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OCEAN
ACTION



Tuna 2020 Traceability Declaration



GLOBAL DIALOGUE
on Seafood Traceability

GDST 1.0 Standards and Guidelines For Interoperable Seafood Traceability Systems

Webinar Presentation to Members of the Global Tuna Alliance
30 January 2020

Speaker: David Schorr

Why this Webinar Now?

**Imminent launch of the first-ever
global, industry-led standards
for interoperable seafood traceability**

**The result of almost 3 yrs of work
by dozens of companies working B2B
through the GDST process**

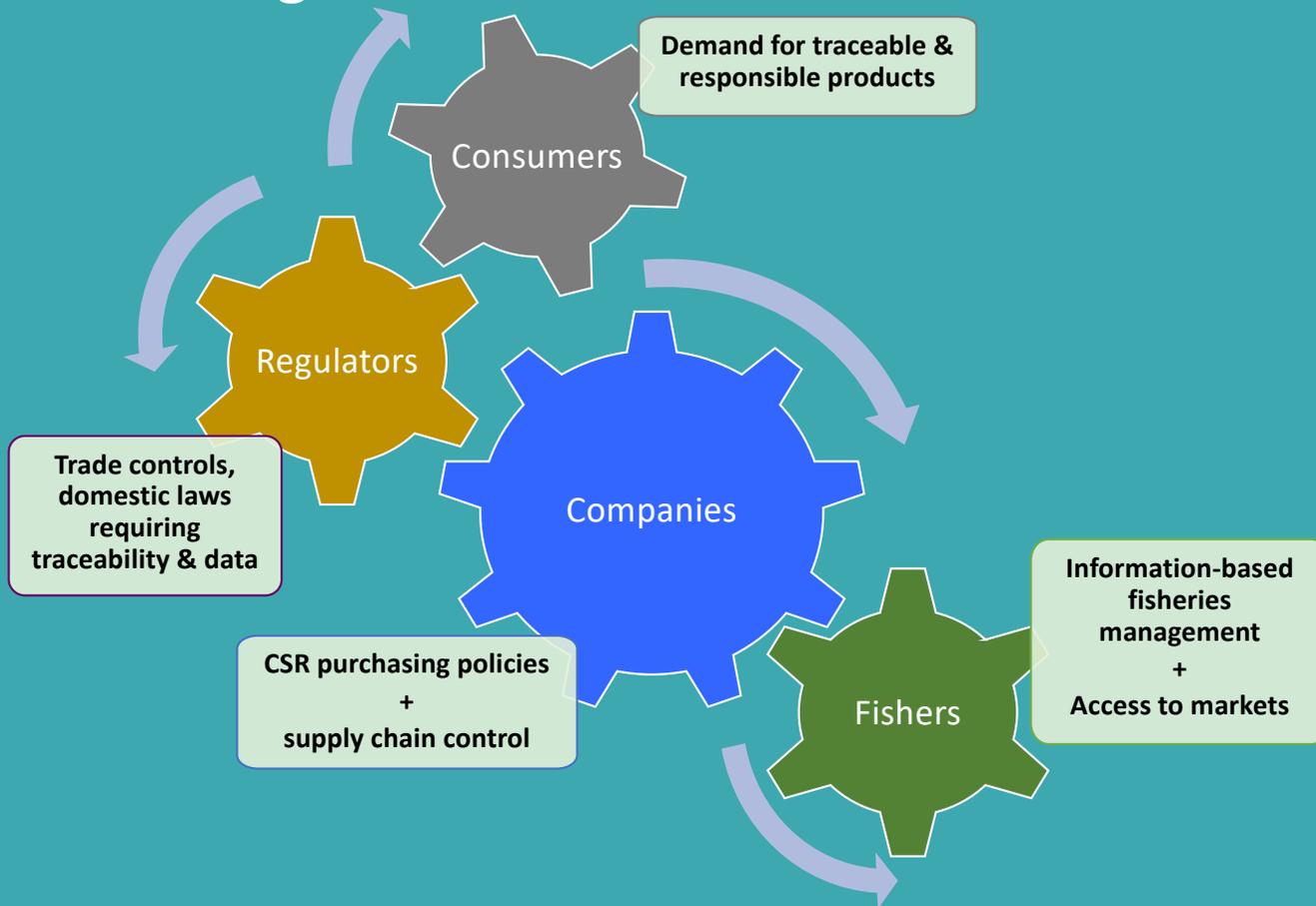
Agenda

1. The twin goals of interoperability and verifiability
2. Overview of the GDST
3. The GDST 1.0 Standards and Guidelines
4. Answering some FAQs
5. Q&A / Discussion

