

ripe.io
Blockchain of Food[®]

Empowering people to make confident choices
about the food they eat, grow and sell.

Ice Cream Technology Conference

Ami Patel, Dir. of Product



Company Overview

Mission:

- Build long-lasting trust and confidence in our food supply chain through an accessible **platform for transparent and reliable information on the origin, journey and quality of ingredients**

Supporters:

- Seed funded by **Maersk Ventures and Relish Works (GFS)**
- Named by **Forbes** as one of the **“25 Most Innovative AgTech Startups”**
- **Ag Funder Most Innovative Supply Chain Startup** (Pre-series A 2018)
- Graduate of **Terra Accelerator (Rabobank + RocketSpace), Sprint Accelerator and Spark LabsCultiv8 Accelerator** (Australia)

People:

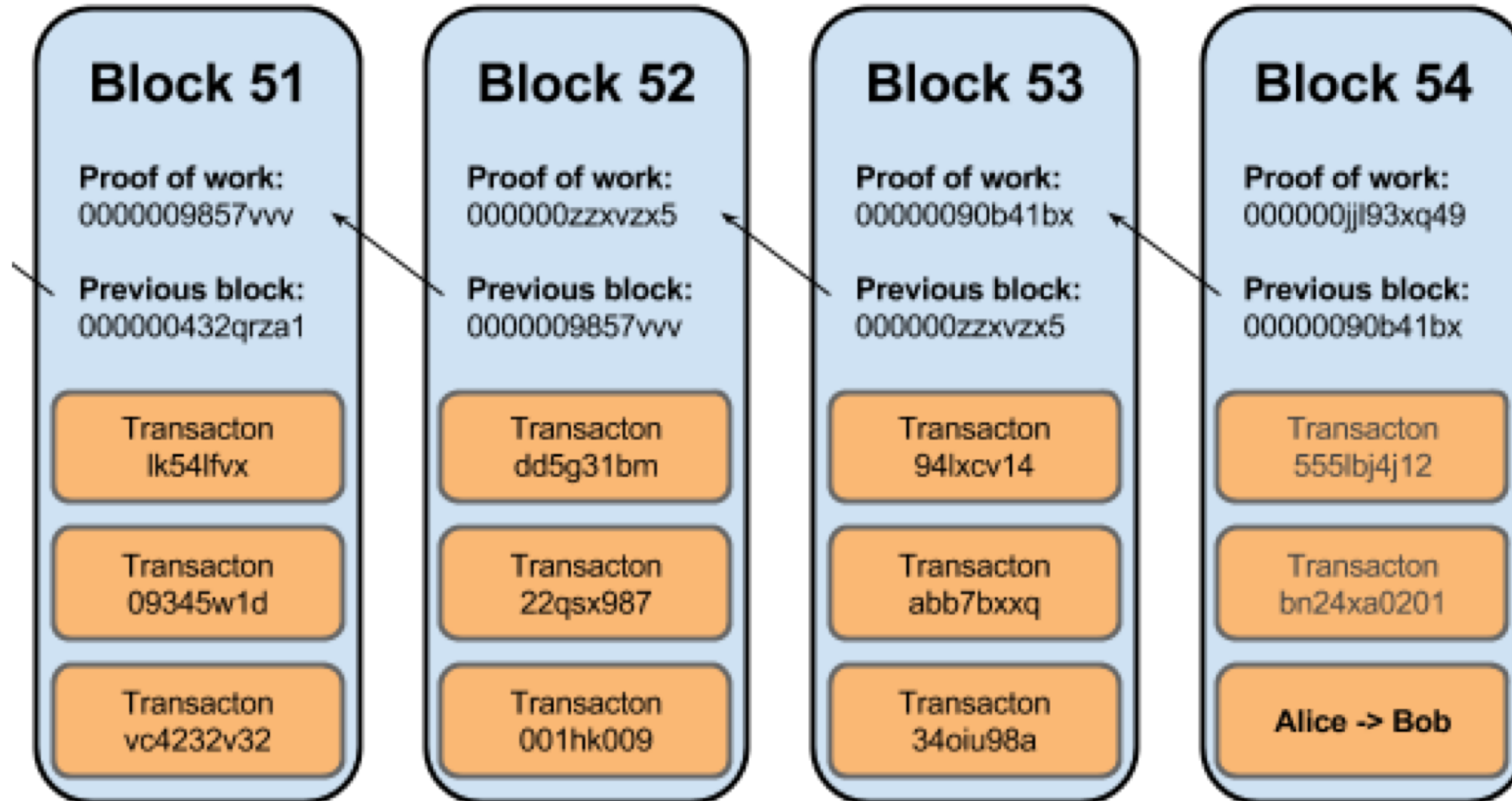
- We are a team of supply chain engineers, food scientists, blockchain developers, technology executives, farmers, sustainability specialists and entrepreneurs **united by a compassion for transparency and truth in our food system**








