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The Food Traceability System Landscape

Overcoming Challenges, Enabling Success

Feed the Future Partnering for Innovation Project
Feed the Future Enabling Environment for Food Security Project

February 3, 2021

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FOOD TRACEABILITY SYSTEMS

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Adam Keatts
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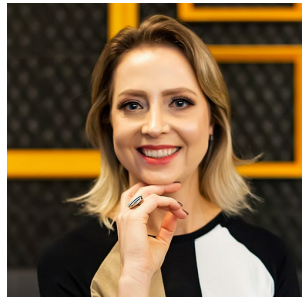

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THE ENABLING ENVIRONMENT FOR FOOD TRACEABILITY SYSTEM SUCCESS

Adam M. Keatts, Chief of Party, EEFS Project

February 3, 2021

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FEED THE FUTURE ENABLING ENVIRONMENT FOR FOOD SECURITY PROJECT

What is EEFS?

- Pre-competed USAID contract mechanism based in DC.
- Provides analytical services to USAID and its Missions.
- Builds the evidence base for interventions in ag market systems.

How do we define the enabling environment?

- The broader operating context for market systems.
- The systemic incentives for all market actors.
- The formal and informal barriers to competitive, inclusive, nutrition-sensitive outcomes in food systems.

Photo credit: Fintrac Inc.

SYSTEMIC BENEFITS OF FOOD TRACEABILITY

How food traceability systems (FTS) advance nutrition-sensitivity, inclusivity, and competitiveness in ag markets:

Mitigate food safety risks

- More nutritious foods generally present greater pathogenic risks (ASF, leafy veg, etc.).
- Identify source of contamination and enable rapid recall.

Expand market access

- National regulations, international standards, and trade agreements require traceability.
- FTS enable compliance.

Increase supply chain efficiency

- Data can identify production and distribution inefficiencies at all levels.
- FTS enhance coordination and enable targeted recall, limiting waste/cost.

FOOD TRACEABILITY AND USAID PRIORITIES

Expanding FTS adoption in developing countries can help advance key strategies:

U.S. Global Food Security Strategy

- "investing to link producers and other agribusinesses in the food system to end markets" (IR2) and "building capacity to improve food safety policies, guidelines, and enforcement." (IR5)

Multi-Sectoral Nutrition Strategy

- "strengthen food supply chain capacity to ensure high-quality, safe food", and "promote transparency within national food systems and enforcement of global standards."

Digital Strategy

- "strengthen critical components of digital ecosystems…capable digital service providers and workforce; and, ultimately, empowered end-users of digitally enabled services."

KEY FACTORS DRIVING FTS ADOPTION

FTS adoption in developing countries remains low. EEFS' study presents 4 factors that affect FTS adoption and successful implementation:

1. **Operator incentives:** Requirements within mandatory regulations and/or voluntary standards to access a target market channel.

2. **Operator capacity:** Financial resources, knowledge, and skills to implement an FTS.

3. **Operator access to technology:** Local availability of customizable platform to meet objectives, and ICT infrastructure for connectivity, reliability, and speed.

4. **Supply chain coordination:** Willingness and ability of suppliers and buyers along the chain to share information (necessary to meet regulatory/standard requirements).

WHAT'S NEXT?

Detailed findings of the EEFS study:

1. Food operator objectives and the design dimensions for FTS.

2. Incentives for food operators – traceability requirements according to specific regulations and standards.

For more information, please contact the EEFS project here:

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OBJECTIVES AND DIMENSIONS OF FOOD TRACEABILITY SYSTEMS

Katherine de Matos, Food Safety and Traceability Expert, EEFS Project

February 3, 2021

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WHAT IS A FOOD TRACEABILITY SYSTEM (FTS)?

A tool that allows food operators to track food ingredients and/or finished food products throughout their entire lifecycle using captured and stored records, including KDEs and CTEs.

- KDEs = Key Data Elements: record the who, what, where, when at each step of the chain.
- CTEs = Critical Tracking Events: record the completion of a step in the supply chain.

Photo credit: Fintrac Inc.

WHY DO FOOD OPERATORS ADOPT FTS?

OBJECTIVES

- Mitigate food safety risks
- Meet regulatory requirements
- Meet consumer demands
- Meet supply chain partner requirements
- Establish brand identity, values, and principles
- Comply with voluntary standards
- Optimize production

