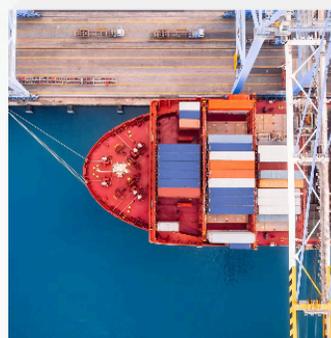


THE SUPPLY CHAIN OF THE FUTURE

From Vision to Action



Executive Summary

The fresh produce industry stands at a crossroads. Decades of legacy practices have led to an inefficient and opaque supply chain, resulting in staggering losses and missed opportunities. While the issue of food waste captures societal attention, it is merely a symptom of deeper systemic challenges: outdated systems, fragmented data, and a lack of trust. The time for incremental change is over; a revolution is needed, fueled by open collaboration and a commitment to transforming the way fresh produce moves from field to consumer.

The International Fresh Produce Association (IFPA) has taken a leadership role by convening industry leaders in a series of "Collabathons" to map out the supply chain of the future. These collaborative events, held across the globe, have engaged diverse stakeholders to identify pain points and co-create solutions. "Data doesn't move food. Collaboration does," as stated by Steve Alaerts, Chair of the IFPA Supply Chain Council, underscoring the spirit of these working sessions.

"We're not just talking about incremental change - we're building a new reality where data transparency and collaboration drive value for everyone, from farm to table."

Drew Zabrocki, Totem, Ltd.

These sessions revealed critical inefficiencies and opportunities within four core pillars of the supply chain:

1. **Growing Operations:** The need for digitization and interoperability to address challenges such as weather unpredictability, labor shortages, and complex logistics. As Aaron Ault of Purdue University pointed out, "there's an imbalance where growers bear the burden of data collection that primarily benefits others".
2. **Packing and Shipping:** The complexities of coordination, quality control, and outbound logistics, with a strong emphasis on the need for technology, automation, and data sharing to improve efficiency and reduce waste.
3. **Sales and Marketing:** The reactive nature of the market and the critical need for unified data definitions, predictive analytics, and greater trust and transparency to optimize pricing, build consumer confidence, and streamline operations.
4. **Retail and Food Service:** The importance of consumer-facing data, transparent claims, and the need for better supplier-buyer information sharing and data usage agreements to reduce waste, meet consumer demands, and improve efficiency.

To address these challenges, the initiative is focusing on four transformative opportunities:

1. **Shelf-life Predictability:** Leveraging real-time monitoring and predictive analytics to reduce spoilage, optimize inventory, and enhance consumer confidence.

2. **Dynamic Incentives:** Shifting from volume-based pricing to value-based compensation models that reward quality, efficiency, and sustainability.
3. **Harmonized Standards:** Creating a common language for data exchange to streamline compliance and improve supply chain coordination.
4. **Smart Data Escrow:** Enabling secure, controlled data sharing to protect proprietary information while fostering trust and collaboration.

The path forward involves a phased implementation roadmap:

- **Spring 2025:** Establishing leadership, launching working groups, and creating an Innovation Hub to showcase real-world solutions.
- **Summer 2025:** Pilot execution, scaling, and industry validation, including a Symposium & Program Pilot Series on June 9th, 2025, in Washington, D.C., coinciding with IFPA's Washington Conference.
- **Fall 2025:** Member validation, a Global Showcase at the IFPA Global Produce & Floral Show, and strategic retrospectives to solidify industry-wide adoption and plan for future collaboration.

This is more than an initiative; it's a global movement. Participation is crucial. Industry stakeholders are encouraged to engage through technical contributions, knowledge sharing, implementation efforts, and sponsorship.

Don't Miss Out!

Mark your calendars for the Symposium & Program Pilot Series on June 9th, 2025, in Washington, D.C. This is your opportunity to witness the future of the fresh produce supply chain unfold. Be part of the revolution. As Drew Zabrocki of Totem insightfully stated, "This isn't a trend, it's a revolution. The future of fresh produce is here, and it demands action." Join us in building a more efficient, sustainable, and transparent global food system. The time to act is now.

Get Involved

Join the movement to transform fresh produce supply chains:

- Connect with IFPA to join working groups
- Identify pilot opportunities within your organization
- Allocate technical resources to development efforts
- Support through sponsorship
- Share success stories and learning



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<http://bit.ly/supplychainofthefuture>

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The Challenge and Opportunity

"Data doesn't move food. Collaboration does." This declaration by Steve Alaerts, Chair of the International Fresh Produce Association (IFPA) Supply Chain Council, set the tone for IFPA's Supply Chain of the Future Collabathons, where industry leaders gathered to transform how fresh produce moves from field to consumer. The stakes are clear: mountains of wasted food at terminal markets worldwide represent not just a local loss, but a global challenge with missed opportunities to nourish communities and support growers across diverse regions and economic contexts. Addressing this challenge requires solutions that are adaptable, scalable, and sensitive to the unique needs of different regions and stakeholders. But the challenge runs deeper than food waste alone. Our industry faces mounting pressure to increase transparency, meet evolving consumer demands, and adapt to a rapidly changing world. Yet, we're hampered by outdated systems, fragmented data, and a lack of trust. The cost of inaction is staggering: billions of dollars lost to spoilage, eroded consumer trust, and missed opportunities for growth. The time for incremental change is over. We need a revolution. And that revolution starts with open collaboration.

"Data doesn't move food. Collaboration does."

Steve Alaerts, foodcareplus

The Crossroads: Embrace Open Collaboration or Risk Value Erosion

The fresh produce industry stands at a precipice. We can continue with outdated, extractive business models that stifle innovation and erode value, or we can embrace a new era of open collaboration, where data empowers every stakeholder and fuels a more sustainable and equitable future. The choice is ours, and the time to act is now.

Current systems are failing us. Non-open-source solutions and proprietary platforms create data silos, limit access to critical information, and hinder collaboration. This fragmented landscape threatens to undermine the value of groundbreaking programs like climate-resilience initiatives, regenerative agriculture, freshness optimization, and food security efforts. If we cling to old ways of doing business, technology companies will hold us hostage, extracting value from our industry while leaving us vulnerable to disruption.

We need a fundamental shift in our approach. We need open standards, decentralized solutions, and collaborative platforms that empower every player in the fresh produce ecosystem. We need

to break free from the constraints of proprietary systems and embrace a future where data flows freely, fueling innovation and creating shared value. Common data formats for key information such as date and time stamp, product identification, origin, quality metrics, and handling instructions will ensure seamless data exchange across different systems and stakeholders. Interoperability frameworks will enable different software applications and systems to seamlessly connect and exchange information, fostering collaboration and data-driven decision-making across the supply chain. By working together, we can break down data silos, improve efficiency, and unlock the full potential of data-driven innovation in the fresh produce industry.

This is a call to action for every stakeholder in the fresh produce industry. We need your support, your time, and your resources to build this future together. Join us in this collaborative revolution. Invest in the Fresh Supply Chain of the Future and help shape an industry that is more efficient, sustainable, and equitable for all.

The time for incremental change is over. The future is now.