The twin goals of interoperability and verifiability

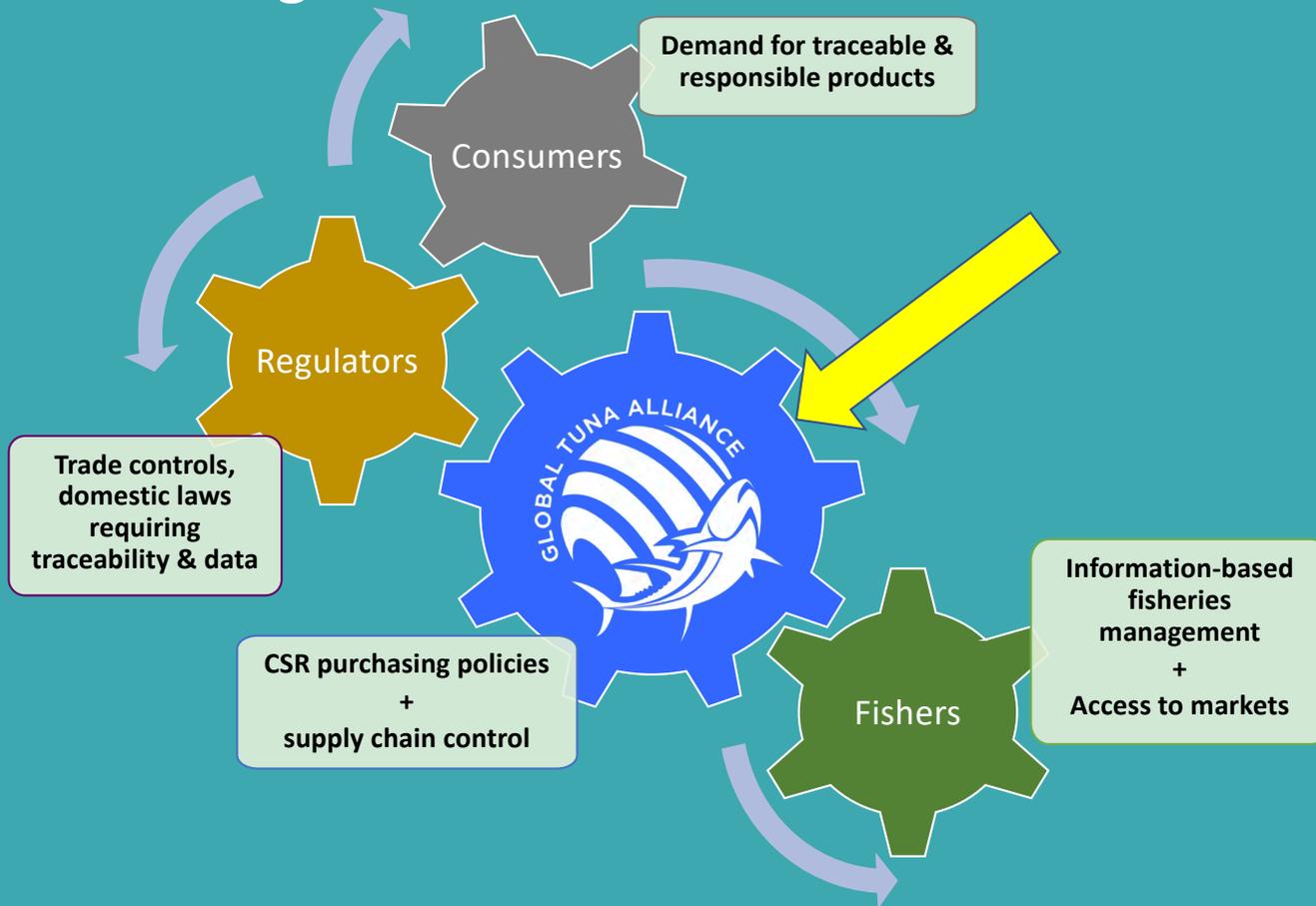
Traceability is Happening

The Context is Evolving



Traceability is Happening

The Context is Evolving



The TTD Traceability Commitment



- The Tuna Traceability Responsibility commitment calls on companies to pledge that:
All tuna products in our supply chains will be fully traceable to the vessel and trip dates, and that this information will be disclosed upon request at the Point of Sale either on the packaging or via an online system.*
- * Recognizing the need for aggregated vessel and trip information from small-scale tuna fisheries.*
- To achieve this, the GTA is proposing companies:
 - Adopt Global Dialogue on Seafood Traceability (GDST) Standards
 - Make a time-bound commitment to implement GDST standards

To globalize responsible supply chains we must:

Enable **full chain transparency** (without mandating it)

Support **data reliability** and verification

Drive down costs, raise returns
for investments in **digital data capture** and **data exchange**

→ Focus on **interoperability** and **verifiability**

However, there are issues...