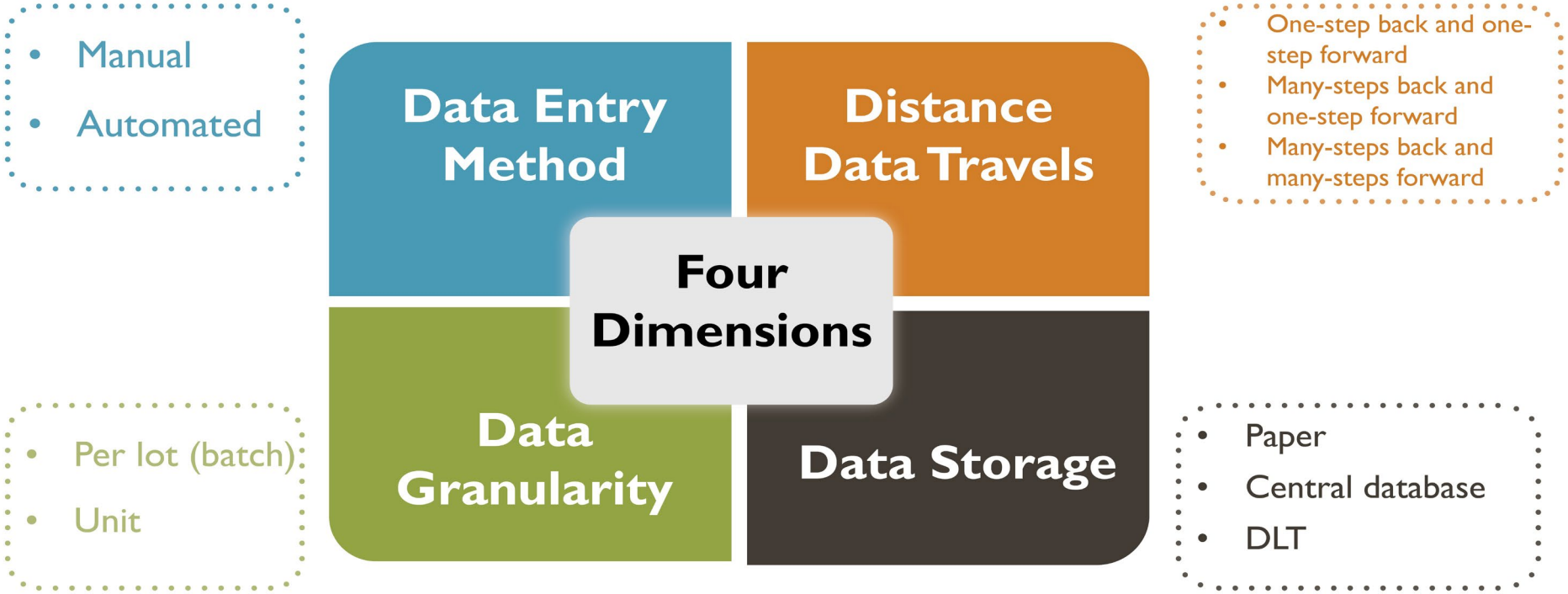
HOW DO OPERATORS SELECT A FTS?

Photo credit: Fintrac Inc.

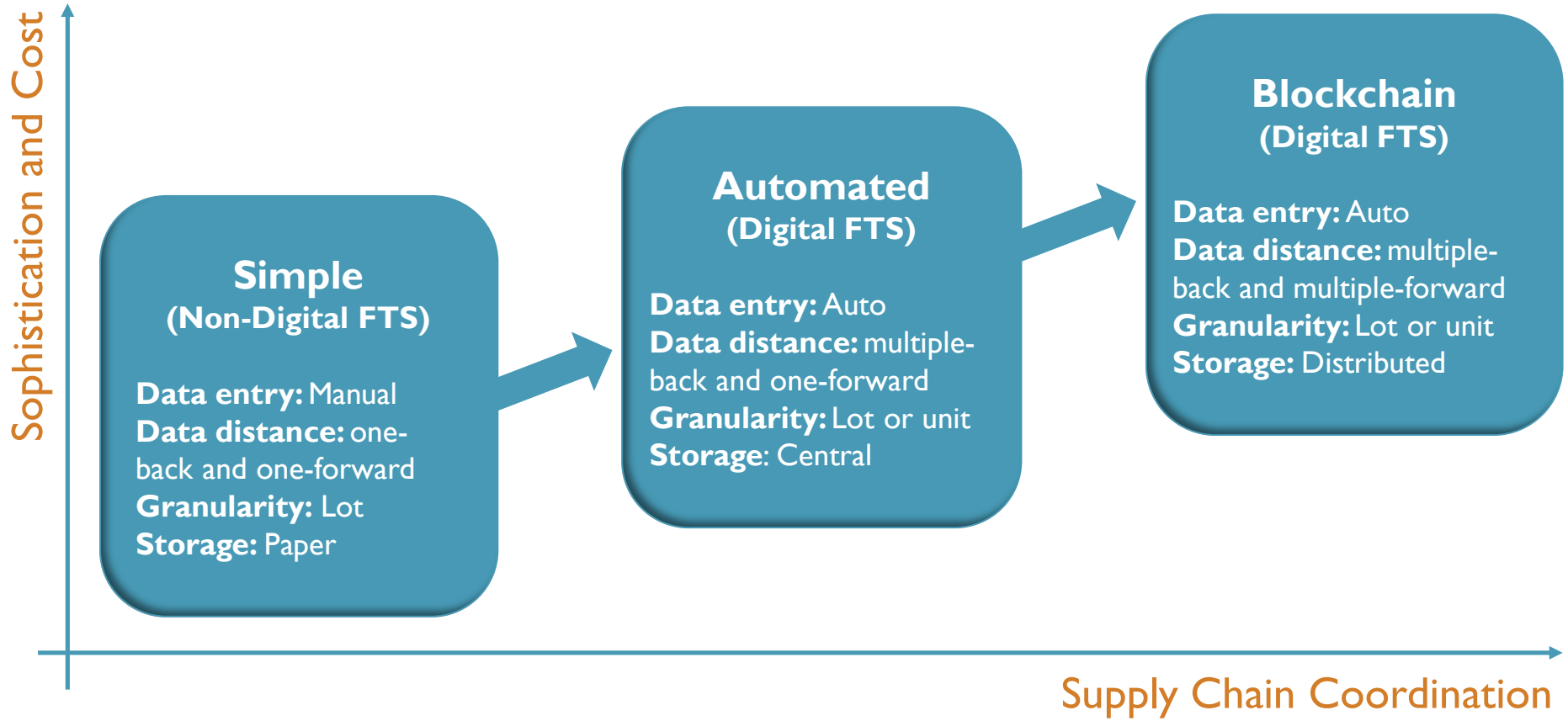
- There is no single ***how***.
- Achieving stated objectives will depend on the FTS design.
- ***And***, the FTS design should depend on the food operator's objectives:
  - Including the specific traceability requirements for a target market segment.
    - Prevailing regulations and standards will dictate necessary functionality.