Moving from Talk to Action



A lack of collaboration within fresh produce supply chains, coupled with data interoperability issues and the absence of standardized frameworks, creates significant obstacles to progress and sustainability. Without seamless information exchange and shared strategies, inefficiencies proliferate, leading to food waste, increased environmental impact, and reduced profitability. For example, a grower may not know of a sudden drop in demand at a retailer, resulting in overproduction and spoilage. Critically, these issues are exacerbated by a failure to listen to every

stakeholder in the chain. From farmworkers to distributors to retailers, each participant possesses unique insights into the challenges and opportunities within the system. By actively seeking and valuing these diverse perspectives—their concerns, their hopes, and their daily realities—we can identify the most impactful changes that address systemic issues. This inclusive approach fosters trust, promotes shared responsibility, and ultimately drives the development of sustainable, equitable, and resilient fresh produce supply chains that benefit everyone involved.

Starting by Listening

To effectively understand and address the intricate challenges within the fresh supply chain, IFPA embarked on a series of event storming sessions aimed at bringing together the brightest minds in the fresh produce industry to identify key challenges and co-create the solutions that will shape the future of our supply chain.

These active listening sessions and event storming exercises took place during three events with over 300 participants from around the world:

- December 2024 - Collabathon focused on the Americas in Las Vegas, Nevada
- February 2025 - Collabathon focused on Europe and Africa
- February 2025 - Collabathon focused on the Middle East, Asia, India, and Australasia

Event Storming: Mapping the Future Together

Event Storming, originally developed in the software world, proved to be a powerful tool for unlocking collective industry knowledge across the three “Collabathon” events. The event storming method brings together diverse stakeholders to build a shared understanding of complex processes in this case, the entire fresh produce supply chain.

"The goal is to get as much knowledge out of your heads and share it amongst the group in as short a time as possible," according to Aaron Ault, Senior Research Engineer, Open Ag Technology and Systems Center at Purdue University. “We're not going to sit through PowerPoint slides for three days.”

Using this collaborative approach allowed us to visualize and dissect complex processes, revealing critical insights into the flow of information and actions. By mapping out processes, data handoffs, regulatory requirements, and indeed pain points and bottlenecks in the fresh supply chain, participants gained a shared understanding of the wider supply chain’s dynamics, laying the groundwork for more informed and user-centric solutions.



Watch The Video: <https://bit.ly/supplychainofthefuture>

Reflecting on the Americas Collabathon

The IFPA Fresh Supply Chain of the Future Collabathon, held in December 2024 in Las Vegas, brought together over 100 industry leaders to tackle pressing challenges facing the global fresh produce supply chain. The meeting room was transformed with four 30-foot sections of paper covering the walls, representing major supply chain segments: Growers, Packers/ Shippers/ Processors, Sales/ Marketing, and Retail/ Food Service. Armed with colorful sticky notes and markers, participants mapped out events, pain points, and opportunities across each segment. As groups rotated through stations, they built upon each other's insights, creating a comprehensive picture of the current state and future possibilities.

Participants from across the Americas collaboratively outlined strategies to address inefficiencies, data silos, and sustainability concerns. The event focused on unlocking the value of interoperable data sharing, with key takeaways highlighting:

- **Overcoming Data Silos:** Developing open standards and protocols to facilitate seamless data sharing across stakeholders.
- **Building Trust:** Establishing secure, transparent mechanisms to foster collaboration across the supply chain.
- **Enhancing Efficiency:** Implementing predictive analytics and automation to streamline logistics and reduce waste.
- **Meeting Consumer Demands:** Ensuring traceability and sustainability to align with evolving consumer expectations.

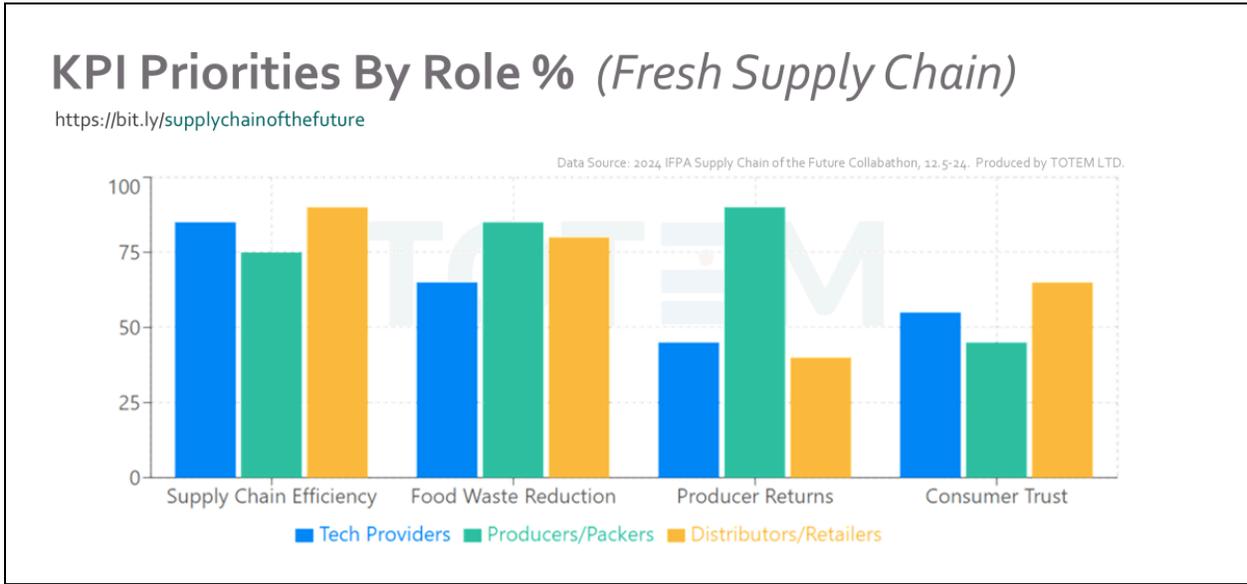


Fig. 1: KPI Priorities by Role (%), identified by participants in the December 2024 Collabathon

The December event marked a shift from theoretical discussions to practical problem-solving through not only the Event Storm itself but also the GS1 Tomato Experience. The hands-on tomato simulation vividly revealed critical supply chain challenges as participants simulated moving product—and its required paperwork— from the grower to the retailer.

This exercise ultimately revealed that quality checks were often sacrificed for speed, posing a risk to product integrity. We also identified temperature monitoring gaps at handoffs and during transportation, a serious concern for perishable goods. Furthermore, documentation errors compounding through the chain created significant inefficiencies. We witnessed physical handling creating sequence disruptions, adding to the complexity of the process. Finally, we noted that pressure to keep the product moving often led to cutting corners or less due diligence, highlighting the need for a more balanced approach. The focus of this GS1 exercise was on tomato handling and transportation was not a focal point, but risks were evident even while manually walking products from workstation to workstation.

Reflecting on the Europe and Africa Collabathon

The Europe and Africa Collabathon took place on February 25, 2025, and included both an interactive Event Storm exercise, participant polling, and an industry panel discussion moderated by Steve Alaerts (foodcareplus).

The Collabathon revealed a clear consensus among participants regarding the most pressing challenges within the fresh produce supply chain. Topping the list, 68% of participants identified the development of "better freshness models by leveraging temperature and [date] time data" as the highest priority opportunity for industry. This underscored a strong desire for enhanced tracking and predictive capabilities to optimize produce quality. Closely following, at 67%, was the need for robust "data sharing and collaboration frameworks," indicating a critical demand for improved communication and information exchange between stakeholders. "Technology and automation opportunities" also garnered significant attention, with 61% emphasizing their importance, demonstrating a strong drive towards innovative solutions.

Additional priorities included "temperature and atmosphere monitoring" (58%) and "end-to-end product life and quality information" (54%), reinforcing the call for comprehensive real-time tracking and traceability. These results highlight a clear focus on leveraging data and technology to address critical issues, reflecting a collective push towards a more efficient and transparent supply chain.

