



PFT Workshop: Food Traceability Rule Lot-Level Tracking September 9-10, 2026

SUMMARY

Background and Scope

The [Partnership for Food Traceability \(PFT\)](#) is an independent, sector-neutral nonprofit Public-Private Partnership driving industry-led solutions for electronic interoperable traceability across the food supply chain. PFT works collaboratively to streamline compliance with [FDA's Food Traceability Rule](#) by developing flexible and efficient implementation frameworks built on mutual accountability. Through the formal Public-Private Partnership structure, PFT provides a forum in which FDA and industry can work together, with FDA's technical assistance and advisement, to coordinate food traceability approaches across diverse supply chain sectors to comply with the Food Traceability Rule, with the goal of effectively removing potentially contaminated products from the market more rapidly.

On September 9-10, 2026, PFT convened a workshop to explore practical implementation challenges and opportunities related to FSMA 204 food traceability requirements. The workshop was open to PFT members and non-members with FSMA 204 compliance obligations. The key objectives of the workshop were to strengthen industry and FDA alignment and understanding on the goals of the Food Traceability Rule and develop a shared understanding of effective, efficient, and practical approaches for achieving those goals across the food supply chain. Interactive traceback exercises provided a real-world framework for examining industry readiness, identifying areas where perspectives or implementation approaches may differ, and surfacing opportunities for continued collaboration as stakeholders work toward the July 2028 compliance date. The exercise placed participants in the role of a traceback investigator, tasked with finding the potential source of an outbreak using synthetic but realistic supply chain data and records. Different scenarios, ranging from complete standardized supply chain data to non-standardized and missing records, demonstrated how the complexity of a traceback may increase when record quality and completeness decrease. The exercises enabled participants to move beyond regulatory requirements to focus on how traceability can work in practice, including operational realities, implementation challenges, potential solutions, and promising practices.

Summary

Participants discussed challenges and solutions to support compliance with FDA's Food Traceability Rule, which establishes enhanced recordkeeping requirements for those who manufacture, process, pack or hold foods on FDA's Food Traceability List (FTL). The Rule mandates lot-level tracking for foods on the FTL, requiring businesses to assign unique codes, known as Traceability Lot Codes, and record Key Data Elements (KDEs) at specific Critical Track Events (CTEs), like initial packing, transformation, and shipping. The goal of lot-level tracking is to enable rapid tracing and identification of the source of potentially contaminated foods during an outbreak. The rule is recognized as having the additional benefit of

narrowing the scope of recalls and removing affected product from the supply chain quickly. The current compliance date for the Food Traceability Rule is July 20, 2028.

Several core themes emerged throughout the discussion:

1. the importance of improved traceability as a public health tool;
2. the value of approaching the Rule as a process improvement initiative;
3. the need for greater supply chain collaboration and shared responsibility;
4. ongoing uncertainty around certain implementation issues; and
5. the tension between standardized, structured data and practical business realities.

Participants broadly agreed on the value of traceability as a public health tool while recognizing substantial work remains before widespread implementation can be achieved.

Traceability is an important public health tool, and the ability to trace product through the supply chain quickly is paramount.

A central theme throughout the workshop was the **public health value of improved traceability** and the role it can play in improving outbreak investigations. Participants gained a deeper appreciation for the complexity of outbreak investigations, how tracebacks are conducted, and the role that traceability records play in helping FDA identify affected product, narrow outbreak investigations, and reduce the time to retrieve and connect information quickly.

FDA representatives described a summer marked by numerous active outbreak investigations, many involving foods included on the FTL. Participants discussed how current traceback investigations often proceed through the supply chain sequentially, with each request introducing additional delays. FDA noted that obtaining records can take days or weeks at each stage of the process, extending investigations and slowing public health response activities. FDA participants noted that traceability is not intended solely as a regulatory requirement but as a practical tool to more quickly identify contaminated products, narrow investigations, and minimize both consumer harm and unnecessary impacts on both affected and unaffected companies.

Through the workshop exercises, participants highlighted an increased appreciation for the **critical role the TLC and TLC source play in linking records across the supply chain** and enabling effective tracebacks. Participants also noted the 24-hour timeframe required by the Rule as an important mechanism that could significantly improve traceback efficiency. The discussions strengthened support for maintaining continuity of key traceability identifiers, particularly TLCs and TLC source information, because these elements provide FDA with a faster path to understanding product movement through the supply chain. Participants recognized that while supply chains are often complex and dynamic, preserving traceability links throughout product movement remains essential to effective traceback. The exercises also elevated participants' appreciation for the sheer volume and complexity of data that must be navigated during a traceback and reinforced the importance of having reliable identifiers and well-connected data to efficiently narrow and follow suspect product pathways through the supply chain.



A related outcome was **increased recognition that digital approaches have significant potential to improve traceback speed**. Participants discussed concepts such as standardized data, digital twins, enhanced barcode capabilities, and improved data exchange mechanisms as ways to reduce manual investigation efforts and accelerate public health response activities. The consensus was that future-state traceability solutions should be designed to support rapid identification and retrieval of relevant information without creating unnecessary operational burden.