Blockchain 101



Blockchain 101



Blockchain 101

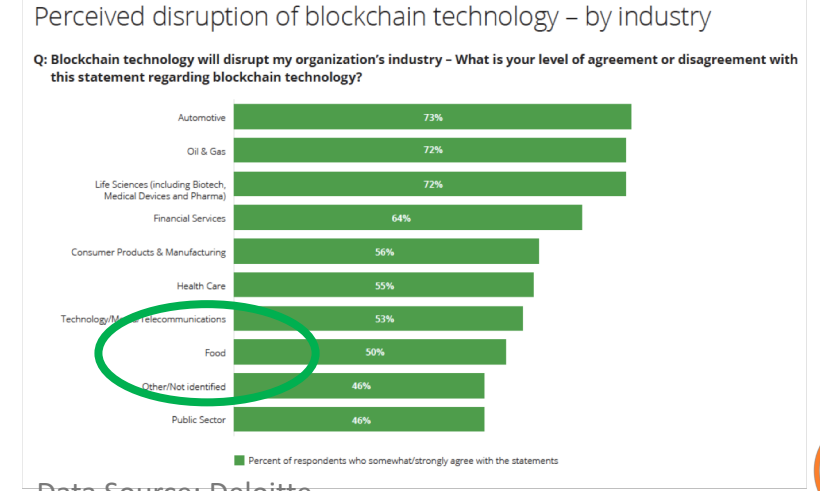
| | Myth | Reality | |
|---|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 |  Blockchain is Bitcoin | <ul style="list-style-type: none">● Bitcoin is just one cryptocurrency application of blockchain | <ul style="list-style-type: none">● Blockchain technology can be used and configured for many other applications |
| 2 |  Blockchain is better than traditional databases | <ul style="list-style-type: none">● Blockchain's advantages come with significant technical trade-offs that mean traditional databases often still perform better | <ul style="list-style-type: none">● Blockchain is particularly valuable in low-trust environments where participants can't trade directly or lack an intermediary |
| 3 |  Blockchain is immutable or tamper-proof | <ul style="list-style-type: none">● Blockchain data structure is append only, so data can't be removed | <ul style="list-style-type: none">● Blockchain could be tampered with if >50% of the network-computing power is controlled and all previous transactions are rewritten—which is largely impractical |
| 4 |  Blockchain is 100% secure | <ul style="list-style-type: none">● Blockchain uses immutable data structures, such as protected cryptography | <ul style="list-style-type: none">● Overall blockchain system security depends on the adjacent applications—which have been attacked and breached |
| 5 |  Blockchain is a "truth machine" | <ul style="list-style-type: none">● Blockchain can verify all transactions and data entirely contained on and native to blockchain (eg, Bitcoin) | <ul style="list-style-type: none">● Blockchain cannot assess whether an external input is accurate or "truthful"—this applies to all off-chain assets and data digitally represented on blockchain |

DATA SOURCE: MCKINSKEY & CO



Blockchain Applicability

Industry Disruption for Multiple Verticals



Data Source: McKinsey

Data Source: Deloitte



Emerging Food Use Cases in Blockchain

- Data Sharing + Supply Chain Intelligence
- Sustainability
- Food Quality
- Food Safety
- Traceability
- Commodity Management
- Marketplaces
- Payments
- IOT and Live Conditions Monitoring
- Authenticity
- Certifications and Audit
- Personalization of Food
- Intelligent Data Driven enhancements to Sourcing Strategies

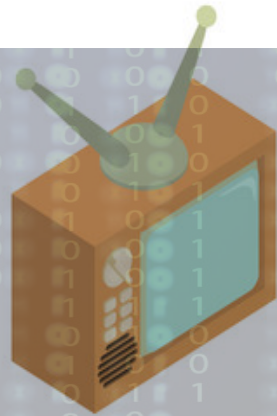


Digitization of Food



Future of Food

Enabling Personalization through Digitization

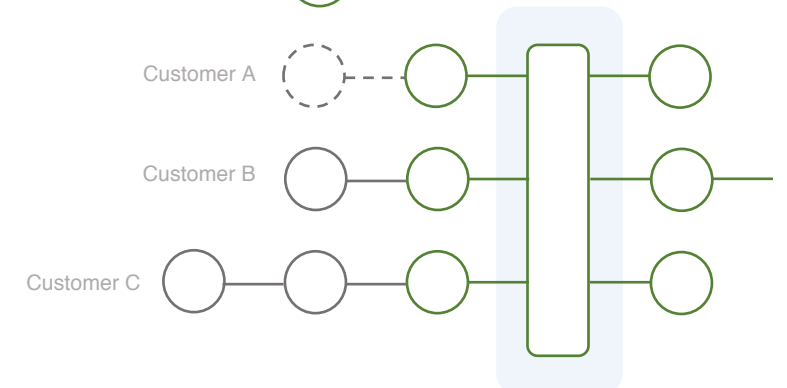
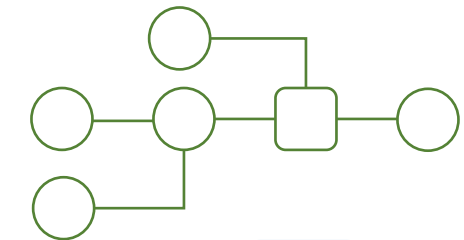
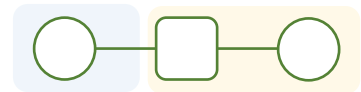