FOOD TRACEABILITY SYSTEM DESIGN

An FTS design has four dimensions, and their combination defines how to implement the FTS.



EXAMPLES OF FTS DESIGN



WHICH COMBINATION OF DIMENSIONS TO CHOOSE?

- What are the requirements imposed?
  - Depends on the target market.
    - National regulations, market-driven standards, and/or consumer expectations.
- What are the operator objectives?
  - Different designs can achieve the same (or different) objectives, with a different set of benefits.
- What capacity does the operator have?
  - Consider financial, technical, and operational capacity.
  - Consider digital infrastructure available (connectivity, rules on interoperability, etc.).
- How complex and integrated is the supply chain?
  - Number of actors, steps in the supply chain, and countries involved.
  - Willingness and ability for suppliers and buyers to share information.

IS BLOCKCHAIN THE BEST SOLUTION FOR FOOD TRACEABILITY?

- Blockchain is a Distributed Ledger Techonology that enhances data integrity because it cannot be changed once entered.
- DLTs improve the way data is stored, but it does not improve the "garbage in, garbage out" dilemma.
- Regulations and standards dictate functionality — not technology.
- DLTs are not always the most appropriate solution for all operating contexts, particularly in least developed countries.
  - Need to consider objectives, requirements, operator capacity, access to technology, available infrastructure, and supply chain actor coordination.

TAKEAWAYS

Photo credit: Fintrac Inc.

- There is no single design of FTS that can be considered the best solution.
- The best solution always depends on the context.

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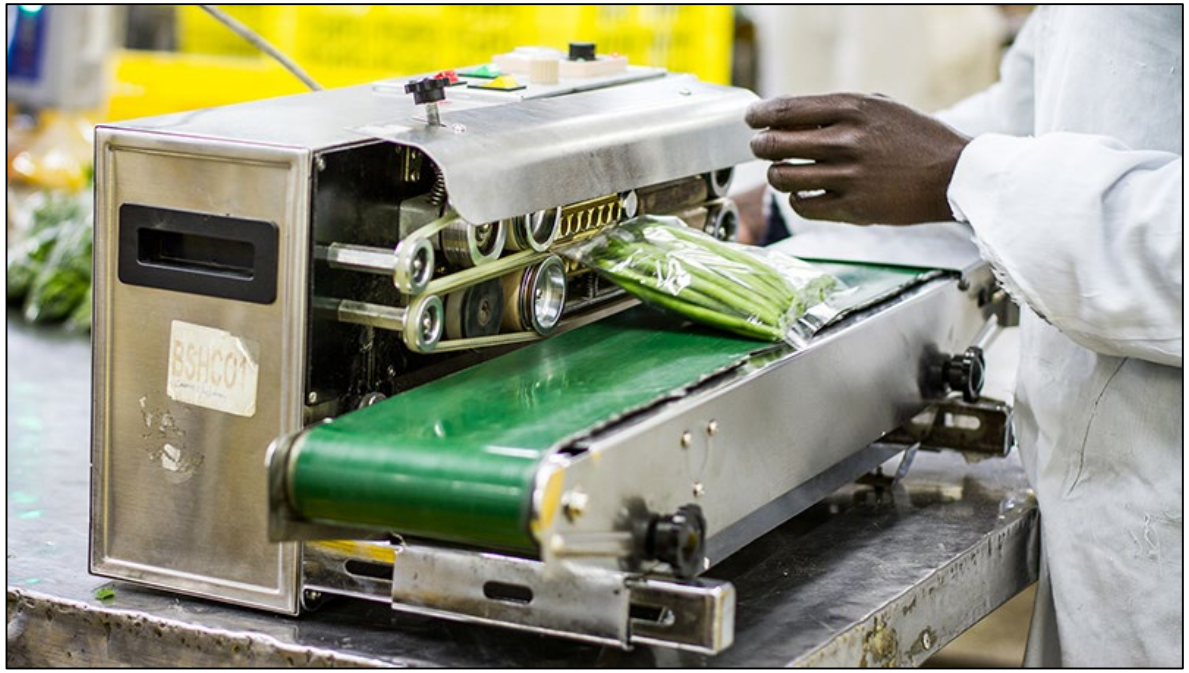