"We have a need for reciprocal transparency"

Fanie Naudé, Growers by Nature

After the interactive portion of the event, there was a panel discussion focused on broader themes of collaboration, trust, and sustainability. Panelists included Marc Evrard (Belgian Fruit

Valley), Pascal De Freyne (Greenyard), and Fanie Naudé (Growers by Nature). The panel discussion brought forward a rich and candid exchange of ideas on the future of the fresh produce supply chain. Marc Evrard of Belgian Fruit Valley highlighted the challenges posed by Europe's Green Deal, acknowledging its ambition for sustainable agriculture while cautioning that it may have inadvertently "harmed the actual production of the fruit" by limiting growers' protective measures. He advocated for a more balanced regulatory approach that safeguards both consumer interests and the viability of fruit production, calling for a "realistic departure point" in policymaking.

Pascal De Freyne of Greenyard and Fanie Naudé of Growers by Nature echoed concerns about sustainability and efficiency, emphasizing the importance of collaboration and data-driven decision-making. There was consensus on the need for better transparency and real-time data utilization, with panelists agreeing that a "direct line from growers to the final point of sales" would be key to creating a more efficient and less wasteful system. Another powerful moment came from Naudé, who emphasized the need for "reciprocal transparency," pointing out that growers often bear the financial burden of disruptions within the value chain. His reflection on an African proverb—"If you want to go fast, go alone. If you want to go far, go together"—resonated with the broader conversation on supply chain interdependence. The sentiment reinforced the panel's consensus that long-term industry resilience requires not just technological innovation but also a shift in mindset toward collective problem-solving.

The session concluded with a call to action for stronger industry cooperation, with Evrard emphasizing education and consumer awareness as critical levers for change. He noted that shifting consumer preferences—such as the adoption of golden kiwis or smartphones—are often the result of proactive education efforts, suggesting that the industry must take a more active role in informing stakeholders at all levels. The panelists left the audience with a clear message: sustainability, transparency, and collaboration must drive the next wave of innovation in fresh produce logistics.

Reflecting on the Middle East, Asia, India, and Australasia Collabathon

The Middle East, Asia, India, and Australasia Collabathon took place on February 27, 2025 and, like the Europe and Africa Collabathon, included both an interactive Event Storm exercise, participant polling, and an industry panel discussion moderated by Steve Alaerts (foodcareplus).

The first part of the event fostered dynamic interaction as participants engaged with the virtual whiteboard, identifying and voting on the

"The future of logistics lies in real-time tracking and monitoring systems, enabling seamless data integration that will automate routing and revolutionize decision-making."

Gaurav Sethi, Intercont+

most pressing challenges within the fresh supply chain. The results revealed a strong consensus on the need for digitization (64%), as too much critical data remains siloed in physical records or individuals' knowledge, slowing efficiency and decision-making. Shelf-life prediction at the product level (53%) and shelf-life analytics and prediction models (47%) emerged as equally vital, reflecting the industry's need for real-time insights to optimize freshness and reduce waste. Additionally, participants prioritized risk management for temperature deviations (53%) and temperature and atmosphere monitoring (50%), underscoring the critical role of environmental tracking in ensuring product integrity throughout the supply chain. These insights set the stage for the panel discussion, reinforcing the industry's collective urgency to address data-driven solutions and interoperability.

The panel discussion brought diverse perspectives on the challenges and opportunities in the fresh produce supply chain, with panelists emphasizing transparency, sustainability, and collaboration. Stefano Iorini (Global Star) underscored the importance of leveraging data to create incentives that benefit all stakeholders, stating that “incentivizing the data is important to ensure fair distribution of margins across the supply chain”. He also noted that market reports, while useful for industry insights, can sometimes create friction among competitors, yet they play a crucial role in fostering transparency.

Marc Evrard of Belgian Fruit Valley provided a pragmatic perspective on European agricultural policies, particularly the Green Deal. He acknowledged its ambitious goals for sustainability but cautioned that in practice, it had left growers with fewer tools to protect their crops, leading to unintended consequences. He called for a more “efficient approach from different authorities” to balance sustainability goals with practical farming realities.

“Incentivizing the [exchange of] data is important to ensure fair distribution of margins across the supply chain”

Stefano Iorini, Global Star

Gaurav Sethi (Intercont+), speaking from a logistics perspective, highlighted the need for real-time tracking and monitoring systems to improve supply chain visibility and efficiency. He envisioned a future where seamless data integration could automate routing and improve decision-making, stating, “Every bite is a vote for a more sustainable, equitable, delicious world”. The panel concluded with a shared call to action, emphasizing that while discussions are valuable, tangible steps toward collaboration and innovation are needed to drive real change in the industry.

The 27 February event reinforced a critical industry-wide call to action: to move beyond discussion and drive real, collaborative change in the fresh supply chain. Across panel discussions, interactive sessions, and voting exercises, participants aligned on the urgent need for digitization, predictive analytics, and real-time monitoring to enhance efficiency, reduce waste, and improve supply chain transparency. Panelists emphasized that sustainability and profitability must go hand in hand, with policies and technologies designed to support both growers and distributors in a

rapidly evolving market.

As Drew Zabrocki (Totem) noted, “Let’s actually get to work,” signaling that the time for isolated solutions and fragmented efforts is over. The industry must now leverage collective knowledge, align on shared data frameworks, and deploy interoperable solutions that can scale globally while remaining adaptable to local market needs. By committing to open collaboration, actionable pilots, and technology-driven decision-making, stakeholders can transform the supply chain into a more resilient, transparent, and sustainable system for the future.

Next Era Value Creation

The session, titled "Next Era Value Creation," was moderated by Steve Alaerts. The panelists included Chuck Tilmon of Walmart, Lalainia Moules of Driscoll's, Aaron Ault of Purdue University, and Steve Roosdahl of Oppy.

The discussion centered on how to improve collaboration across the whole supply chain to make better outcomes happen. A key issue was that much of the data needed by the rest of the supply chain is collected by the grower, but not for the grower’s benefit. As Ault put it, “the grower's job is to make the food. Everything else everybody else wants is in their interest”. He noted that the supply chain seems to bring complexity to the growing process.

The moderator, Alaerts, prompted Ault on the topic of blockchain. Ault responded that he has “opinions on Blockchain” and that this might be a prompt for the audience.

“If we want that full visibility, we've got to get the data usage right so that data is not misused in any way, shape or form”

Chuck Tilmon, Walmart

The discussion moved on to the topic of data sharing. Roosdahl of Oppy noted the nuance around data sharing, he wants to be selective about who he shares his information with, data can be harmful when taken out of context. He gave the example that he wants to share information to reduce waste and improve efficiency, but not if it’s going to put downward price pressure on sales. “I can't run myself out of business.” Roosdahl said.

Chuck Tilmon of Walmart contributed to the discussion by highlighting the importance of transforming supplier-buyer information sharing with transparent forecasting for efficiency. He emphasized that the key barrier to embracing that new model is a data usage agreement for full visibility, to ensure that data is not misused. “If we want that full visibility, we've got to get the data usage right so that data is not misused in any way, shape or form, ” Tilmon said. This point underscores Walmart's interest in leveraging data to optimize its supply chain, while ensuring data is not misused, while continuing in their mission to continue to provide low prices.