ripe.io Platform



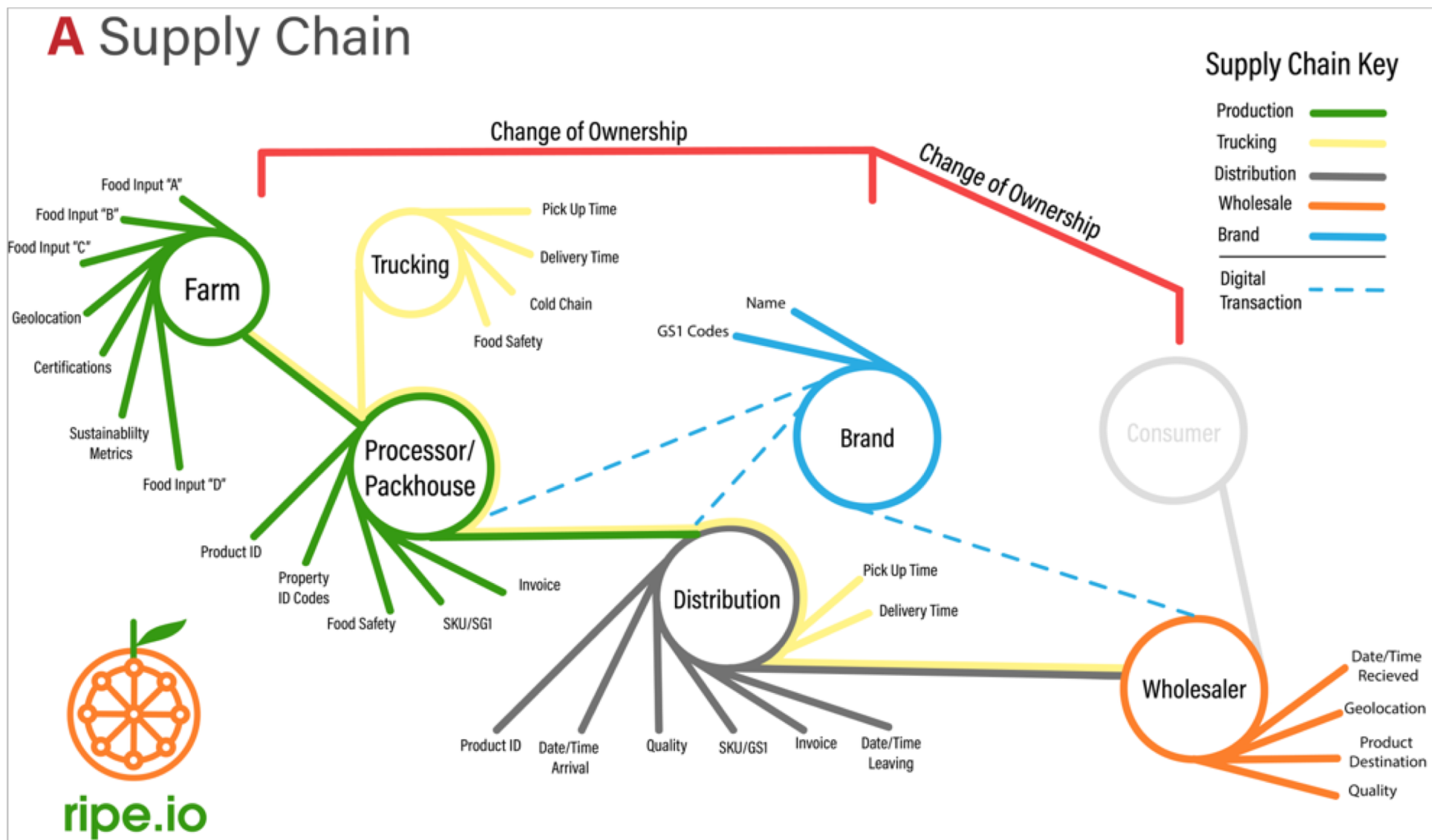
Supply Chains Come in all Shapes & Sizes

- 1** *Simple Supply Chain + Vertically Integrated*
 - Small number of stakeholders
 - Single owner
- 2** *Simple Supply Chain + Non-vertically Integrated*
 - Small number of stakeholders
 - Multiple owners
- 3** *Item-Specific Supply Chain*
 - Different origin points and/or stakeholders depending on product
- 4** *Complex Supply Chain*
 - Longer chains
 - More stakeholders
- 5** *Pre-Existing, Networked Stakeholder*
 - The same stakeholder crosses multiple value chains for different customers