INCENTIVES FOR TRACEABILITY ADOPTION

LAWS, STANDARDS, AND GUIDELINES

Nicholas Klissas, Legal and Regulatory Expert, EEFS Project

February 3, 2021

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INCENTIVES FOR FOOD OPERATORS TO ADOPT TRACEABILITY SYSTEMS

The carrots and sticks that drive food operators' decisions:

- **National laws/regulations:** Rules adopted by governments to advance public interests.
- **International trade regimes**: Rules adopted by governments to engage in the international trading system
- **International guidelines:** Principles adopted by various public and private interests.
- **Voluntary Standards:** Rules adopted by buyers and industry networks to control their supply chain and deliver customers what they demand.

Photo credit: Fintrac Inc.

WHAT DRIVES FOOD LAWS?

- Impulse for change stemming from food emergencies (mad cow disease, terrorism, food scandals, poisonings).

- Regulations emerge from the interplay of consumer demand, food operators' acceptance of change, and regulators' ambitions.

LAWS SHAPE TRACEABILITY REQUIREMENTS

National governments establish the rules for food production, processing, and distribution that directly or indirectly affect traceability requirements:

- Some laws require mandatory tracking of certain food products either produced, transported, or consumed in the domestic market.
- Other domestic laws have extraterritorial reach due to their application to imports or transshipments of food products into or through the territory.
- "One up, one down" rule is the foundation.

FDA
FDA FOOD SAFETY MODERNIZATION ACT

efsa
European Food Safety Authority

WHY DEVELOPED COUNTRY LAWS MATTER FOR FTF COUNTRIES?

Photo credit: Fintrac Inc.

Feed the Future country decision-makers and food operators can look to developed country regulatory frameworks for four reasons:

1. International best practice in food traceability rules.
2. Examples of different regulatory approaches to achieve an objective.
3. Lessons learned on how consumer concerns drive regulatory action.
4. Practical guidance for food operators to access these end markets.

THE U.S. REGULATORY APPROACH

The evolution of food traceability rules in the U.S. has been incremental.

Driven by consumers, balances food sector concerns.

1906: Outrage over beef quality led to the "one up, one down" tracing rule (FMIA).

- Only applied to beef initially.

1938: FDA was given food safety standards and enforcement powers (FFDCA).

2002: Terrorism and mad cow disease drives increased food traceability (PHSBPRA).

- Increased traceability requirements, import controls.
- But farmers and restaurants remained exempt.

2011: FDA given further authority, requires HARPC plans (FSMA).

2021: Proposed regulations would create Food Traceability List.

- Requires firms to keep better records and create recall plans.

Photo credit: Fintrac Inc.

THE EU'S COMPREHENSIVE APPROACH

EU's General Food Law (2002)

- Uses "one up, one down" rule.
- Traceability requirements are comprehensive and should be performed at "all stages of production, processing, and distribution" without any exemption.
- Covers all food and feed.

Trade Control and Expert System (TRACES)

- Created in response to mad cow disease.
- Centralized traceability system records movements within the EU of animals, animal products, and the majority of plants.
- Enables electronic submission of SPS certificates.
- Accessible by member state authorities, food operators, and consumers.

The Rapid Alert System for Food and Feed (RASFF)

- Links food safety authorities, EU Commission, and the public. Food operators to report problems immediately.

JAPAN'S REGULATORY APPROACH

The "soft glove, hard fist" approach requires:

- One up, one down record-keeping.
- Firms are "responsible for appropriately taking the necessary measures to ensure food safety at each stage of the food supply process."
- Producer associations and municipalities impose tougher requirements.

New Basic Food Law (2002): Mad cow disease outbreak leads to emergency legislation, creating the Food Safety Commission, farm-to-table beef tracking.

Rice Traceability Act (2009): Scandal of non-food grade rice leads to precise tracking of rice and rice products.

