



The Importance of Data Standards

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U.S. DOE Industrial Efficiency and Decarbonization Office
Stakeholders' Workshop

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Vision: A fully traceable food system enabled by interoperable digital solutions accessible to all.

Mission: Engaging food system stakeholders in their traceability journey through applied research, capacity building, advocacy, system design and implementation.

**Standard
Development
and Extension**

**Education &
Training**

**Contracted
Research**

**Best Practice
Guidance**

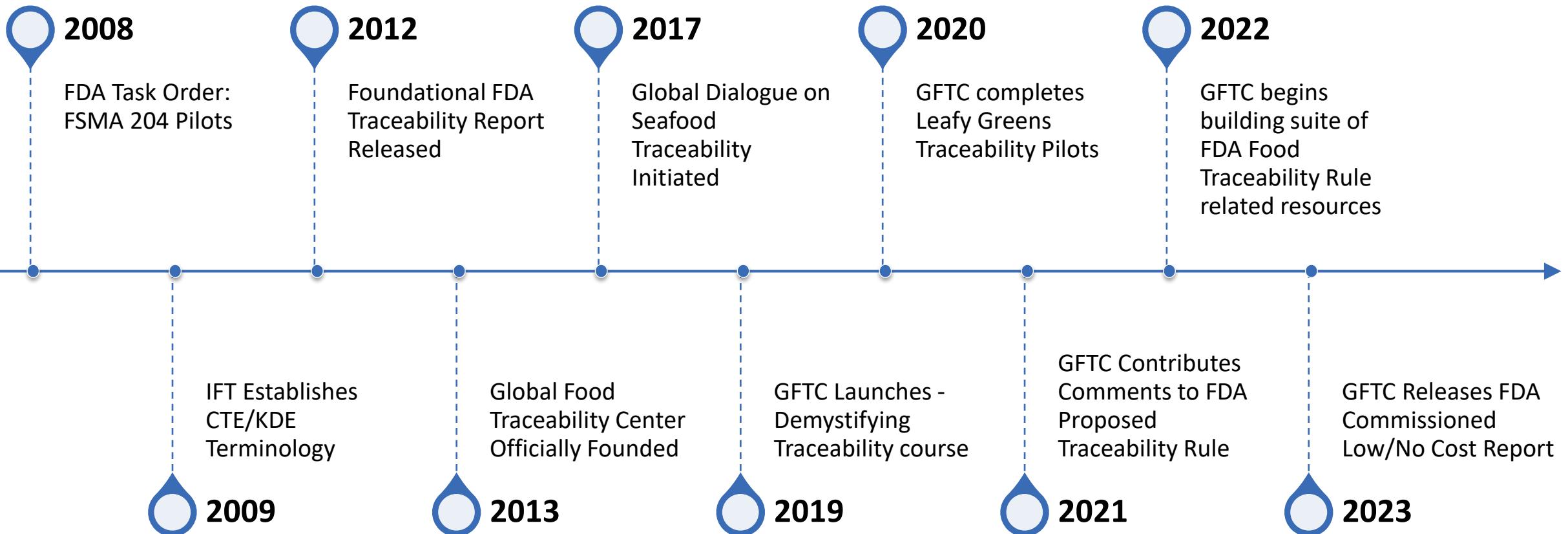
**Technical
Convenings &
Piloting**

**Tool
Development**

Advocacy

**Outreach &
Communication**

A History of GFTC's Engagement in Traceability



The Need for Decarbonization



Food and Agriculture Organization of the United Nations

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Food systems account for more than one third of global greenhouse gas emissions



New data tool offers detailed insights covering role of critical guidance for holistic mitigation efforts

Key insights on the Environmental Impacts of Food

Food production has a large environmental impact in several ways	Half of the world's habitable land is used for agriculture	Food is responsible for one-quarter of the world's emissions
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Food production has a large environmental impact in several ways

What are the environmental impacts of food and agriculture?

The visualization here shows a summary of some of the main global impacts:

- Food production accounts for over a quarter (26%) of global greenhouse gas emissions.¹
- Half of the world's habitable land is used for agriculture. Habitable land is land that is ice- and desert-free.
- 70% of global freshwater withdrawals are used for agriculture².
- 78% of global ocean and freshwater eutrophication is caused by agriculture.³ Eutrophication is the pollution of waterways with nutrient-rich water.
- 94% of non-human mammal biomass is livestock. This means livestock outweigh wild mammals by a factor of 15-to-1.⁴ This share is 97% when only land-based mammals are included.
- 71% of bird biomass is poultry livestock. This means poultry livestock outweigh wild birds by a factor of more than 3-to-1.⁵

Tackling what we eat, and how we produce our food, plays a key role

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Food systems account for over one-third of global greenhouse gas emissions



The environmental impacts of food production

Greenhouse gas emissions	26% of greenhouse gas emissions Food (13.7 billion tonnes)
Land use	50% of the world's habitable land
Freshwater withdrawals	70% of global freshwater withdrawals are used for agriculture Agriculture (70% of freshwater withdrawals) Industry (19%) Households (11%)
Eutrophication	78% of global ocean and freshwater pollution Agriculture (78% of global eutrophication) Other sources (22%)
Mammal biodiversity	94% of global mammal biomass (excl. humans) is livestock Livestock (94% of global mammal biomass (excluding humans)) Wild mammals (6%)
Bird biodiversity	71% of global bird biomass is poultry livestock Poultry livestock (71% of bird biomass) Wild birds (29% of bird biomass)



How Does Your Company Inventory GHG Emissions?

- As measured by what and how?
- How complete is your data?
- How are you receiving data from suppliers?
- How are you sharing data with customers?
- Can you validate or verify data?