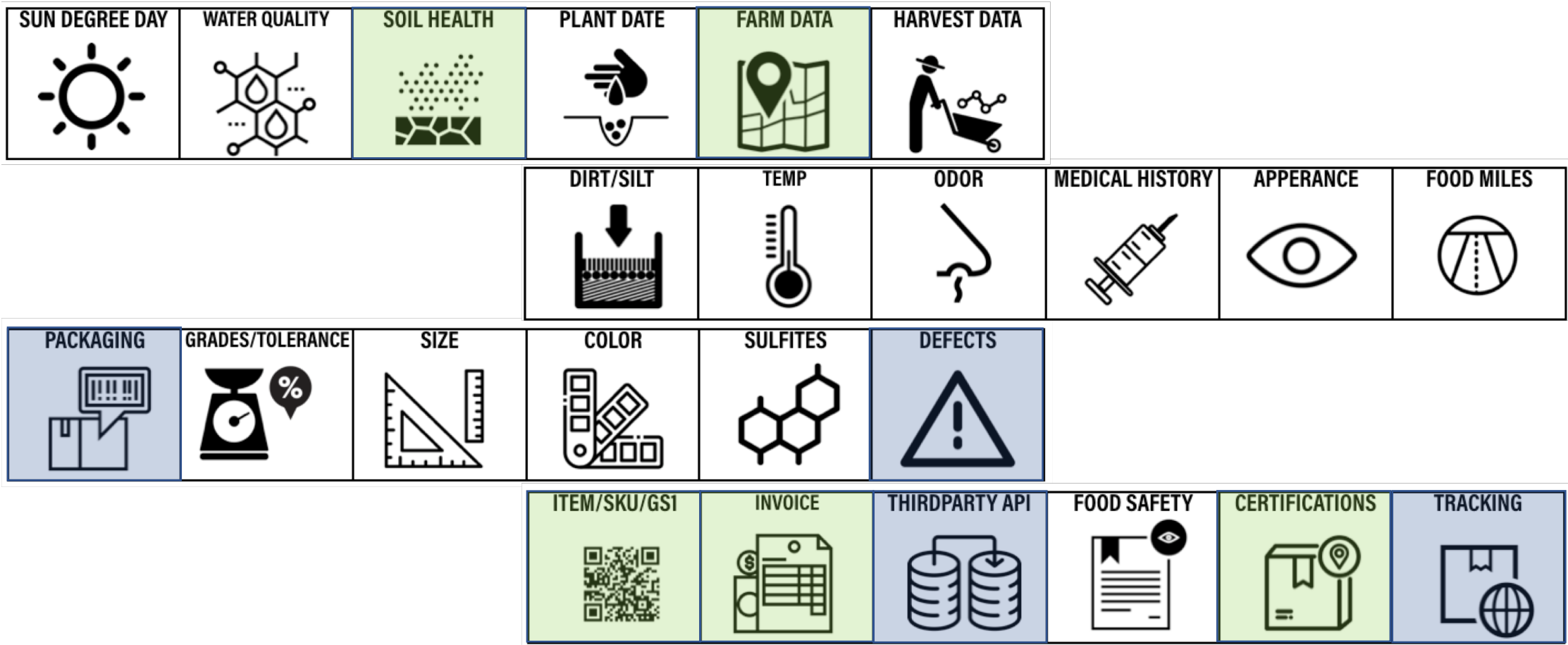
Mapping Out the Food Journey

Digitizing begins with identifying the physical supply chain gaps



Food Bundle

Translating the supply chain into a digital food journey



ripe.io Dashboard

Visualizing the Food Journey for an Efficient Business Models

☰

07/25/2018
San Francisco
5032
SEARCH

PRODUCT TRACKING

| | | | | | |
|---------------------------------------------------------|-----------------------------------------------------------------------------|------------------------------------------|------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| Product Name Cherry Tomato Medley | | Item # 5021 | Reference # 1738948 | | |
| Quality Rejection (Y/N) N | | Rejection Reason N/A | | | |
| Pickup Date & Time 07/23/2018 01:30 PM | Farm To Distributor Temp. / Humidity In Transport: 54 °F /53 % | Arrived 07/24/2018 09:30 PM | Departed 7/25/2018 08:30 AM | Distributor To Restaurant Temp. / Humidity In Transport: 43 °F /52 % | Receiving Location San Francisco Temp. / Humidity At Receipt: 41 °F /46 % |

Harvest Date
07/23/2018
10:30 AM

Farm

→

Received Date
07/25/2018
10:30 AM

End User

More Tracking Details

Event Sequence

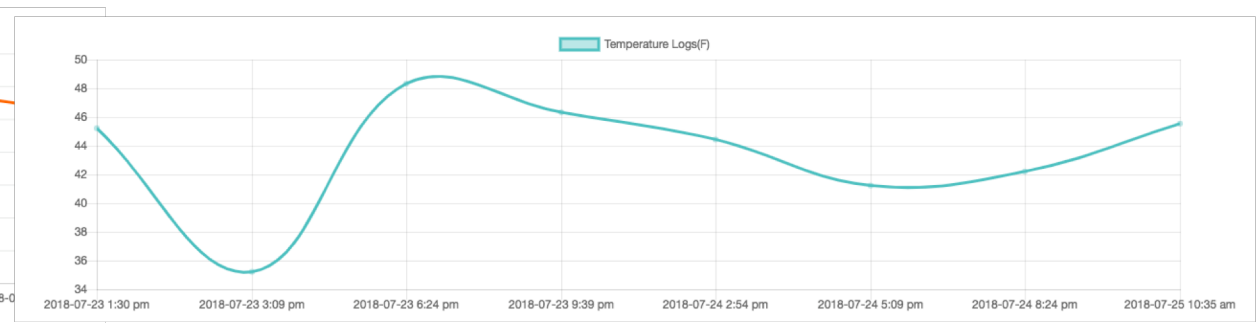
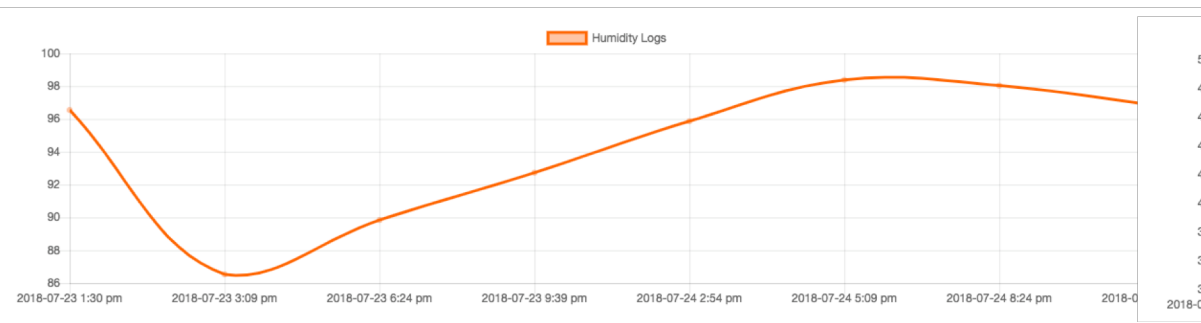
POWERED BY RIPE.IO
☐ Select ☐