- **Technology confusion** (dozens of solutions, 100s of vendors)
- Systems in **non-interoperable silos** --> rigidity + vendor-capture
- Obstacles to **data creation/acquisition**
(inconsistent demands on suppliers = confusion, costs ↑, motivation ↓)
- Diverse **information reporting requirements** growing & diverging
 - international proliferation of **regulations**
 - growing and shifting **consumer/NGO demands**





The need for **global standards**



Overview of the GDST



The GDST is a global, precompetitive, business-to-business platform launched in 2017

Primary Goal:

Voluntary industry standards for interoperable seafood traceability



GLOBAL DIALOGUE on Seafood Traceability



Network of the Global Agenda Councils

Seafood Traceability: A Key to Sustainable Livelihoods, Durable Trade and Secure Communities

Statement by Members of the World Economic Forum Global Agenda Council on Oceans

Fishing, fisheries and seafood are vital to communities around the world. The way we fish, how we manage fishing vessels along our coasts, and how fish products reach consumers affect livelihoods, ecosystems, international trade and security.

With massive fishing fleets trawling the world's oceans and with nearly 40% of fish entering international markets, seafood is a vastly transnational commerce. Fish exports generate more net earnings for developing countries than exports of coffee, cocoa, bananas, rubber, meat and rice combined.

But despite an increasingly high-tech and globalized industry, marine fishing remains the last large-scale "hunter and gatherer" activity. We are still struggling to organize and regulate ocean-based fishing for long-term sustainability. Overfishing has reached crisis proportions, with more than two-thirds of stocks fished up to or beyond their biological limits. Moreover, 20% or more of fish catch results from "illegal, unreported or unregulated" fishing, and thus escapes basic fisheries management.

GDST has grown into a significant, powerful "B2B" platform



67 companies have joined or endorsed GDST

7 of top 10

USD \$35B/yr

+ SeaBOS endorsement

A. Espersens A/S – Ahold Delhaize – Ajinomoto Co., Inc – 178 Degrees – Aldi Nord – Anova Food USA – AP2HI – Asian Alliance International Company – Charoen Pokphand Foods Public Company Limited (CPF) – Bolton Food – Bomar (PT. BOGATAMA MARINUSA) – Culinary Collaborations LLC – Bumble Bee – General Tuna Corporation (Century Pacific Tuna) – Japanese Consumers' Co-operative Union – China Aquatic Products Processing & Marketing Alliance (CAPPMA) – Citra Mina – Lyons Seafood – Envisible – Fishin Company – Hong Kong Exhibition Centre – Intercity Packers Meat & Seafood – LDH (La Doria) Ltd. – Lidl Stiftung & Co, KG – Luen Thai Fishing Venture – Metro – Publix Super Markets, Inc. – Sainsbury's Supermarkets Ltd – Morrisons Supermarkets – Mt Cook Alpine Salmon – Seachill Part of the Hilton Food Group – Seacore – New England Seafood – Southeast Asian Packaging and Canning Ltd – Stavix Seafoods – Sysco Corp – Target – Nissui – Thai Union – Orca Bay – PT Bumi Menara Internusa (BMI) – Wegmans – Santa Monica Seafood – Sea Delight – Socskargen Federation of Fishing and Allied Industries, Inc. – Taylor Shellfish – Woolworths Group – Co-op UK – Thai Tuna Industry Association – Tri Marine – Vietnam Association of Seafood Exporters and Producers – Vinatuna – Whole Foods – World Tuna Purse Seine Organization – Pacifical – Karoo Catch – Tesco – Silver Coast Foods LLP – Young's Seafood

GDST geographic diversity



- **Canada**
 - Intercity Packers Meat & Seafood
 - Seacore

- **USA**
 - Anova Food USA
 - Bumble Bee
 - Culinary Collaborations LLC
 - Envisible
 - Fishin Company
 - Orca Bay
 - Publix Super Markets, Inc.
 - Santa Monica Seafood
 - Sea Delight
 - Stavis Seafoods
 - Sysco Corp
 - Target
 - Taylor Shellfish
 - Tri Marine
 - Wegmans
 - Whole Foods