The ability to effectively capture and share data in a structured format will facilitate better, faster tracebacks.

The workshop consistently highlighted the importance of **data quality as a fundamental enabler of effective traceability**. Participants observed that the value of any traceability system depends on the quality, consistency, and usability of the information that flows through it.

The interoperability exercises demonstrated that even compliant records can vary dramatically in format and usability. Tracebacks can become significantly more difficult when information exists in disconnected spreadsheets, emails, handwritten records, invoices, or photographs rather than structured and searchable formats. The exercises highlighted that the challenge is often not the absence of data, but the difficulty of locating, interpreting, and connecting information quickly when an investigation occurs.

As a result, participants generally agreed that **implementation efforts should prioritize structured data capture and information-sharing practices that support interoperability** across systems and organizations. Common identifiers, standardized data structures, and digital data exchange were consistently identified as important enablers of efficient traceback, and in particular, GS1 standards were noted as an existing option that is currently in use by many across the supply chain. Importantly, it was also acknowledged that alternative standardization strategies may be needed to support industry members who do not have the ability to take advantage of GS1 at this time.

The workshop also highlighted the importance of **accurate master data that is created and maintained by the initial TLC source**, reinforcing the value of establishing consistent foundational information that can be leveraged throughout the supply chain. Reliable source data reduces the potential for downstream errors, improves consistency across trading partners, and helps establish a stronger foundation for traceability programs.

Data quality is a people and process issue, not simply a technology challenge.

Workshop attendees emphasized that technology alone cannot solve data challenges – **data quality is fundamentally a people and process issue, not simply a technology issue**. Even the most sophisticated traceability systems depend on the quality of the information entered into them and the consistency of the processes used to capture, maintain, and share that information. Effective implementation therefore requires organizations to establish clear processes and responsibilities for traceability data and ensure that the individuals who create, handle, or rely on that data understand their role in maintaining its integrity.



This will require **ongoing education, engagement, and organizational commitment** at multiple levels, including among employees responsible for receiving, shipping, inventory management, operations, food safety, and data management. Education should extend beyond what information must be captured to reinforce why having accurate and complete data matters and how individual actions contribute to the effectiveness of a traceback, both positively and negatively. Building this understanding can help traceability become integrated within routine business processes rather than treated as a separate regulatory or technology initiative. Technology can enable effective traceability, but strong processes, clear accountability, and an organizational culture that recognizes the value of data quality are what ultimately make the technology effective.

Stakeholders should view the Rule as a process improvement requirement rather than a data capture mandate.

The workshop reframed **compliance as a process-improvement initiative rather than a data capture and recordkeeping requirement**. Tracebacks, lot numbers, inventory management, and product movement records are not new concepts for the food industry. Companies already have systems and processes in place to manage products and support recalls and tracebacks. Accordingly, implementation does not necessarily require creating a new traceability system layered on top of existing operations. Instead, organizations should evaluate how existing processes can be strengthened to **produce more accurate and consistent traceability information and make that information available more quickly**, ultimately supporting the public health objectives of faster and more effective tracebacks.

Organizations should understand how traceability information is created, where data is maintained, how it moves through the business, and where potential failures or errors can occur. The objective should be to design and maintain controlled processes that can reliably connect product movement to the relevant KDEs required by the Rule. This process-based approach is particularly important when using “inference” or “calculation” as a means of determining TLC and TLC source information. The Rule states, and FDA has reiterated, that **companies are not required to scan cases to capture the necessary data**. Thus, companies can use well-controlled data and inventory management processes to infer the TLC and TLC source. Through well-controlled risk-based processes, companies can demonstrate that the underlying process works as intended, understand where inference could introduce risk or error, and establish appropriate controls and verification to provide confidence in the resulting traceability information.

Process validation and verification efforts should establish a definition of what “good” looks like. This includes evaluating traceability processes against measures such as:

- Accuracy: Is the information correct?
- Completeness: Are all required data elements captured?
- Consistency: Is information captured uniformly across locations, suppliers, and business processes?
- Timeliness: Is information available when it is needed?



There was substantial discussion around the importance of testing traceability systems before they are needed during an actual food safety event. Routine verification exercises, traceback simulations, and process assessments were identified as valuable tools for identifying weaknesses and strengthening organizational readiness. To note, PFT has [three pilot frameworks](#) that companies can use to test various aspects of Traceability Rule implementation at their organization.

Participants recognized that successful implementation depends on building repeatable, reliable processes that consistently generate high-quality data. Organizations that focus on process improvement, validation, and verification will be better positioned not only for regulatory compliance, but also for achieving the broader public health objectives that underpin the Food Traceability Rule.

Collaboration and shared responsibility across the supply chain are essential for effective implementation of the Food Traceability Rule.

Successful implementation of the Rule depends on **collaboration across the entire food ecosystem**. Rather than viewing compliance as the responsibility of individual companies, participants consistently framed traceability as a collective effort requiring coordination among suppliers, manufacturers, distributors, retailers, technology providers, and FDA.