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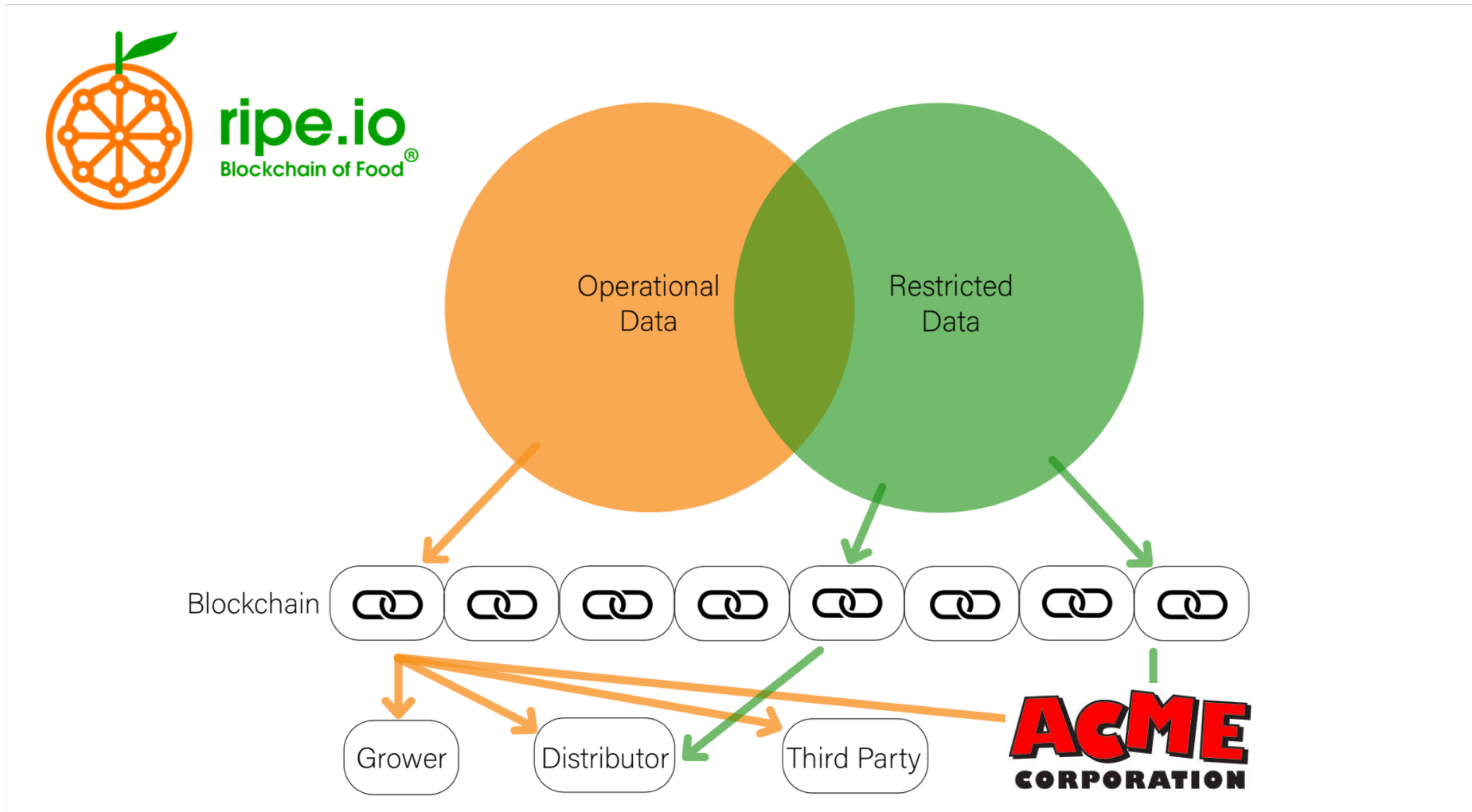
EVENT SEQUENCE

Sequence of Events in Blockchain

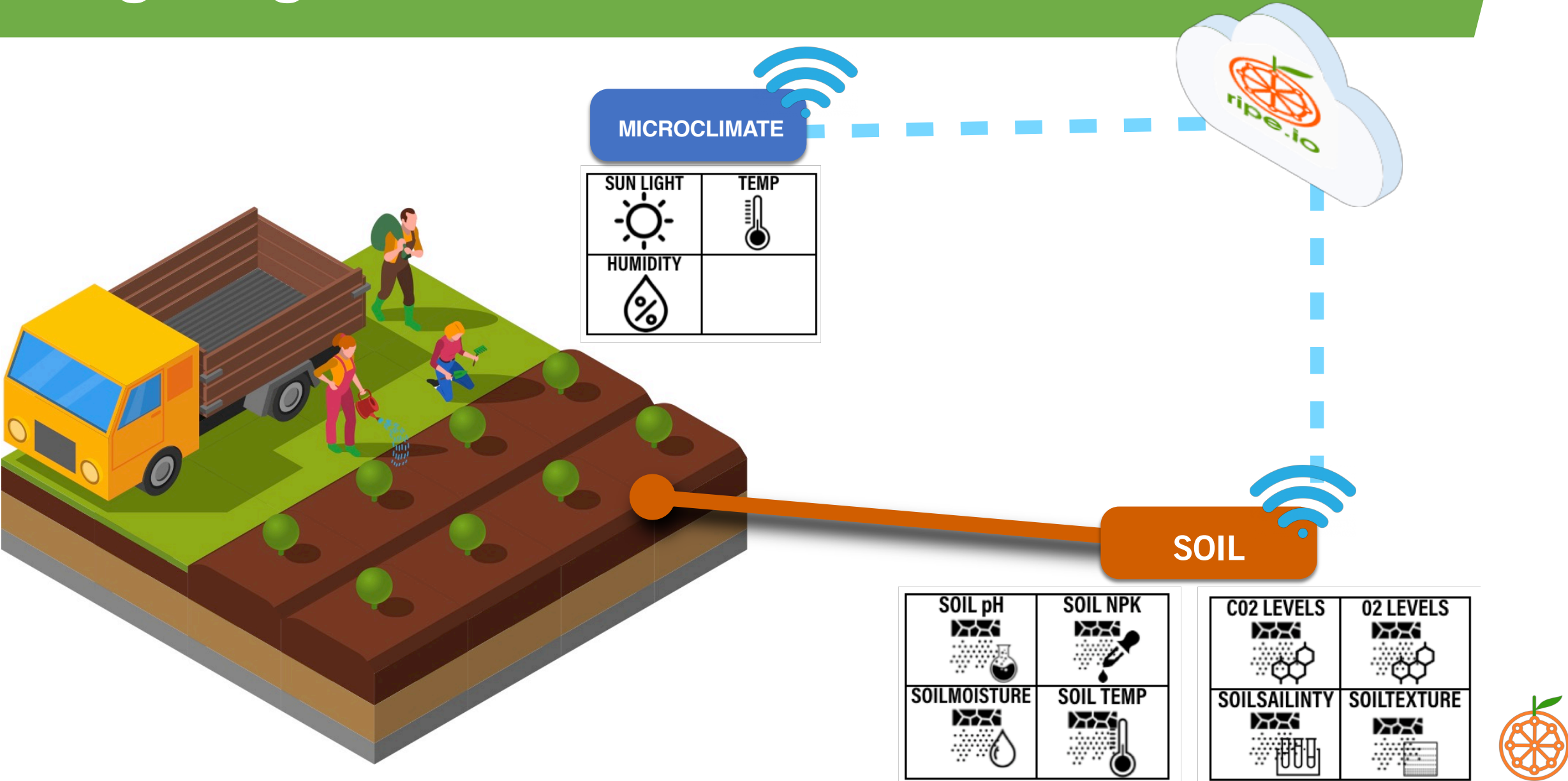
| Event Name | Owner | Date and Time | BC Txn Hash | Data |
|------------------------|-------------|---------------------|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Received at restaurant | Restaurant | 07/25/2018 10:30 AM | 0x1c2c1a1b1242ae895fa4b2845494a763f92ac8bef760e8d927102a4a38bf053e | Product Name: Cherry Tomato Medley Item #: 5021 Reference #: 1738948 Quantity Received: 1 case SG Receiving Location: San Francisco, 7/25/2018 10:30 AM |
| Product Data | Sensor | 07/23/2018 1:30 PM | 0x238874a33713115d8ec1310a42c4985bfa700ca5b7f908de3a9660fe667920bc | Item #: 5021 Mac Address: 44ead844ca9a Humidity Data: a95a708f7a5978cc6cd93aa9432d253c Temp. Data: d1386698930a7af168dd8fa2013181d0 Sensor Event ID: 6cb9e470518def54ec6cdf47d495aa8 |
| Warehouse Data | Distributor | 07/25/2018 8:30 AM | 0x01a911a389a908a29520296206f4904c255e82c8f78d9c2ca646300f5f9f0ed1 | Item #: 5021 Reference #: 1738948 Warehouse Address: 3135 Montgomery Blvd, Santa Clara 95052 Received Date: 07/24/18 09:30 PM Received Quantity: 1 case Humidity Data: a95a708f7a5978cc6cd93aa9432d253c Shipped Date: 07/25/18 8:30 AM Shipped Quantity: 1 case |