- **UK**
 - Co-op UK
 - LDH (La Doria) Ltd.
 - Lyons Seafood
 - Morrisons Supermarkets
 - New England Seafood
 - Sainsbury's Supermarkets Ltd
 - Seachill
 - Tesco
 - Young's Seafood Ltd
- **Denmark**
 - A. Espersens A/S
- **Germany**
 - Aldi Nord
 - Lidl Stiftung & Co, KG
 - Metro
- **Italy**
 - Bolton Foods
- **Netherlands**
 - Ahold Delhaize
 - Pacific

- **Turkey**
 - Eciens

- **South Africa**
 - Karoo Catch

- **Australia**
 - Woolworths Group
- **China**
 - China Aquatic Products Processing & Marketing Alliance (CAPPMA)
 - Hong Kong Exhibition Centre
 - Luen Thai Fishing Venture
- **Hong Kong**
 - 178 Degrees
- **India**
 - Silver Coast Foods LLP
- **Indonesia**
 - AP2HI
 - Bomar (PT. BOGATAMA MARINUSA)
 - PT Bumi Menara Internusa (BMI)
- **Japan**
 - Ajinomoto Co., Inc
 - Japanese Consumers' Co-operative Union
 - Nissui
- **New Zealand**
 - Mt Cook Alpine Salmon
- **Philippines**
 - Citra Mina
 - General Tuna Corporation (Century Pacific Tuna)
 - Socksargen Federation of Fishing and Allied Industries, Inc.
 - World Tuna Purse Seine Organization
- **Thailand**
 - Asian Alliance International Company
 - Charoen Pokphand Foods Public Company Limited (CPF)
 - Southeast Asian Packaging and Canning Ltd
 - Thai Tuna Industry Association
 - Thai Union
- **Vietnam**
 - Vietnam Association of Seafood Exporters and Producers
 - Vinatuna

Americas = 18

Europe = 16

Other = 2

APAC = 24

GDST representation across the supply chain

[lists are illustrative, overlapping, and not fully inclusive]

Ajinomoto Co., Inc
 AP2HI
 Citra Mina
 Fishin Company
 Karoo Catch
 Luen Thai Fishing Venture
 Mt Cook Alpine Salmon
 Nissui
 Socksargen Federation of Fishing
 and Allied Industries, Inc.
 Tri Marine
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 Thai Union
 Young's Seafood Ltd

Bolton Foods
 Bumble Bee
 Century Tuna
 Charoen Pokphand Foods
 Citra Mina
 Co-op UK
 Fishin Company
 Nissui
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 Wegmans
 Whole Foods
 Woolworths Group



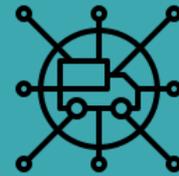
Fishing/Farming



Processing



Export/Import



**Additional Processing
and Distribution**

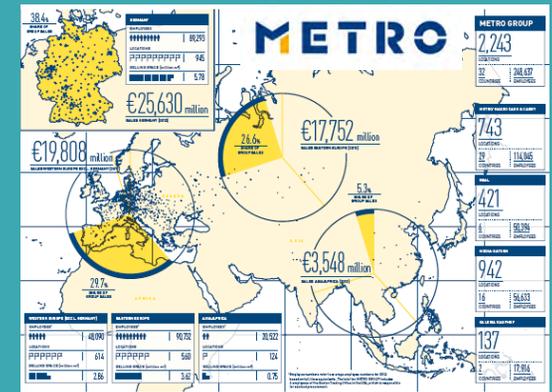
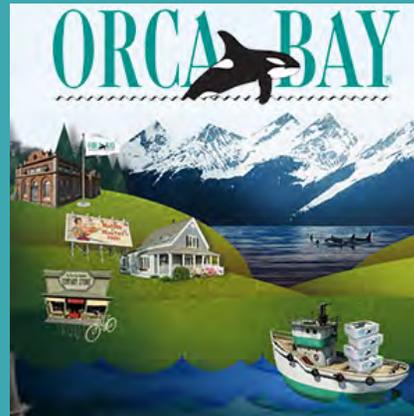


Major Brands



Retail / Food Service

Including enterprises at all scales -- small, medium, & large



GDST 1.0 Standards and Guidelines

What “interoperability” means in practice

- Interoperability means

- Speaking the same language, understanding the same words
- Answering the same questions
- Sharing information without re-inventing the wheel

