-sight scan-based and radio frequency identification (RFID) systems automate the process at a cost level suitable for only the largest retailers and suppliers.

A decentralized approach to capturing and storing the data forces stakeholders to choose between an impossible amount of compliance work or proper risk management. And, even though the FDA does not require it, a centralized repository shared by the supply chain network is the responsible approach for retailers and wholesalers and is clearly the most effective path forward. Retailers and wholesalers do not want to be late and find out they are not prepared for the regulatory requirements. They need to get on the transparency bandwagon now and be prepared ahead of time.

CHAPTER 3:

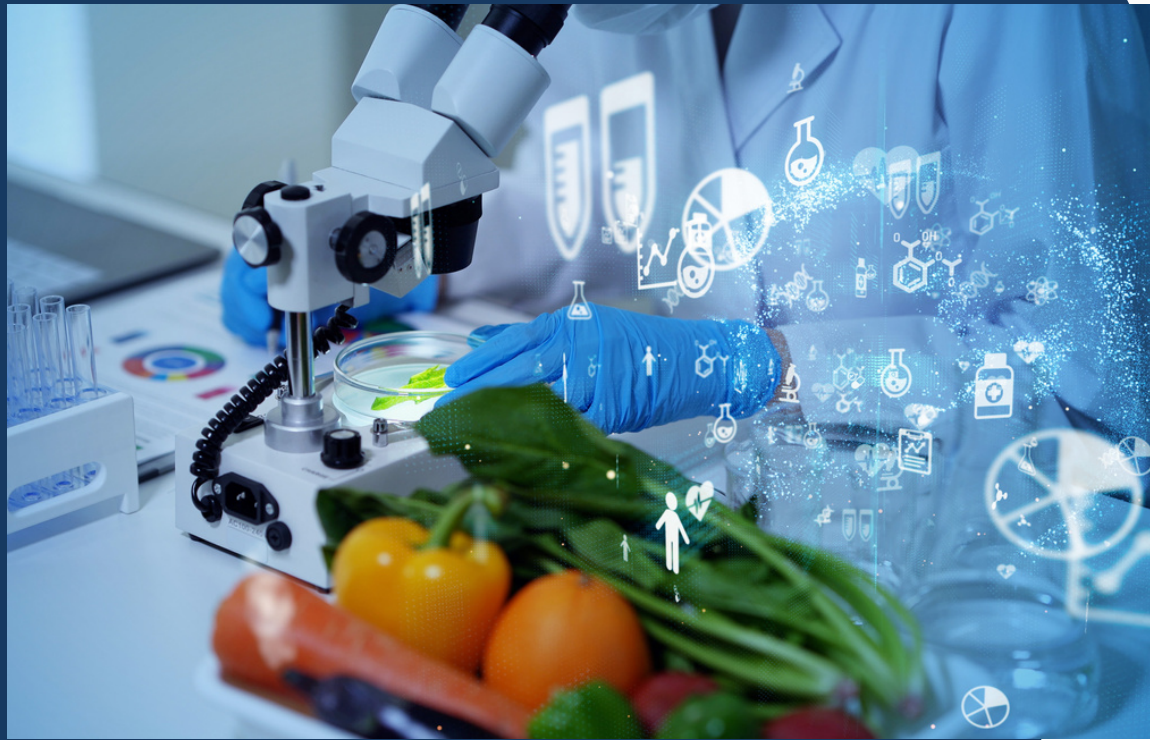
FTLC AND IMPLEMENTING TRACEABILITY SOLUTIONS

Supply chain digitization and product tracking have long-lasting business impacts by delivering safe food and reducing costs. They also help with identifying risks, building brand reputation and controlling food safety incidents. Simply put, tech-enabled traceability allows food businesses to participate in the modern food system.

To take advantage of these opportunities, several retailers, wholesalers and suppliers, supported by Repositrak, formed the Food Traceability Leadership Consortium (FTLC) to help food retail industry leaders collaborate on the development of a common and scalable food tracing solution. The group shared the concerns they have with addressing Section 204, including:

- Solution implementation would be expensive, whether it is buying hardware, integrating software, or retraining employees on a new process.
- Additional labor needed to scan products.
- Internal system and process changes to adopt a standard.
- Non-participation due to exemption or lack of technical capability breaks the chain and makes traceability impossible.
- Some trading partners will assume traceability does not apply to them.
- Many trading partners do not have the technical capability implement a technical solution.
- DCs may need to segregate product by batch & lot as well as scan every case on outbound pallets creating added expense and the need for additional space.
- How to integrate data from suppliers with multiple technology solutions.
- Some products are on the Food Traceability List, some are not. Any solution should work for all products because it is unlikely the FDA will stop at the current list.





During its inaugural meeting in May 2021, the FTLC established three principles to guide the response to the potential expansion of food traceability requirements. Members agreed the proposed solution must achieve the following goals:

- Minimal cost that does not impact margins or price to consumer.
- Easy to adopt, use and verify in order to drive universal adoption.
- Meet or exceed FDA proposed regulations to prepare for the future.