Lalainia Moules of Driscoll's emphasized the need for standards and common data definitions, not just on labeling, but also on more complex terms like "organic" or "climate smart." This highlights

Driscoll's focus on improving data management and delighting the consumer. Moules also pointed out the need for unified definitions that cross borders, reflecting the global nature of Driscoll's operations and the need for international alignment on data standards.

Manifesting Our Future

The "Manifesting our Future" session, moderated by Rob Trice of Better Food Ventures, shifted the focus from problem identification to solution generation. The session featured panelists Liz Sertl of GS1 US, Mike Laws of Sunrise Logistics, Andy Kennedy of iFoodDS, Michael Darden of DFM Data Corp, and Drew Zibrocki of Totem.

Rob Trice of Better Food Ventures, as the moderator, played a key role in guiding the conversation toward actionable outcomes. Trice set the stage for a solutions-oriented discussion, prompting panelists and participants to think creatively and collaboratively about how to address the challenges facing the fresh produce supply chain.

Drew Zibrocki of Totem brought a unique perspective to the panel, emphasizing the importance of collaborative innovation and open-source solutions. Zibrocki highlighted the potential of data and technology to build a more efficient, sustainable, and equitable food system. He likely echoed the collaborative tone of the event when he stated Totem is passionate about building a more efficient, sustainable, and equitable food system through the power of data and technology.

Andy Kennedy of iFoodDS focused on the practical applications of technology to improve traceability and food safety. Kennedy likely provided insights into how data and digital solutions can be leveraged to streamline processes, enhance transparency, and build consumer trust.

Mike Laws of Sunrise Logistics contributed valuable insights on logistics and transportation, emphasizing the importance of clear communication and shared understanding across the supply chain.

"You can't get to have agreement in a database or in a conversation or in a customer service call without having an agreement on some of the terms"

Michael Darden, DFM Data Corp

Michael Darden of DFM Data Corp spoke about the importance of having a common language across the supply chain. He used the example of "container availability," noting that the term has 14 different documented definitions. "You can't get to have agreement in a database or in a conversation or in a customer service call without having an agreement on some of the terms," he said.

Liz Sertl of GS1 US addressed the critical need for standards and common data definitions within the supply chain. Sertl highlighted the challenges in defining terms like "organic" and "climate smart" and stressed the importance of unified definitions and data capture methods across

borders and throughout the supply chain.

The panelists engaged in a rich discussion, building upon the challenges identified in earlier sessions and proposing concrete action items. The conversation underscored the importance of:

- **Standardization:** Panelists reiterated the need for industry-wide collaboration to establish common data standards and definitions.
- **Collaboration:** The discussion emphasized the importance of fostering stronger collaboration and communication among all stakeholders.
- **Technology:** Panelists explored the role of technology in driving efficiency, improving traceability, and enabling data-driven decision-making.

The "Manifesting our Future" session provided a dynamic and forward-looking conclusion to the day's discussions. By focusing on actionable solutions and fostering a collaborative spirit, the session paved the way for concrete progress toward building the supply chain of the future.

The Industry Call to Action

Across three collaborative events spanning the globe—industry leaders and supply chain experts engaged in deep discussions about the challenges and opportunities shaping the future of the fresh supply chain. While each event brought unique insights, common themes emerged, including the urgent need for digitization, improved shelf-life prediction, enhanced data sharing, and greater supply chain collaboration. Throughout these conversations, panelists and participants analyzed critical inefficiencies across the supply chain, identifying pain points and potential solutions within four distinct phases: Growing Operations, Packing and Shipping, Sales and Marketing, and Retail and Food Service.

"The future supply chain will incorporate an open-source and interoperable data channel, enabling seamless information flow from the farm to the store shelf."

Rob Trice, Better Food Ventures

The discussions across all three events provided a comprehensive look into the fresh supply chain, highlighting both challenges and opportunities in each of the four key phases. Growing Operations, as discussed by Aaron Ault (Purdue University), emphasized the need for better digitization and interoperability, as much of the knowledge and logistics management still rely on manual tracking or exist solely in the minds of experienced workers, posing an information loss risk as they retire. He also noted that weather unpredictability and market fluctuations pose constant

logistical challenges for growers, making real-time data collection and forecasting essential. Packing and Shipping, led by Drew Zabrocki (Totem), centered around coordination with growers, quality audits, and the impact of labor shortages. He highlighted the increasing need for automation and real-time data to manage product freshness and ensure efficient routing and repacking to meet shifting market demands. Sales and Marketing, presented by Martha King (Totem), focused on communication breakdowns, missed pricing opportunities, and market volatility. She stressed that dynamic pricing based on quality metrics, improved recall processes, and better visibility of inventory and supply chain conditions would lead to more efficient market operations. Lastly, Retail and Food Service, covered by Rob Trice (Better Food Ventures), emphasized consumer-facing requirements such as transparent claims, allergen labeling (like Natasha's Law in the UK), and the growing demand for sustainability and quality guarantees. Across all phases, data standardization, transparency, and automation emerged as crucial themes, pointing toward an industry-wide need for harmonized data frameworks and digital transformation.

Growing Operations: The Foundation of Food Supply

The grower section revealed a stark reality. While growers' primary focus is producing food, they face mounting pressure to collect and share data that primarily benefits others in the supply chain. As Aaron Ault (Purdue University/The Qlever Company) observed, "Everything from the grower forward is largely an imposition on the grower . . . the grower's job is to make the food. Everything else everybody wants is in their interest."

The timeline emerged naturally from planning through harvest:

Planning & Forecasting:

- Growers respond to RFPs throughout the season, often managing competing customer requirements
- Participants at the Las Vegas event (78%), identified communication challenges as the top issue for growers/producers
- Complex logistics knowledge often resides "in the heads of the older crew close to retirement"
- Field allocation decisions must balance minimizing shipping time with meeting diverse customer requirements

In-Season Management:

- Weather unpredictability creates cascading effects from fungus concerns to harvest timing
- Labor shortages impact everything from data collection to harvest operations

- Critical environmental data collection occurs alongside yield estimates and crop quality assessments
- Market price changes after planning, or after planting creating significant challenges

Harvest & Transition:

- Quality audits from customers, retailers and packers occurring during grow and harvest
- Complex decisions around rejected produce: charity donation vs. secondary processing
- Data transfer to transportation providers and packers becomes increasingly critical
- Managing different customer requirements leads to field-specific growing practices

A critical insight emerged around data digitization and sharing. As Ault explained, most operations are in one of three stages: "The first stage is just digitization . . . everything was on paper or in people's heads. The second level is interoperability. . . . I have six different platforms, ten different customer portals. The third challenge is sovereignty. How do we answer the questions we need down the chain without sending all our data?" Many participants during the Las Vegas event (68%) also noted that the lack of transparency and traceability was a key challenge affecting the supply chain.

The grower segment highlighted an urgent need to "scale differentiation" finding ways to meet diverse customer requirements without significantly disrupting core growing operations. This requires solving both technical challenges around data sharing and human challenges around knowledge transfer and labor availability.

"If I have perfectly sound guidelines to produce healthy, environmentally grown fruit for one retailer, I cannot supply the same fruit to another because of slightly different interpretations"

Marc Evrard, Belgian Fruit Valley

For growers, this initiative offers a unique opportunity to:

- **Gain price insights:** By sharing data on quality and sustainability practices, growers can command premium prices and access new markets.
- **Reduce waste:** Access to real-time data and predictive analytics can help optimize harvest timing and minimize spoilage. Indeed, 78% of participants identified food waste as a major challenge impacted by inefficient and non-transparent data flows.
- **Maintain control:** Smart data escrow solutions allow growers to share data securely without compromising privacy or revealing sensitive information.
- **Improve decision-making:** Collaborative platforms provide access to valuable market insights and data-driven recommendations.