Collective Understanding

Universally defines what data is required to measure decarbonization



Communication

Gets everyone speaking the same “language”



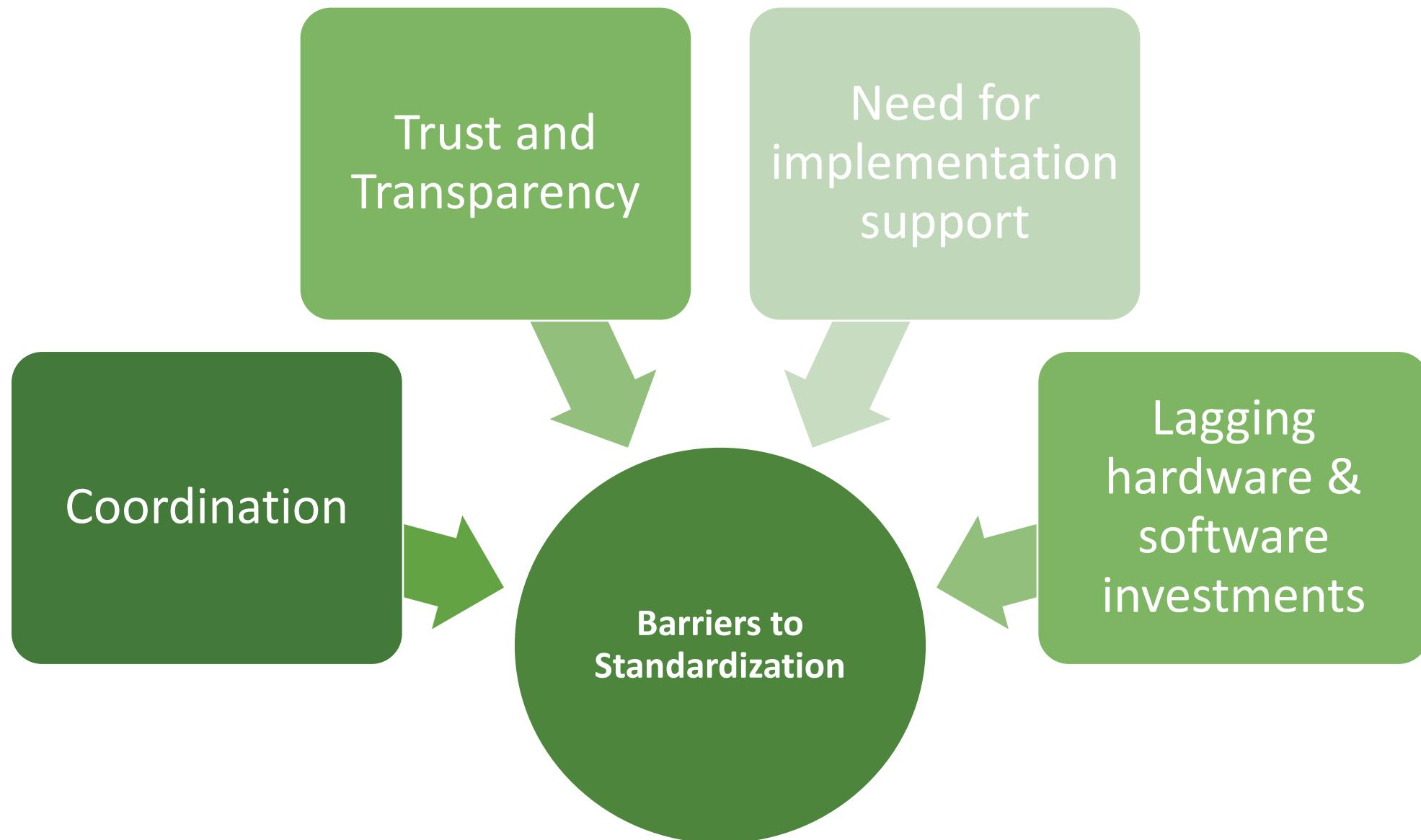
Benchmarking

Sets a baseline for achieving compliance



Guidance

Provides a “north star” for all to follow



Decarbonization – Benefits of a Standardized Approach





Who needs to be involved in setting these data standards?

Private Sector

Regulators

NGOs,
Academia, and
Multilaterals

Technology
Solutions &
Equipment
Manufacturers

Data Standardization Initiatives are Underway



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Trade

- Basic Importing and Exporting
- Forced Labor
- ACE and Automated Systems**
 - How to Use the Automated Commercial Environment (ACE)
 - ACE Portal Modernization
 - Getting Started with Automated Systems
 - ACE Automated Broker Interface (ABI) CBP and Trade Automated Interface Requirements (CATAIR)
 - Vessel Entrance and Clearance System (VECS)
- ACE Frequently Asked Questions
- Business Transformation and Innovation Division**
 - Additional Studies on Emerging Technologies
 - DHS Silicon Valley Innovation Program
 - DHS University Programs on Blockchain
 - Envisioning ACE 2.0

Leading with Global Interoperability Standards

CBP supports the creation and use of global interoperability standards, or standards that guide software to exchange data, bridging data silos that exist today among global supply chain participants. To facilitate this, CBP is working with industry partners to develop a common standard for product identification that will foster a transparent, seamless, and global supply chain.

CBP's support for international interoperability standards continues to gain traction. For example, CBP's Identifiers (DID) and Verifiable Credentials (VC) as an official web standard by the World Wide Web Consortium (W3C). CBP is also working with industry partners to establish additional verifiable trade data standards across several standard areas, including product identification, traceability, and quality. These standards will be developed through a collaborative process involving government, industry, and other stakeholders.

Tags: [Trade](#)

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GS1

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GS1 standards

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- Traceability
- Uncategorized
- Wild-Caught Seafood

“If you want to go fast, go alone. If you want to go far, go together.”



Thank You

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