内閣府 食品安全委員会
Food Safety Commission of Japan

TRACEABILITY IN TRADE AND INTERNATIONAL COOPERATION

Trading rules adopted by national governments that implement Free Trade Agreements or relevant World Trade Organization agreements.

- Traceability systems should be no more trade-restrictive than necessary.
- Importing countries should not compel exporting countries to adopt any particular traceability system.
- Technical assistance should be offered in cases where the requirements of the importing country cannot be met.

WORLD TRADE ORGANIZATION

FAO FIAT PANIS

IPPC

OIE WORLD ORGANISATION FOR ANIMAL HEALTH

INTERNATIONAL GUIDELINES

International organizations provide guidelines and reference standards for public or private sector interests to adopt and/or adapt to a local context.

Codex Alimentarius

Trace food if it improves food inspection and certification. Tools for traceability should be economically viable, practical, and technically feasible.

IPPC

NPPOs should keep records so that consignments are "traceable through all stages of production, handling, and transport to the point of export."

OIE

Traceability systems to be based on a risk assessment and under a Veterinary Authority.

ISO

Established technical standards for food traceability.

ISO 22005:2007 – Traceability in the Feed & Food Chain.

WTO TRACEABILITY REQUIREMENTS

- FAO, Codex, OIE, IPPC, and ISO food safety standards are authoritative.
- **SPS Agreement:** Allows measures, based on science, to be imposed for human health or safety, animal or plant health, or the environment.
- **TBT Agreement:** Limits the onerousness of traceability system requirements and product labelling, quality, and packaging standards.
- **Trade Facilitation Agreement:** Calls for single window systems to transmit border control documentation, including SPS certificates.

Animal Health Certificate
(for Dog & Cat to be Exported to Hong Kong from Group II Countries/Places only)

IMPORTANT : Please read the Notes overleaf before completing this form

PART A: DECLARATION BY *OWNER / CONSIGNOR (To be completed by owner / consignor)

Dog/Cat: | Breed: | Sex: | Age: Year Month
Colour : | Microchip No: | Type of Microchip: # ☐ ISO # ☐Other ISO Compatible
Expected Date of Arrival to be Exported: (dd/mm/yy) | Address of premises where the animal has been continuously resident during the preceding 180 days or since birth :
Name and address of consignee in Hong Kong :

I, the undersigned, am the *owner/consignor of the above animal and declare that the above information is true and correct.

Signature : _____ Name in Block Letter : _____ Date : ____/____/____(dd/mm/yy)

Address/Telephone/E-mail :

PART B: VETERINARY CERTIFICATE (This certificate is valid for 14 days from the date of issue)

I, * a government veterinary officer / a registered veterinary surgeon licensed to practise in the country/place from where the animal is exported, certify the following: (Note: The animal can only be exempted from quarantine provided all the following items are attested as 'True')

Please tick ☑ in the appropriate boxes ➔ | True | False

(a) I am satisfied as to the correctness of the declaration made by the *owner/consignor in Part A above. I have checked that the owner has written above.
(b) After due enquiry I am satisfied that the animal has been continuously residing in the country/place of export during the preceding 180 days or since birth prior to departure from that country/place. The area within 10km of animal premises has been free of reported cases of rabies in any animals (excluding bats) during the preceding 180 days from the date of departure.
(c) The animal has been vaccinated against rabies on _____ (date) that is less than one year and more than 30 days prior to departure. In the case of primary vaccination the animal was at least 90 days old when vaccinated.
** A copy of the history of all rabies vaccination records must be attached to this certificate ** .
(d) The animal is free of any quarantine restrictions imposed by the government authority of the country/place of export.
(e) The animal is free from clinical signs of infectious or contagious disease and is fit to travel to Hong Kong.
(f) I have sighted the attached vaccination records/certificates and confirmed that the animal has been fully vaccinated against the following canine/feline diseases on _____ (date) that is not less than 14 days and not more than 1 year before coming into Hong Kong.
Dog:- Canine Distemper, Infectious Canine Hepatitis and Canine Parvovirus.
Cat :- Feline Panleucopaenia (Infectious Enteritis), Feline Respiratory Disease Complex (Cat Flu).
** A copy of the history of above mentioned vaccination records must be attached to this certificate ** .
(g) I certify that the animal is either not pregnant or less than 4 weeks pregnant if it is a female.

Signature : _____ Name in Block Letter : _____ Date : ____/____/____(dd/mm/yy)

*Official Capacity : Seal or Stamp ➔

Address/Telephone/Fax/E-mail :

PART C: OFFICIAL AUTHORITY (This part must be fully completed and stamped/sealed by a full time salaried Government Veterinary Officer.)

I am a full-time Government Veterinary Officer and I confirm that the above-mentioned veterinary surgeon is registered and licensed to practise in the country/place from where the animal is exported.