Packing and Shipping: The Coordination Hub

The packer/shipper/processor segment revealed the complex choreography required at this critical junction of the supply chain. As

Drew Zabrocki noted, this section encompasses multiple distinct operations: "These are actually three different things. Some people actually run a packer or shipper and a processor, and there's also manufacturing." Overall, Labor Shortages (75%) and Transportation Costs (74%) were rated by participants as the top challenges in supply chains today.

"Once trust is established, any kind of data will help all players make better decisions"

Stefano Iorini, Global Star

The product movement or goods movement process flow emerged in distinct phases:

Inbound Planning & Coordination:

- Detailed coordination between harvest timing and production plans
- Alignment of buyer requirements and product specifications
- Partnership with growers to ensure inbound product meets expectations
- Continuous quality checks and audits throughout the process

Production Line Dynamics:

- Frequent line changes driven by shifting customer requirements
- Labor challenges affecting staffing and skilled positions
- Training and education needs for new industry entrants
- Real-time decisions on repacking and product modifications

Outbound Logistics:

- Loading and delivery appointment management with growers, packers and distribution centers
- Challenges with poor cell service and carrier/truck driver communication
- Location, Temperature and atmosphere monitoring
- International complexities including customs and border protection, and product-specific requirements

A recurring theme was data sharing. As Drew Zabrocki explained, "I want to share my information with anyone without sharing it with everyone. Data out of context can be damaging. I want to share information to reduce food waste and improve shelf life and improve efficiency and get a better value. But if it's going to put downward price pressure on my sales, no, I can't do it."

The segment highlighted five main focus areas:

1. Technology and automation opportunities
2. Labor efficiency improvements
3. Data sharing and collaboration frameworks
4. Sustainability and waste reduction
5. Safety and security measures

The complexity at this stage underscored the need for both technological solutions and human expertise, with an emphasis on leveraging AI and IoT, Zabrocki said, "not just for the sense of tech, but for better analysis and understanding, for insights to help us be better at our business."

 **For packers and shippers, this initiative offers a path to:**

- **Improve efficiency:** Standardized data formats and automated processes that streamline operations and reduce labor costs.
- **Enhance decision-making:** Real-time data and predictive analytics optimize logistics, reduce waste, and improve customer satisfaction.
- **Strengthen partnerships:** Collaborative platforms foster stronger relationships with growers and retailers, leading to better alignment and improved outcomes.

Sales and Marketing: The Bridge Between Production and Consumption

The sales and marketing segment revealed a non-linear, reactive process that bridges the entire supply chain. "It depends' is a phrase that came up a lot," Martha King (Totem) noted. "We have to be reactive to the consumers, reactive to crises, all of those different things that are happening along the way."

Standards and Definitions:

- Need for unified data definitions for stakeholders domestically and across borders
- Standardization of basic elements like date / time and location
- Challenges with terms like "organic" and "climate smart"
- Automation of IDs and unique identifiers

Predictive Analytics and Pricing:

- Models leveraging temperature and date / time data
- Dynamic pricing based on quality metrics
- Streamlined recall processes
- Automated shipment confirmation

Data Management Challenges:

During the Las Vegas Collabathon, Chuck Tilmon (Walmart) highlighted the trust dimension: "We live in a very low trust environment right now. We don't trust the government, we don't trust large companies, we don't trust our neighbors sometimes."

"We need to determine what we want to protect in data and what we're okay with having open for sharing in an effective communication."

Rob Trice, Better Food Ventures

Michael Darden (DFM Data Corp.) emphasized the importance of precise communication: "One of the keys is to be able to know that what you're saying is being understood by the person who is listening." He illustrated this with "container availability",

Value Creation and Return:

The board revealed opportunities for:

- Sustainability initiative tracking
- Financial benefit measurement
- Value return to growers
- Automated practice verification

A key insight emerged around data sharing and trust. As Martha King observed, "We talk about how we want our consumers to trust us . . . but yet when we talk about the data, it's as if we have a lack of trust within the supply chain. . . . I wonder how much of that mentality within our own proprietary areas that we guard then starts to bleed outward."

For sales and marketing teams, this initiative can:

- **Improve demand forecasting:** Data-driven insights can help predict consumer demand and optimize pricing strategies based on current market conditions.
- **Build consumer trust:** Transparency and data-backed claims can enhance brand reputation and increase consumer confidence.
- **Streamline communication:** Standardized data formats and shared platforms can improve communication and collaboration across the supply chain.

Retail and Food Service: The Consumer Connection

The retail/food service board revealed three emerging themes around data and consumer value. Rob Trice (Better Food Ventures) highlighted: "Local production, sustainability footprint, carbon, and nutrient density . . . this is kind of next generation data creation." As we have seen with our Las Vegas, GS1 Tomato Experience and the other sections of the Event Storming, even getting reliable and timely basic information is still a challenge that needs structure and leadership.

Key Consumer-Facing Requirements:

- End-to-end product life and quality information - claims validation and traceability
- Shelf-life analytics and prediction models
- Dynamic product and transport pricing capabilities
- Verifiable claims validation (safety, sustainability, worker welfare)

Data Sharing Transformation:

- Need for transparent product specific upstream forecasting
- Better supplier-buyer information sharing during grow and harvest
- Data usage agreements for specific visibility
- Protection against data misuse

Quality and Shelf Life:

- Demand forecast information sharing upstream to develop dynamic analytical models
- Product level shelf-life prediction at product level
- Collaborative data sharing of identities and statuses across and between supply chain technologies
- Risk management for warehouse and transport temperature deviations

"The future supply chain will incorporate an open-source and interoperable data channel," Trice noted, "enabling seamless information flow from the farm to the store shelf." This transparency becomes crucial for validating claims and managing inventory effectively.

A critical insight emerged around data privacy and trust. Certain information like origin, destination, date, and time could be openly shared, while sensitive data about product value, quantity, and quality needed controlled access. As Trice summarized, "We need to determine what we want to protect in data and what we're okay with having open for sharing in an effective communication."

"We have to be reactive to the consumers, reactive to crises, all of those different things that are happening along the way."

Martha King, Totem, Ltd.

 **For retailers and food service providers, this initiative offers the ability to:**

- Reduce waste: Real-time data and predictive analytics can optimize inventory management strategies and help minimize product spoilage.
- Meet retailer and consumer demands: Transparency and detailed product information can satisfy consumer demands for information and build trust.
- Improve efficiency: Standardized processes and structured and formatted data can streamline operations and help measure and reduce costs.

The Path Forward: Reimagining What's Possible

As industry leaders dissected the challenges within each phase of the fresh supply chain, several transformative opportunities emerged as critical levers for driving efficiency, reducing waste, and improving profitability. Across all three events, participants consistently highlighted the need for Harmonized Standards to streamline compliance and simplify data exchange across markets. The concept of Smart Data Escrow gained traction as a way to enable secure, controlled data sharing while protecting proprietary information. Shelf-life Predictability was identified as a game-changer, with real-time monitoring and predictive analytics offering the potential to reduce spoilage, optimize inventory, and enhance consumer confidence. Lastly, Dynamic Incentives surfaced as a necessary shift, encouraging value-based compensation models that reward quality, efficiency, and sustainability rather than just volume. These four opportunities represent practical, scalable solutions that the Supply Chain of the Future initiative will directly address to help reshape the future of fresh supply chains.