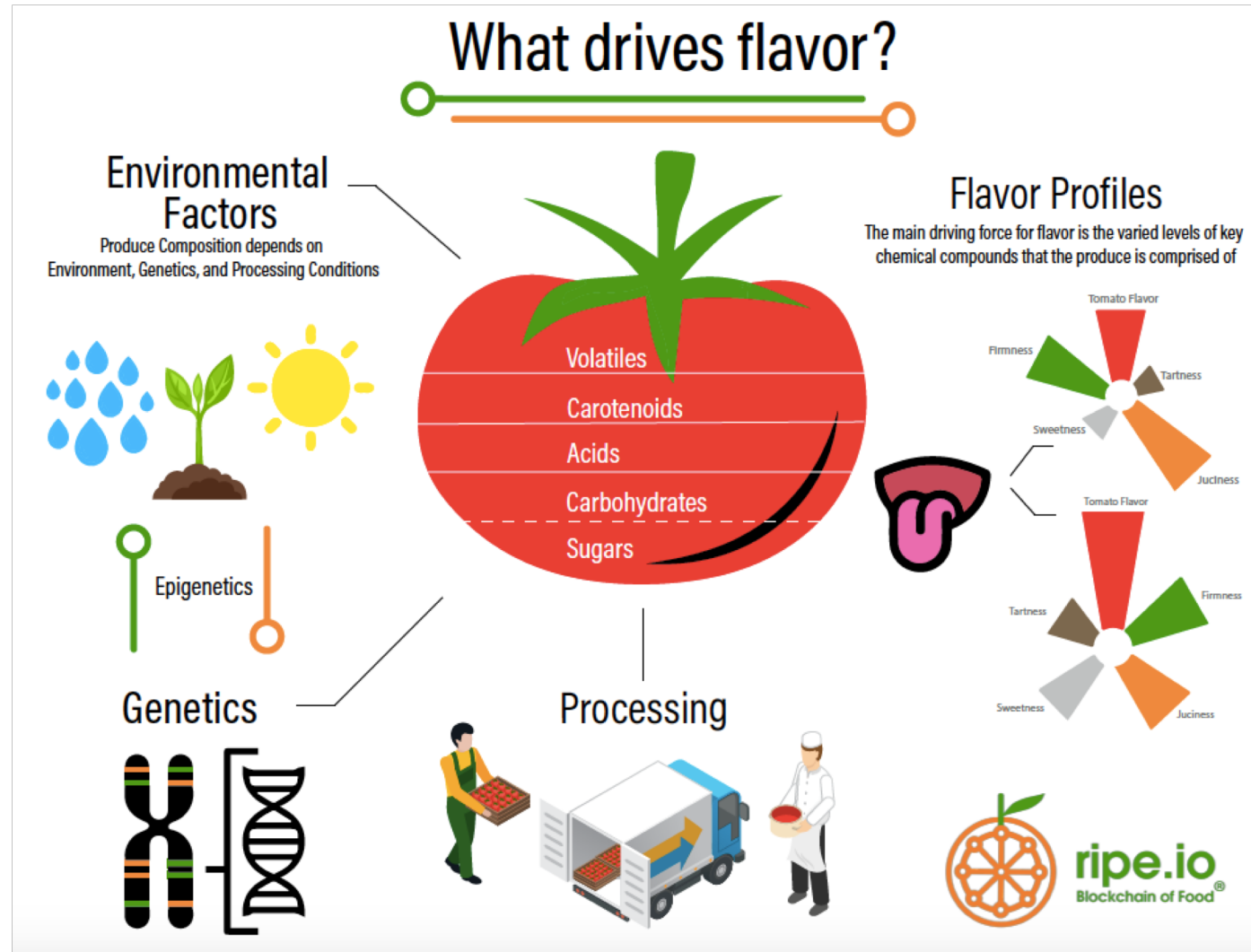
Data Sharing and Security



Integrating with Sensor and IoT Innovators

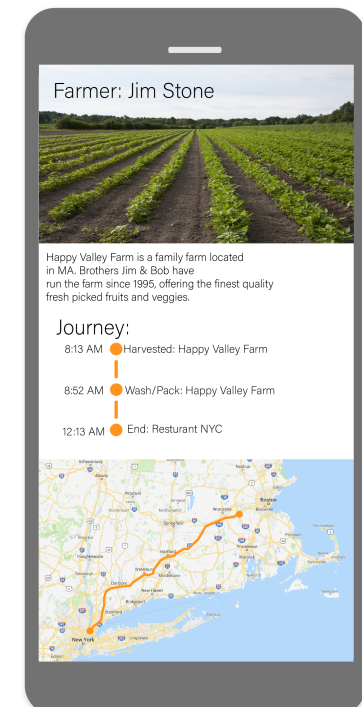
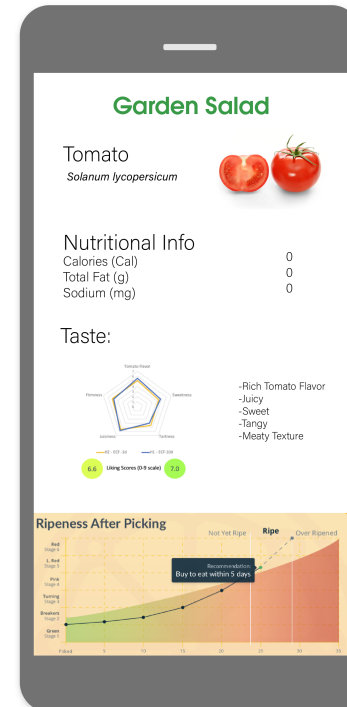