Signature : _____ Name in Block Letter : _____ Date : ____/____/____(dd/mm/yy)

Official Capacity : Official Seal or Stamp ➔

Address/Telephone/Fax/E-mail :

* Delete as appropriate
(Form No. VC-DC2)

PRIVATE VOLUNTARY STANDARDS

- Developed by standards organizations, businesses, nonprofit organizations, and/or industry networks.
- Conform to, and often exceed, international guidelines/reference standards.
- Compliance not legally required by national laws or international treaties.
- Compliance required to access market channels where buyers have adopted the standard.
- Examples:
  - **GlobalGAP:** Covers crops, livestock, and aquaculture; particularly tailor made for firms covered by the EU General Food Law.
  - **GS1 Global Traceability Standard:** Interoperability is GS1's outstanding feature, bringing UPC Barcodes, QR codes, and RFID tags. Creates standardized system of "semantics," i.e., KDEs, CTEs, GLNs, and GTINs.

NATIONAL VOLUNTARY STANDARDS

- Developed by and/or administered by government agencies.
- To establish a national product brand; or to better define a commonly identified characteristic or trait.
- Managed by a government agency which might either control the standard, encourage its adoption, or manage certification requirements.
- Uptake is on a voluntary basis.
- Examples:
  - **USDA Organic:** Created to eliminate confusion (and food fraud) in the marketplace and assure consumers.
  - **ThaiGAP and KenyaGAP**: Both similarly aimed at boosting food safety reliability, quality assurance, and access to European markets.

TAKEAWAYS

Photo credit: Fintrac Inc.

Assessing and understanding the detailed traceability requirements of prevailing regulations ***(within origin country and destination country)*** and standards ***(within target market channel)*** will:

- Guide development practitioners on the incentives for FTS adoption.
- Inform food operators the level of technical and operational capacity they need to meet.
- Guide operators and technology providers to customize a traceability solution that best suits their needs while meeting requirements.

For more information

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Partnering for Innovation

Commercializing Traceability Software Products

Laura Harwig, Program Director

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FEED THE FUTURE PARTNERING FOR INNOVATION

Partnering for Innovation builds partnerships with private sector agribusinesses in emerging markets to help them sell products and services to smallholder farmers, who represent a potential market of more than 500 million customers.

Our partner agribusinesses are provided with the investment assistance, expert guidance, and technical support they need to expand into new markets and create a growing and lasting customer base for their agricultural innovations.

Impact to Date (FY 2012 – 2020)

1,713,198
Farmers cultivating 849,064 hectares of land have benefited from partnerships

75
Partnerships in 24 countries through September 2020

133
Technologies and management practices commercialized, with $110,036,515 million in sales of technologies by partners

$104,580,000
In leverage spent by partners to date, $47,112,712 invested by Partnering for Innovation

COMMERCIALIZING TRACEABILITY SOFTWARE PRODUCTS

Partnership Goals: USAID-LAC partnered with Partnering for Innovation in 2016 to target businesses selling proven food safety and export readiness technologies. The goal was to incentivize these companies to target small-scale actors in the Latin American market and help them comply with FSMA requirements.

Partnership Companies: Two companies were selected for investment: Farmforce and Solutions SA. Both of these companies were developing and scaling traceability software solutions.

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Partnering for Innovation

Funding Traceability Technology: Lessons Learned for Commercializing Traceability Software in Emerging Markets

Kate Granger, Consultant, Feed the Future Partnering for Innovation

January 2021

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PARTNER SNAPSHOT

Partner	farmforce™	Solutions
Geographic Focus	Global (Asia, Africa, Latin America)	Local (Haiti)
Key Solution	Enterprise Resource Planning Platform	Logistics Management
Value Proposition	Operational & Inventory Management	Farmer Database & Production Conditions Tracking
Target Customers	Multinational Corporations, Premium Producers	Other Value Chain Actors (Distribution, Processing, Farm Services, Finance)
Operational Ecosystem	Low barrier to entry, high fail rate, crowded space	High barrier to entry, skewed by government-backed products

PARTNERSHIP HIGHLIGHTS

farmforce™	
USAID Investment	$254,312
Partner Co-Investment	$118,796
Investment Period	July 2017 – August 2018
Geographic Focus	LAC Region
Smallholders Impacted	6 subscriptions, 1,714 smallholders

- The partnership goal was to expand and scale pilot operations in Guatemala throughout the region by:
  - ✓ Promoting exporter adoption of Farmforce's traceability systems
  - ✓ Conducting in-depth market research and marketing campaigns
  - ✓ Providing one-time subscription discounts of up to $1,000 per company
  - ✓ Providing stakeholder education on various compliance tools and strategies
- Expected to secure at least 6 new subscriptions with exporters sourcing from smallholders.