Shelf-life Predictability

One of the most transformative opportunities identified in the industry is Shelf-life Predictability, which has the potential to reduce food waste, improve inventory management, and enhance product quality. Pascal De Freyne emphasized that retailers' reluctance to share data makes it difficult for growers and distributors to forecast demand and optimize product usage. Real-time shelf-life analytics and predictive modeling can dynamically adjust distribution strategies to ensure that products are routed to the right markets before spoilage occurs. Drew Zabrocki described a future where "we can dynamically shift products to the right place at the right time, maximizing shelf life and reducing waste". By integrating AI-powered analytics, environmental tracking, and dynamic logistics coordination, businesses can make data-driven decisions that optimize inventory flows and improve sustainability. The next phase of industry pilots will focus on integrating smart sensors, automated tracking systems, and real-time shelf-life assessments into mainstream operations.

Dynamic Incentives

The supply chain of the future must shift away from traditional volume-based pricing models toward Dynamic Incentives that reward stakeholders based on value creation. Drew Zabrocki stressed that “everyone who contributes to supply chain efficiency—whether logistics providers, software companies, or quality auditors—should be recognized and compensated accordingly”. This means moving beyond static pricing and embracing a model where pricing and compensation adjust dynamically based on real-time performance metrics. Additionally, poor performers or inefficiencies should be phased out, with Zabrocki noting, “If you’re not adding value, you don’t have a place in the supply chain of the future”. By leveraging automated data tracking, quality verification, and predictive analytics, the fresh produce industry can establish a performance-based ecosystem that aligns incentives with sustainability, efficiency, and product quality. The next phase of industry pilots will focus on demonstrating how real-time data can be used to create value-based pricing models that benefit all stakeholders. This can only be achieved with a foundation of interoperable data sharing, which relies on harmonized standards and smart data escrow to ensure that data is shared securely and transparently, enabling the industry to build a future where value is recognized and rewarded at every step.

“If you’re not adding value, you don’t have a place in the supply chain of the future”

Drew Zabrocki, Totem, Ltd.

Smart Data Escrow

Data transparency and trust remain critical challenges in the fresh supply chain. Smart Data Escrow offers a solution that balances information sharing with business confidentiality. Data escrow platforms provide a transparent and auditable record of data access and usage, building trust and accountability across the supply chain. This preserves privacy while enabling verification of claims – essentially allowing users to share data with *anyone*, *without* sharing data with *everyone*.

“Why don't we flip the model? Instead of sharing raw data, share the code that produces needed answers.”

Aaron Ault, Purdue University / The Qlever Company

As Stefano Iorini explained, “Once trust is established, any kind of data will help all players make better decisions”. However, many businesses are hesitant to share operational data due to concerns over competitive risks and data misuse. Smart Data Escrow, built on the SADIE (Smart Asynchronous Data in Escrow) framework, enables controlled, secure data sharing,

ensuring that each stakeholder only accesses relevant information without exposing proprietary details. By moving information dynamically to the right entity at the right time, actors throughout the supply chain can optimize logistics, reduce waste, and enhance forecasting capabilities without compromising sensitive commercial data. This approach aligns with broader industry goals of trust-based collaboration, paving the way for more efficient and mutually beneficial partnerships.

"If the problem is that we have to send data to somebody else and we don't know what they're going to do with it, why don't we flip the model?" proposed Aaron Ault. "Instead of sharing raw data, share the code that produces needed answers." The traditional model of data sharing often requires growers to relinquish control of their valuable data, leading to concerns about privacy and

"I want to share my information with anyone without sharing it with everyone. Data out of context can be damaging."

Drew Zabrocki, Totem, Ltd.

potential misuse. Smart data escrow offers a revolutionary alternative. Instead of directly sharing raw data, growers can utilize smart contracts and secure data escrow platforms to maintain data sovereignty. This means growers retain ownership and control of their data, granting access only to specific parties and for defined purposes. Beyond growers, distributors, retailers, and anyone throughout the supply chain can choose to share only the specific data elements required for a particular transaction or analysis, preserving the confidentiality of sensitive information. Additionally, data usage agreements can be enforced through smart contracts, ensuring that data is used only for the intended purposes and preventing unauthorized access or manipulation.

Harmonized Standards

The need for Harmonized Standards is one of the most pressing challenges in the fresh supply chain, as fragmented and conflicting regulations create unnecessary inefficiencies. Marc Evrard of Belgian Fruit Valley highlighted that even within neighboring European countries, retailers impose different compliance requirements, making it difficult for growers to operate efficiently. He noted, "If I have perfectly sound guidelines to produce healthy, environmentally grown fruit for one retailer, I cannot supply the same fruit to another because of slightly different interpretations". This lack of standardization forces farmers to invest in multiple, often contradictory, compliance measures, diverting resources from sustainable production. Mike

"You can't come to an agreement in business without having an agreement on the terms"

Mike Laws, Laws Logistics

Laws (Laws Logistics) emphasized starting with clear agreement on terms: "You can't come to an agreement in business without having an agreement on the terms." The Collaborations and working groups have prioritized addressing this issue by aligning global standards like GS1, ISO, ASTM, and UN/CEFACT into a unified methodology. As Liz Sertl (GS1) emphasized, "We need to agree what

data carriers we are going to have.” This includes standardizing both the technical carriers and their contents, creating a common language for data and expectations will reduce operational costs, improve transparency, and streamline international trade, ultimately allowing more efficient supply chain coordination.

Making It Real

The path from vision to reality requires concrete action. These four pillars—Harmonized Standards, Smart Data Escrow, Shelf-life Predictability, and Dynamic Incentives—represent a new era of transparency, efficiency, and collaboration in the fresh supply chain. Addressing these foundational challenges is essential to building a more resilient, sustainable, and technology-driven future, where waste is minimized, product quality is optimized, and all stakeholders benefit from a more integrated and efficient system. However, achieving this transformation requires collective action, strategic investment, and industry-wide commitment.

“This isn't a trend, it's a revolution. The future of fresh produce is here, and it demands action.”

Drew Zabrocki, Totem, Ltd.

This Supply Chain of the Future is more than a standalone initiative—it is a global movement designed to unify growers, logistics providers, retailers, technology companies, and policymakers in reshaping the future of fresh produce supply chains. Without decisive action, continued fragmentation and rising costs will undermine the industry's ability to meet the demands of a rapidly evolving market.

The future of the fresh supply chain hinges on collaboration and innovation. Embracing this opportunity will help ensure a more sustainable, efficient, and competitive industry for years to come. The moment to act is now.

Implementation Roadmap: Building Our Future Together

Now is the time to take a leadership role in shaping this transformation. Through global Collabathons, pilot programs, and technical working groups, this initiative is developing the frameworks necessary for a more open, interoperable, and intelligent supply chain. Engaging as a sponsor, partner, or contributor provides an opportunity to help define the next generation of industry standards while gaining early access to emerging technologies, strategic visibility, and a

leadership position in driving meaningful change.

Establishing Leadership and Advancing Industry Collaboration

The Spring phase of the Supply Chain of the Future initiative is dedicated to establishing industry leadership, launching technical working groups, and aligning stakeholders around key priorities for implementation. This is a critical moment for organizations across the supply chain—from growers and logistics providers to retailers and technology firms—to actively engage in shaping the next generation of supply chain standards and solutions. Through the formation of working groups, steering committees, and the Innovation Hub, this phase will define collaborative use cases and develop the technical frameworks necessary for interoperability, data sovereignty, and predictive analytics in the fresh supply chain.