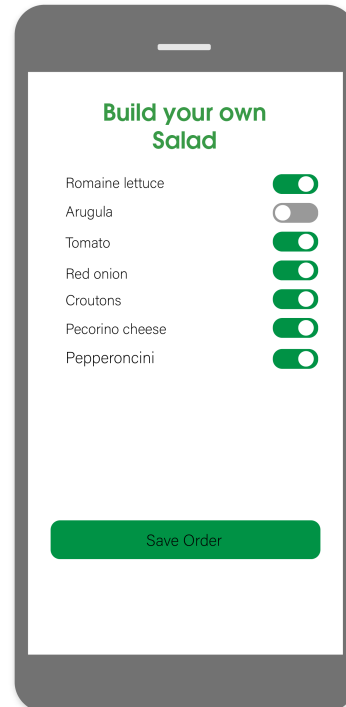
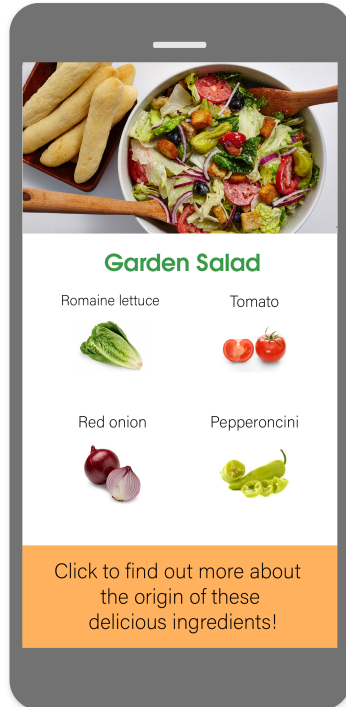
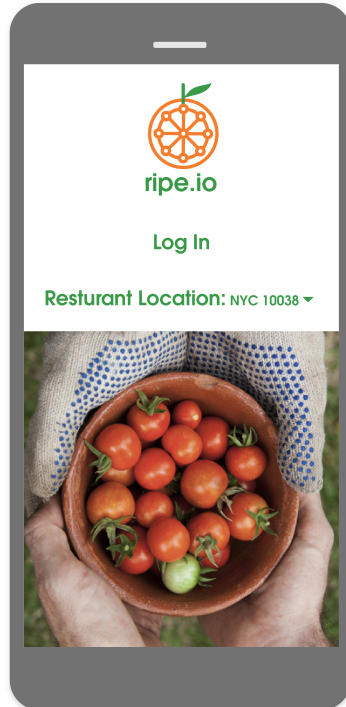
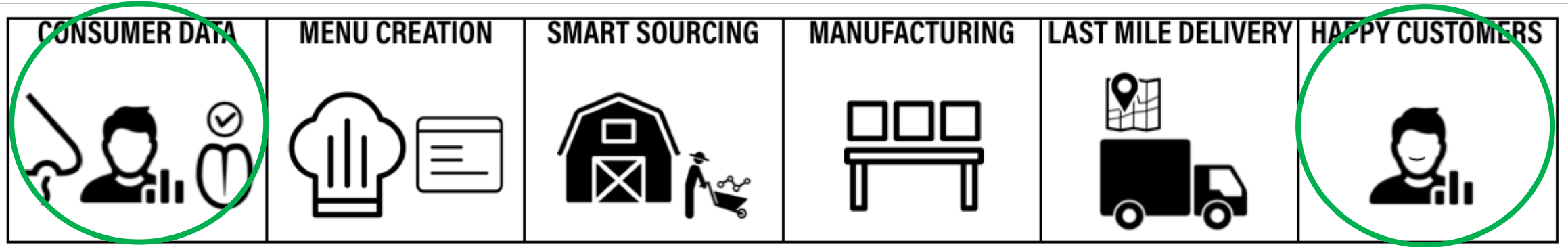