The workshop highlighted that supply chains are inherently interconnected, and that **supply chain partners who work together are generally better positioned to achieve compliance** and respond effectively during traceback investigations. Participants noted that traceability challenges are often not confined to a single organization but emerge at the interfaces between trading partners where information is transferred, transformed, or interpreted differently. As a result, implementation success depends on organizations working together to establish aligned expectations, improve data sharing practices, and resolve operational challenges that emerge across trading partner relationships.

The workshop also highlighted the value of collaborative pilots, demonstrations, and shared learning initiatives. Participants expressed interest in continuing to evaluate practical solutions to common pain points, including inferred lot tracking approaches, barcode implementation strategies, data-sharing models, and supplier onboarding practices. There was broad support for using pilots not only to demonstrate technical feasibility but also to understand how proposed solutions interact with FDA traceback processes and operational realities. Particular opportunities to develop more consistent approaches were identified around labeling requirements, TLC Source implementation, GS1 standards adoption, and supplier readiness. In addition, greater alignment across trading partners could reduce complexity, lower implementation costs, and improve overall traceability performance.

The discussions also reinforced **FDA's commitment to working collaboratively with industry** during implementation. FDA repeatedly emphasized a desire to see progress rather than perfection and indicated that learning from industry experiences will help shape future educational resources, implementation support, and enforcement approaches.



Continued dialogue between FDA and industry is essential to address ongoing challenges and regulatory and compliance ambiguities.

While the workshop demonstrated substantial momentum toward implementation, discussions also confirmed that important implementation challenges remain regarding operational edge cases and practical application of the rule. Addressing these challenges will require **continued dialogue, practical testing, and collaborative problem-solving between industry and FDA** to identify workable implementation approaches.

Several recurring topics reflected areas where industry continues to seek additional understanding and alignment. One of the most frequently discussed issues was the use of inferred lot tracking methodologies. Participants noted that many organizations are evaluating whether receiving data, paired with well-controlled inventory management practices, can be used to infer outbound lot information rather than scanning every individual case movement. While some companies shared examples of inference-based approaches that appear operationally feasible, questions remain regarding the level of accuracy required and what flexibilities FDA may ultimately consider acceptable. Participants emphasized the need for additional pilots, exercises, and evidence showing that inferred models can perform as effectively as manual scanning approaches. PFT's "[Pilot 1 Framework](#)" can provide structure for interested companies to test the feasibility and accuracy of flexible TLC capture and maintenance methodologies.

The workshop also highlighted ongoing uncertainty regarding transformations and handling of "eaches." Participants cited examples such as distributors breaking down larger pallets or cases into smaller units or repacking products into different configurations while maintaining traceability. Questions were raised about when these activities constitute a transformation requiring a new traceability lot code and how organizations should maintain continuity of traceability through these processes.

Another area of discussion involved implementation of TLC source and TLC source reference information. Participants noted practical challenges associated with incorporating these elements into existing operational systems and barcode structures. For example, distributors explained that while TLCs may already be captured in pallet-level barcodes, TLC source information is often not encoded and may require new approaches, such as 2D barcodes or enhanced data-linking capabilities. Participants also discussed the limitations of using phone numbers or URLs as TLC source references, noting that these approaches can introduce additional latency into traceback activities when compared to machine-readable identifiers and connected data systems.

Companies should prioritize progress over perfection and treat implementation as an ongoing process of continuous improvement.

Importantly, the workshop reinforced **broad consensus that organizations should not wait for perfect clarity before advancing their traceability efforts**. Participants emphasized the urgency of implementation and encouraged companies to begin building capabilities now, recognizing that additional lessons, refinements, and areas for improvement will emerge through practical



implementation experience. There was widespread support for sharing successes, challenges, and implementation of learnings across the industry so that all stakeholders can benefit from collective experience. Rather than approaching compliance as a single milestone, companies should use implementation as an opportunity to continually assess how well their traceability processes work in practice and identify where adjustments may be needed.

There was particular interest in developing resources that translate technical and regulatory concepts into accessible, actionable information that can support implementation at different levels of an organization and across the supply chain. Sharing successes, challenges, and implementation of learnings allow individual experiences to contribute to broader industry progress. Practical examples can help organizations understand what effective implementation looks like, while open discussion of approaches that have not worked as intended can help others anticipate and address similar challenges.

A recurring message throughout the workshop was that **implementation should be viewed as an ongoing journey rather than a one-time compliance exercise**. As organizations gain practical experience, implementation approaches will continue to evolve and mature. Continued engagement among FDA, industry stakeholders, trading partners, and technology providers will be essential to help close remaining gaps, improve consistency across the supply chain, and build confidence in practical approaches to compliance.

Conclusion

The workshop demonstrated meaningful alignment across industry and FDA regarding the ultimate goals of traceability implementation. Participants agreed that the greatest opportunity lies in improving the speed and effectiveness of traceback investigations through stronger collaboration, higher-quality data, and more reliable business processes. Implementation challenges remain, and success will depend on collective learning, open communication, and continued collaboration between FDA and industry to develop practical, scalable approaches that work across the diversity of the food supply chain. As implementation efforts continue, stakeholders expressed a strong commitment to working together to improve traceability capabilities while advancing public health objectives and working effectively within operational realities.