Innovation Hub

The Innovation Hub will emerge as a dynamic, searchable online platform. It is designed to illuminate real-world pathways towards enhanced supply chain efficiency and transparency. By showcasing tangible applications, solutions, and technologies, the Hub acts as a bridge between those seeking practical implementations and the solution providers poised to deliver them.

The Innovation Hub's architecture centers around standardized case studies, ensuring that challenges, solutions, and outcomes are presented in a clear, consistent format. This foundation is complemented by multi-dimensional categorization, enabling users to filter by geography, commodity, and supply chain components for targeted discovery. Additionally, premium visibility options offer enhanced presentation opportunities, including additional visual content and priority placement.

Through this structured approach, the Innovation Hub aspires to accelerate the adoption of effective solutions, fostering a trusted repository of implementation examples drawn from the global supply chain. By facilitating connections and surfacing market intelligence, the platform is poised to stimulate collaboration and illuminate emerging trends.

The Innovation Hub extends an open invitation to a broad spectrum of stakeholders, including technology developers, solution providers, growers, packers, processors, transportation and logistics companies, retailers, distributors, industry consortiums, standard-setting organizations, sustainability-focused enterprises, and startups. By creating a shared space for innovation, the Hub aims to catalyze progress and drive the evolution of the supply chain towards greater efficiency, transparency, and sustainability.

 *Submit ideas to be featured in the Innovation Hub: <https://bit.ly/supplychaininnovations>*

Working Groups & Steering Committees

The launch of working groups and steering committees will bring together technical experts, supply chain leaders, and regulatory advisors to establish a common foundation for data exchange, predictive modeling, and value-driven incentive structures. These groups will focus on advancing the four core pillars of the initiative—Shelf-Life Prediction, Dynamic Incentives, Smart Data Escrow, and Harmonized Standards—developing reference implementations and standards that will guide real-world pilots later in the year. The Innovation Hub will also open in a limited pre-application phase, providing early access to industry participants eager to test and refine emerging technologies that improve supply chain efficiency, transparency, and sustainability.

 *Join The Working Groups And Make Things Come to Life: <https://bit.ly/supplychainteam>*

Engagement and Sponsorship Campaign

Simultaneously, the initiative will launch an engagement and sponsorship campaign, calling on industry leaders to actively support and participate in these efforts. Sponsoring organizations will gain early visibility into technical advancements, direct influence over pilot design, and leadership recognition as early adopters of transformative supply chain solutions. To further amplify industry participation, a targeted media outreach campaign—including newsletters, press releases, and social media engagement—will ensure widespread awareness of opportunities for collaboration.

By the end of Spring, the initiative will have built a strong foundation for technical collaboration, pilot preparation, and cross-sector engagement. These efforts will pave the way for the next phase, where working products and technical outputs will be refined, pilots will be executed, and the industry will take critical steps toward implementing real-world solutions that redefine the future of fresh supply chains.

 *Demonstrate Thought & Industry Leadership : <https://bit.ly/supplychainleaders>*

Pilot Execution, Scaling, and Industry Validation

As Summer unfolds, the Supply Chain of the Future initiative transitions from strategic planning to tangible execution, focusing on the implementation and validation of key innovations such as Smart Data Escrow, Shelf-Life Prediction, Dynamic Incentives, and Harmonized Standards. This phase is pivotal in demonstrating the practical applicability and benefits of these advancements across diverse supply chain scenarios.

June 9, 2025: Symposium & Program Pilot Series at IFPA's Washington Conference

A cornerstone event during this period is the Symposium & Program Pilot Series, scheduled for June 9, 2025 in Washington, D.C., coinciding with the International Fresh Produce Association's (IFPA) Washington Conference. This premier gathering unites all segments of the fresh produce

and floral industry to address pressing public policy matters with the U.S. Congress and Administration. The Symposium will feature:

- **Vision Casting:** Outlining strategic directions for broader industry adoption and future developments.
- **Live Demonstrations:** Showcasing real-time applications of pilot programs, including data interoperability and predictive analytics.
- **Interactive Discussions:** Engaging sessions with industry leaders, policymakers, and technology experts to explore challenges and opportunities.
- **Pilot Deployment and Early-Stage Testing**

 *Register (Hybrid) for Symposium & Program Series : <https://bit.ly/supplychainsymposium>*

Scaling and Refining Pilot Implementations

Following the symposium, the initiative will expand and refine its pilot programs through targeted industry partnerships, cross-sector collaboration, and continued technical enhancements. The second and third work products from the working groups and steering committee will be released, incorporating lessons learned from early-stage pilots and addressing challenges identified in initial deployments.

Key Focus Areas:

- **Program Pilots Execution** – Scaling pilots to more participants, including retailers, logistics providers, growers, and technology firms.
- **Optimization of Shelf-Life Prediction Models** – Testing new data inputs, AI models, and real-time monitoring capabilities to improve accuracy.
- **Dynamic Incentives Testing** – Refining pricing structures and incentive models to reward quality, efficiency, and sustainability.
- **Harmonized Standards Development** – Aligning pilot implementations with global standards (GS1, ISO, ASTM, UN/CEFACT) to facilitate adoption.
- **Data Interoperability Refinement** – Enhancing Smart Data Escrow protocols to ensure secure, real-time data sharing.

Throughout this phase, the working groups and steering committees will continue to analyze pilot data, refine implementation frameworks, and publish updated industry guidance to support broad-scale adoption.

 *Submit Cases, Collaborative Demonstrations & Pilots: <https://bit.ly/supplychainpilots>*

Industry Engagement & Knowledge Sharing

To sustain momentum and encourage industry-wide participation, a multi-channel media strategy will be executed throughout the summer, including:

- Regular industry updates via newsletters, social media, and targeted email campaigns.
- Pilot success stories and use case reports highlighting key insights and business impact.
- Open-source resources and technical toolkits to support implementation by new adopters.

An initial launch of the Innovation Hub will occur before the Global Show to generate excitement and publicity. This soft launch will highlight early sponsors and supporters, and will serve as the focus of social media, press, and advertising campaigns leading up to the main event. Additionally, we will investigate interoperability with DFMD profile management solutions for authorized Transport Unit ID and status communications in relation to program pilots.

By the end of Summer, the initiative will have demonstrated the feasibility and value of key innovations, setting the stage for final validation and industry-wide deployment in the fall. The next phase, culminating in the IFPA Global Produce & Floral Show in October, will serve as a premier venue for showcasing pilot successes and laying out a roadmap for long-term adoption of lessons learned across the fresh produce supply chain.

 *Join The Group To Stay Informed:* <https://bit.ly/supplychainofthefuture>

Validation, Global Showcase, and Strategic Retrospectives

As Fall begins, the Supply Chain of the Future initiative enters its final phase of industry validation and strategic reflection. This period will focus on assessing pilot outcomes, selecting the most impactful use cases, and preparing for the industry-wide Global Showcase. The culmination of months of collaborative efforts, this phase is designed to solidify industry-wide adoption of the key innovations—Smart Data Escrow, Shelf-Life Prediction, Dynamic Incentives, and Harmonized Standards—by demonstrating their real-world benefits through collaborative pilots and technology demonstrations.

September: Pilot Wrap-Up and Collaborative Demo Selection

Throughout September, stakeholders will review pilot results, measure the impact of implemented solutions, and refine strategic recommendations for the industry. The Steering Committees and Working Groups will conduct detailed evaluations of the Program Pilot Series, identifying high-impact use cases that will be featured in the upcoming Global Showcase.