Flavor Profiling



Digitizing taste and preference profiles

Addressing the growing demands of personalization and transparency

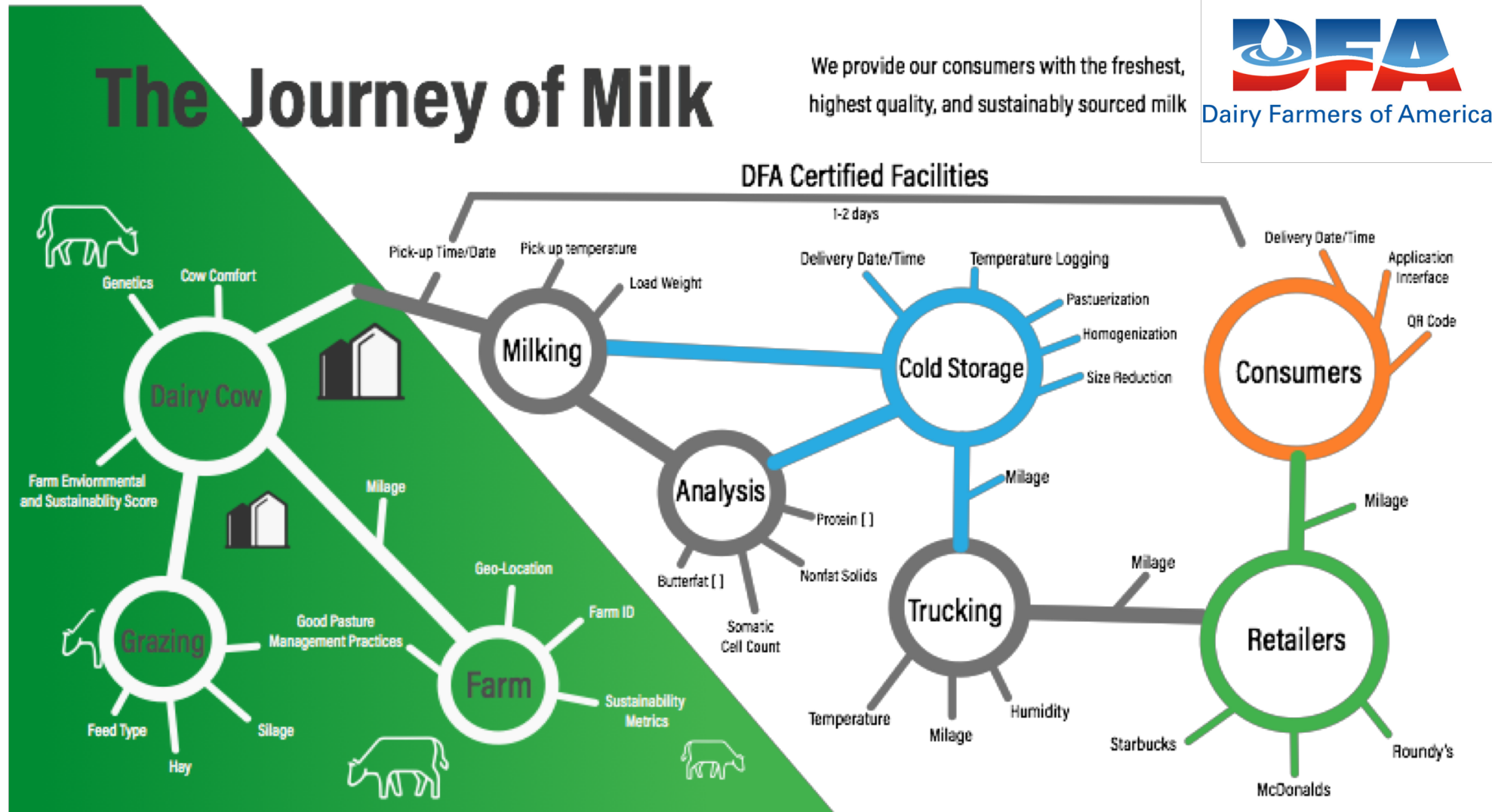


Client Solution: Dairy Farmers of America



Dairy Farmers of America

Growing demand of consumer engagement and sustainability transparency



Allows Connection with the Consumer



The milk used in your beverage came from a farm that participates in DFA's Gold Standard Dairy Program. This program ensures dairy production is done the right way:

- Nutrition
- Animal care and wellness
- Environmental stewardship
- Employee safety and training
- Milk safety and quality
- And much more

[Learn More](#)

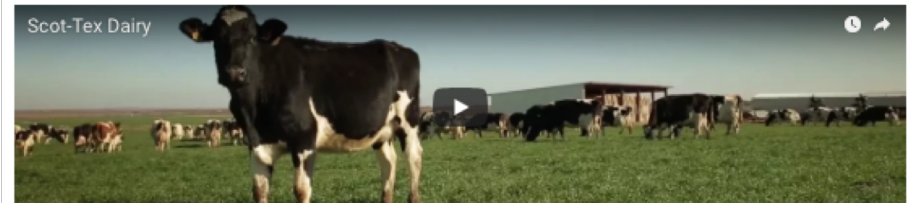


Farmer Bill

Located in Cedarburg, Wisconsin, Farmer Bill and his family farm produced the milk used in your beverage today, but he does so much more than that. He's your neighbor, community leader and your local agricultural supporter. With 300 cows on their farm, Farmer Bill supplies first-rate milk to premium brands.

When you purchase a product that uses the dairy from his farm, you're not only supporting Farmer Bill, but his family who provides dairy for local and global communities. Farmer Bill is dedicated to supplying you with safe, nutritious dairy products that can immediately enhance your eating experience.

Scot-Tex Dairy



Brand Integrity & Supply Chain Innovation



Decreasing Food Waste

Consumer Demand for Sustainable Companies



30%



Driving Brand Integrity

Providing Transparent Information for Consumer Trust and Confidence



FAKE PARTS

ADULTERATION



COUNTERFEIT

ADULTERATION



COUNTERFEIT

FORGERY





Thank You



@ripeio