Subsequent meetings of the FTLC focused the collaboration with ReposiTrak on repurposing ReposiTrak's Compliance and Supply Chain platforms to create an inexpensive solution for

FSMA 204 compliance for suppliers and a free solution for retailers and wholesalers. The group determined that companies deploying internally developed or a using a wide range of vendors for food traceability would lead to a hodgepodge of non-interoperable systems, resulting in a fragmented supply chain where critical traceability data could not be shared between trading partners and significant operational complexity. Food retailers and suppliers cannot afford to let that happen and the members of the FTLC made a commitment to solve the challenge for the benefit of the entire industry.

CHAPTER 4: ReposiTrak Traceability Network



The solution ReposiTrak developed with the direction of the FTLC is called the Traceability Network and is built on the company's platform to electronically collect and store KDEs from existing supplier systems and documents at CTEs, then compose an electronic pedigree of each product and each transfer. Because the solution leverages existing ReposiTrak technology and the facility network mirrors the food supply chain, the cost is spread across the network to deliver a solution that is easy to adopt and affordable for even the smallest suppliers.

ReposiTrak is focused on solving supply chain collaboration challenges that involve tracking products from manufacturer and grower all the way through to the retail store. Traceability is a subset of the company's widely deployed and proven supply chain and compliance platform. The ReposiTrak Traceability Network solution itself leverages more than \$150 million invested in existing and proven technology that securely stores data off-premises and then transfers it when and how customers want it.

From a supply chain technical capability

standpoint, ReposiTrak tracks millions of SKUs, each with up to 200 attributes, through its forecasting, ordering, maintenance and perpetual inventory applications. Data is routinely collected and managed for inventory maintenance, forecasting, ordering and invoice generation. The ReposiTrak platform processes tens of millions of supply chain transactions weekly, with hundreds of thousands of supplier-to-store level connections that have complete interoperability and traceability. The platform already collects batch and lot data, and because KDEs are a small subset of the existing data records currently managed, the FDA requirements are really just another use case.

To make this happen, ReposiTrak scans your documents in any format using a proprietary combination of File Mapping, Optical Character Recognition (OCR) and Artificial Intelligence (AI) technologies and extracts the lot/batch codes (also known as the Traceability Lot Code or TLC) and other pertinent information. Then, the system digests that information and creates a KDE record, using the TLC as the connecting element between all previous steps in that food product's journey.

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The ReposiTrak Traceability Network is designed to automatically create the KDE records for every CTE, as required by FSMA 204. But the system goes far beyond that. You also have access to an easy-to-use dashboard where reports and recall documentation can be generated in a matter of minutes. We also send notifications when exceptions are detected.

The ReposiTrak Traceability Network removes the need for labeling, scanning or segregation of inventories to record movement data. But for those that already use scan/label technologies

to record their data, ReposiTrak can still help securely store data off-premise and easily exchange data with customers.

The combined FTLC/ReposiTrak answer to FSMA Section 204 is not just a solution. It is an existing data platform with massive scale that already enables full traceability from end-to-end. The centralized system with a consistent data management format dramatically simplifies the exchange of data, which saves customers significant time and money translating and managing the exchange of data. It also ensures compliance and integrity across the supply chain with the safety and security with off-premise data storage that ensures the data is readily available when needed.

There's no limit to what the ReposiTrak Traceability Network can handle and there's plenty of capacity to track EVERY item you manage – not just what's outlined in the FDA's FTL. We're already creating, storing, and managing billions of data points per year, and we're ready to grow with you.

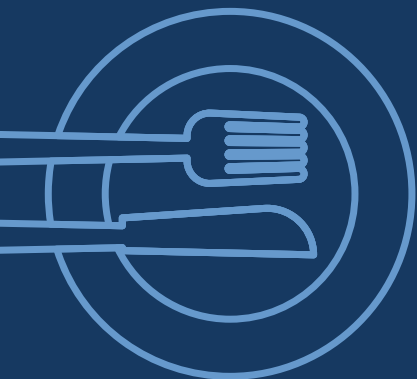


The ReposiTrak Traceability Manager is ALWAYS ON. Once you're onboard, traceability information is automatically captured for every product you set up. As you onboard new vendors, simply add their documentation to ReposiTrak and they'll fall into the process. The sign-up and registration process for them will take less than 15 minutes. What's more? You can log on to your custom ReposiTrak dashboard at any time to view the path of a product or to pull reports for the FDA, recalls, or other purposes at a moments' notice. You'll also receive automatic notifications, and emails can be directed to the people responsible for correcting any issues.

Finally, to take the power of food traceability one step further, the ReposiTrak Traceability Network uses expiration/SELL BY dates. Having insight into the products that are at risk of going out of date can help you to manage food waste, anticipate markdowns, and have a better handle on the cost and labor associated with managing unusable product.

Sell More. Stock Less. See Everything.

ReposiTrak offers an easy-to-use, cloud-based suite of solutions that can easily integrate into your current workflow. Contact Us today to learn about how we can help improve the efficiency of your food supply chain operation with demand planning, out-of-stock management, vendor vetting and sourcing, compliance managing, auditing and much more.



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