Key activities in this phase include:

- **Final Pilot Evaluations** – Assessing technical effectiveness, business impact, and scalability of data interoperability solutions, predictive analytics, and incentive-based models.
- **Selection of Collaborative Demos** – Identifying outstanding pilots and use cases to be featured at the IFPA Global Produce & Floral Show in October in Anaheim, California.
- **Industry Reporting & Knowledge Sharing** – Publishing insights, white papers, and technical reports that provide implementation roadmaps for broader adoption.

October: Global Showcase at the IFPA Global Produce & Floral Show

The initiative will culminate at the IFPA Global Produce & Floral Show, which will take place October 16-18 in Anaheim, CA. This event is one of the largest gatherings of global fresh supply chain stakeholders and is expected to bring together over 22,000 industry leaders.

At this event, we will feature the Supply Chain of the Future initiative by:

- **Demonstrating Successful Pilot Implementations** – Showcasing real-world solutions in Smart Data Escrow, Shelf-Life Prediction, Dynamic Incentives, and Harmonized Standards.
- **Highlighting Case Studies & Use Cases** – Presenting real-world applications and business outcomes from participating organizations.
- **Facilitating Cross-Sector Collaboration** – Providing a forum for industry leaders, technology providers, and regulators to discuss the next steps for standardized adoption and market integration.

This showcase will act as a turning point, demonstrating what's possible when the industry collaborates on open, interoperable solutions and setting the stage for long-term industry transformation.

 *Demonstrate Thought & Industry Leadership* : <https://bit.ly/supplychainleaders>

Beyond: Strategic Retrospective & Future Roadmap

As the initiative concludes its 2025 pilot and showcase phases, the latter parts of the year will focus on reviewing lessons learned, consolidating insights, and setting a roadmap for future collaboration.

Key activities will include:

- **Team 360 Sessions** – Gathering stakeholder feedback to assess program effectiveness and identify improvement areas.
- **Steering Committee Retrospectives** – Reviewing pilot results, working group contributions, and industry engagement levels to determine the next phase of industry

collaboration.

- Strategic Planning for the next year and beyond – Outlining how industry leaders can sustain momentum, refine solutions, and scale adoption over the next five years.

This phase is designed to ensure that the progress made in transitions into long-term industry change, with stakeholders working together to drive continuous improvement, align on global standards, measures, and sustain the movement toward a more transparent, efficient, and data-driven fresh supply chain.

Building the Future Together: A Call to Action

The Supply Chain of the Future initiative represents a transformative opportunity for the fresh produce industry—a collaborative and global movement to build an open, interoperable, and more resilient supply chain. Achieving this vision requires broad industry participation, investment, and leadership. Now is the time to engage, contribute, and help define the standards and solutions that will shape the next decade of fresh supply chains.

Industry Participation: Be Part of the Transformation

To ensure success, active engagement across the supply chain is essential. Companies and organizations can participate in several ways, gaining strategic advantages while contributing to the industry's future.

Technical Contribution: Leading Innovation & Standards Development

- Join working groups focused on developing open standards, harmonized data frameworks, and reference implementations.
- Participate in hackathons and technical sprints to solve real-world challenges.
- Volunteer for pilot programs to test, refine, and validate emerging solutions in live supply chain environments.
- Contribute to technical documentation that guides industry-wide implementation.

Knowledge Sharing: Shaping the Future Through Collaboration

- Engage in virtual regional sessions to discuss and share insights on supply chain challenges and emerging solutions.
- Share use cases and operational requirements, ensuring that solutions are aligned with real-world business needs.
- Participate in technical series and industry discussions to influence future standards and best practices.

- Contribute to **open-source documentation** that accelerates adoption across the industry.

Implementation: Driving Real-World Change

- Test reference implementations within current supply chain operations.
- Pilot new technologies, such as Shelf-Life Prediction Models, Dynamic Incentives, and Smart Data Escrow.
- Provide critical feedback on emerging standards to refine their effectiveness.
- Share success stories and case studies, demonstrating the tangible impact of new solutions.

 *Join The Working Groups And Make Things Come to Life: <https://bit.ly/supplychainteam>*

Sponsorship Opportunities: Be a Driving Force in Industry Transformation

This initiative requires financial and strategic investment to bring solutions from concept to implementation. Sponsoring organizations gain exclusive visibility, leadership recognition, and direct influence over industry-wide change.

Sponsorship directly supports:

- Engineering & Resource Allocation – Funding the development of open-source tools, APIs, and implementation frameworks.
- Event Organization & Facilities – Enabling critical industry gatherings, including Collabathons, technical workshops, and pilot demonstrations.
- Technical Documentation Development – Ensuring that standards, frameworks, and guidelines are accessible and actionable for industry-wide use.
- Pilot Program Execution – Providing the necessary resources to deploy, scale, and validate pilot projects in real-world environments.

"We need to find something that we agree upon, take action on it, create success, tell that story that will help us gain momentum and credibility."

– Rob Trice, Better Food Ventures

 *Demonstrate Thought & Industry Leadership : <https://bit.ly/supplychainleaders>*

Building Trust Through Action

At the heart of this initiative is a commitment to transparency, collaboration, and continuous listening to industry. The Supply Chain of the Future initiative is designed to be:

- Pre-commercial & Collaborative – Focused on shared industry challenges, not proprietary solutions or competitive advantages.
- Built on Open Sharing & Industry-wide Benefit – Ensuring that all stakeholders, from growers to retailers, have access to the tools and insights necessary for success.
- Driven by Rapid Iteration & Learning – Moving quickly from concept to pilot, refining solutions based on real-world implementation.

Now is the time to take action, shape the future, and ensure that the industry evolves in a way that benefits all stakeholders. Those who engage now will be at the forefront of defining a data-driven, sustainable, and resilient fresh supply chain.

The future of the fresh supply chain is being built today. This is being led by IFPA and Totem. Join us. Get involved!

Join the movement to transform fresh produce supply chains:

1. Connect with IFPA to join working groups
2. Identify pilot opportunities within your organization
3. Allocate technical resources to development efforts
4. Support through sponsorship
5. Share success stories and learning

“This isn't a trend, it's a revolution. The future of fresh produce is here, and it demands action. We're not just talking about incremental change – we're building a new reality where data transparency and collaboration drive value for everyone, from farm to table.” - Drew Zabrocki, Totem, Ltd.

Interested in getting involved?

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<http://bit.ly/supplychainofthefuture>

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About IFPA



The International Fresh Produce Association (IFPA) is the largest and most diverse international association serving the entire fresh produce and floral supply chain and the only to seamlessly integrate world-facing advocacy and industry-facing support.

International Fresh Produce Association's roughly 3,000 members span the entire fresh produce and floral supply chains in 87 countries around the world - including all 50 U.S. states.

Organizations benefit from the experience, sparking dialogues, and creating solutions. IFPA works with our members to keep a pulse on important trends, solutions, and emerging issues from across the world, to guide us all in moving forward. IFPA is here to support you, clear the path ahead, and make good things happen with your prosperity in mind.

www.freshproduce.com

About Totem



Totem is a technology advisory and program management firm specializing in collaborative innovation and open-source solutions for global supply chains. We are passionate about building a more efficient, sustainable, and equitable food system through the power of data and technology. Our expertise in data management, standards development, and community engagement has been instrumental in driving the IFPA Fresh Supply Chain of the Future initiative. We are committed to continuing our collaboration with the IFPA and its partners to bring this vision to life.

www.totemltd.com

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