PARTNERSHIP HIGHLIGHTS

Solutions	
USAID Investment	$376,491
Partner Co-Investment	$279,190
Investment Period	March 2017 – July 2019
Geographic Focus	Haiti
Smallholders Impacted	2 new exporters, 8,800 smallholders

- The partnership goal was to scale the company's digital mango traceability system within Haiti by:
  - ✓ Collecting data on smallholder farmer production and location
  - ✓ Coordinating smallholder farmer groups clustered around aggregation points
  - ✓ Organizing aggregation infrastructure, like fruit collection sites and washing stations
  - ✓ Providing equipment, harvest crates, and smartphones to mango producer groups
  - ✓ Training producers to use the software to track each farmer's harvest
- Expected 9,000 mango producers to sell 800 MT of traceable mangoes to at least 2 exporters

PARTNERSHIP RESULTS

High-Level Challenges:

- Targets were negotiated under the assumption that FSMA compliance would be mandatory
- Instead, FSMA lacked clear enforcement and exporters preferred to risk noncompliance
- Without FSMA, the business case did not provide strong enough financial incentives
- Each actor felt that traceability benefitted others more who should bear the costs
- In addition, both companies also faced challenges beyond their control in 2017 at the start of the investment period
  - ✓ hurricanes and climate change shifts
  - ✓ anti-government protests and shut downs
  - ✓ shift from nonprofit to corporate business

Photo credit: Fintrac Inc.

PARTNERSHIP RESULTS

Overall Results:

- As a result, both companies struggled to meet their partnership goals:
  - ✓ Farmforce reached its target number of 6 new subscribers, but without FSMA to drive uptake, none continued using the software once subsidized pricing ended.
  - ✓ Solutions worked with the required number of smallholder farmers, but relied on in-place paper tracking systems rather than its AgroTracking software.
- From this perspective, both companies achieved their needed outputs, but failed to generate higher-level impact during the investment period

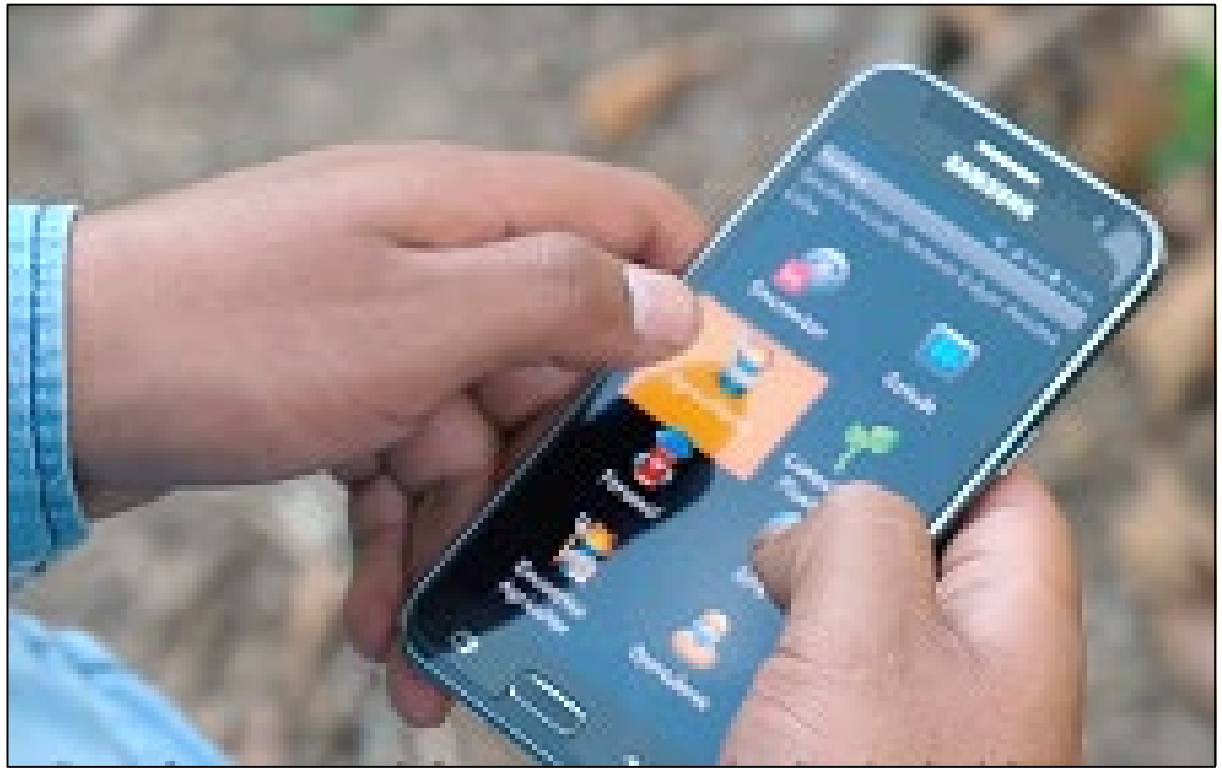

Photo credit: Farmforce

LESSONS LEARNED

TECHNOLOGY LANDSCAPE:

- Traceability technologies have proliferated over the last decade, from simple smartphone apps to complex enterprise management platforms.
- Both companies are now operating in a much more crowded market and neither drove sufficient sales by marketing solely as a traceability solution.
- They have now adapted their technologies and marketing strategies to allow users to better maximize the system's value relative to its cost:
  - ✓ Farmforce is focusing on higher-value crops where consumer demand for ethical labor and sustainability drives price premiums.
  - ✓ Solutions is building AgroTracking out as a logistics solution for produce buyers, processors, and service providers.

FUNDING RECOMMENDATION:

Invest in technology solutions for improved compliance, inter-operability, or data collection and visualization rather than in individual software.

The technology landscape has evolved into a crowded market, and public investment in the development of technologies tailored for niche markets should no longer be a priority. Instead, consider investing in technologies that connect different software products, enable reporting for multiple standards, and help companies capture and combine data more effectively.

LESSONS LEARNED

BUSINESS MODEL:

- Users of both software solutions stated that implementing traceability systems helped them:
  - ✓ Think through modernizing paper systems
  - ✓ Conduct deeper analysis in real time
  - ✓ Determine opportunity costs of different activities
  - ✓ Make more strategic decisions that helped lower operational costs over time
- However, most users did not have the corporate agility to translate traceability into operational improvements to their business systems.
- Many users wanted simple, cheap reporting tools that would meet export requirements without requiring significant operational changes.

FUNDING RECOMMENDATION:

Help companies make the case for traceability by demonstrating the benefits of software adoption.

System users must be able to maximize the full value of the investment of collecting and managing data. However, software providers rarely have the value chain expertise to help users identify what data needs to be tracked and how to use it to improve profitability. Funders should leverage their value chain expertise to provide clear protocols for maximizing software use within different business models and enhance users' ability to make better business decisions and streamline operations.

LESSONS LEARNED

SMALL-SCALE CAPACITY:

- Coordinated support services through traceability offer stronger market opportunities and more integrated technical assistance to smallholders.
- For example, both companies are explicitly leveraging traceability to develop credit histories for smallholders and link them with financial services and loan opportunities.
- Investing in production, harvest, and post-harvest technical assistance for smallholder farmers ensures high quality and price premiums for exporters of traceable products.
- These services offer high value to smallholders via increased yields, higher quality, premium prices, consistent market access, and higher incomes.

FUNDING RECOMMENDATION:

Link traceability to provision of complementary small-scale agribusiness services.

Government and development programs can leverage traceability systems to provide additional smallholder services, such as weather forecasting, input distribution, technical assistance, crop insurance, and credit. This would not only provide smallholders with access to information and novel pathways to increase incomes, but would also provide buyers, processors, and aggregators with key logistics data to ensure consistent supply, quality, and delivery.

LESSONS LEARNED

CATALYTIC DONOR FUNDING:

- A more critical investment analysis of market drivers and customer incentives during the investment due diligence process was needed.
- This upfront analysis could have allowed funders to identify multiple pathways for business growth, technology innovation, and sector harmonization.
- It would also have pushed partners to develop better risk mitigation strategies, especially as their sales strategies depended on a single market driver.
- A deeper analysis may have also revealed that targeting premium crops could have yielded higher numbers of smallholder farmers impacted, greater financial incentives for technology adoption, and a critical mass of technology uptake.

FUNDING RECOMMENDATION:

Conduct a more in-depth market analysis upfront to determine the best investments and provide relevant market intelligence.

Donors can make investments more strategic by conducting in-depth market research to identify the most promising opportunities with the greatest potential for scalable results by mapping solutions, companies, and needs upfront. This market research can also help provide technology providers and users with more information about sector needs in terms of price, user experience, and software functionality to help them better navigate the landscape.

LESSONS LEARNED

POLICY & ENABLING ENVIRONMENT:

- Lack of harmonization meant that exporters with other certifications had to implement a different reporting system to be FSMA compliant.
- In addition, exporters were unwilling to collaborate or share proprietary processes with competitors to navigate regulatory compliance requirements.
- Therefore, many preferred to risk penalties for noncompliance rather than make upfront investments to launch new traceability systems.
- However, exporters that proactively lay the foundation for systems will have a market advantage as regulations inevitably become stricter.
- Both companies are gaining in their target markets and investing in brand awareness and customer pipeline ahead of changes in FSMA enforcement.

FUNDING RECOMMENDATION:

Promote harmonized policy-making and tech infrastructure development to drive traceability uptake and facilitate compliance.

Donors have the expertise to help develop markets, increase capacity for technology use, and create good practice guidelines. Harmonized standards for data collection, governance, ownership, and sharing will streamline traceability adoption for value chain actors targeting multiple agricultural markets. Standardized reporting between various food safety standards will also encourage seamless traceability and create a more robust food system.

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Partnering for Innovation

Discussion with Private Sector Experts

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Head of Agriservices, Digital Delivery and Country Programs
Syngenta Foundation for Sustainable Agriculture

Robert Johnson
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Q&A

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