- Data

- Demanded uniformly
- Named consistently
- Provided verifiably

- IT Connections

- Predictable formats
- Flexible platforms
- Controlled easily

- Interoperability does NOT mean

- “One size fits all”
- Universal access to data
- Loss of confidentiality or control

→ KDEs/CTEs + IT interoperability standards

GDST KDEs (wild capture list shown here)

VESSEL MASTER DATA
Vessel Name
Vessel Registration
Unique Vessel Identification
Public Vessel Registry Hyperlink
Vessel Flag
Availability of Catch Coordinates
Satellite Vessel Tracking Authority
Transshipment Vessel Name
Transshipment Vessel Unique Vessel Identification
Transshipment Vessel Flag
Transshipment Vessel Registration
CERTIFICATIONS AND LICENSES
Fishing Authorization
Harvest Certification
Harvest Certification Chain of Custody
Transshipment Authorization
Landing Authorization
Existence of Human Welfare Policy
Human Welfare Policy Standards
TRACEABLE OBJECT INFORMATION
Species
Product Form
Item / SKU / UPC / GTIN
Linking KDE (batch, lot or serial number)
Weight or Quantity
Unit of Measure

TECHNICAL
Event ID
Event Date, Time & Time Zone
Event Read Point (Geo Location)
Product Ownership
Information Provider
CATCH DATA
Catch Area
Fishery Improvement Project
Vessel Trip Dates
Date(s) of Capture
Gear Type
Production Method
TRANSSHIPMENT DATA
Transshipment Location
Dates of Transshipment
LANDING DATA
Landing Location
Dates of Landing
PROCESSING DATA
Expiry / Production date
Product Origin

Chosen to ensure legal origin and support CSR policies on sustainability and human welfare

Key Data Elements (KDEs): *More than just a list*

KDE No.	KDE Name	KDE Definition	Standard Data Options	Standards Org.	List Link	Authoritative Data Source	Authoritative Data Document
W02	Vessel Registration	standardized number or identifier for distinguishing vessels registered under the same flag nation.	Free-entry Field	N / A	N / A	Flag state regulatory body with oversight of the nation's fishing fleet	Respective Flag state fishing vessel registry
W03	Unique Vessel Identification	identifier associated with a vessel for the duration of its existence that cannot be re-used by any other vessel with a permanent physical marking on the craft.	IMO Number registry managed by IHS Maritime (For eligible vessels)	International Maritime Organization (IMO) - http://www.imo.org/en/ourwork/msas/pages/imo-identification-number-scheme.aspx http://www.fao.org/fishery/docs/DOCUMENT/global_record/2015/inf9e.pdf	https://gis.imo.org/Public/SHIPS/Default.aspx	IHS Maritime on behalf of the International Maritime Organization	The IHS Maritime registry of valid IMO numbers
W05	Gear Type	equipment used to extract seafood from water for capture.	The International Standard Statistical Classification of Fishing Gear (ISSCFG) Revision 1	UN-FAO's Coordinated Working Party on Fishery Statistics (CWP)	http://www.fao.org/3/a-bt987e.pdf	Fishing vessel captain	Captain's logbook / harvest records

Defining Key Data Elements

KDE Standards Include:

- Determining scope / basic contents (what is on the list)
- Nomenclature (common vocabulary)
- Detailed definitions
- Agreeing data formats
- Agreeing “authoritative sources” for information quality
- (KDEs) and who/where they enter the system
 - KDE/CTE matrix (CTE= Critical Tracking Events)

Key Data Elements (KDEs)



Critical Tracking Events (CTEs)

(CTEs assign responsibility
for data capture)

Wild Caught KDEs	CTE						
	Catch	On Vessel Processing	Transshipment	Landing	Pack/Unpack	Ship/Receive	Processing
VESSEL MASTER DATA							
Vessel Name	X	X					
Vessel Registration	X	X					
Unique Vessel Identification	X	X					
Public Vessel Registry Hyperlink	X	X					
Vessel Flag	X	X					
Availability of Catch Coordinates	X						
Satellite Vessel Tracking Authority	X						
Transshipment Vessel Name			X				
Transshipment Vessel Unique Vessel Identification			X				
Transshipment Vessel Flag			X				
Transshipment Vessel Registration			X				
CERTIFICATIONS AND LICENSES							
Fishing Authorization	X						
Harvest Certification	X						
Harvest Certification Chain of Custody		X	X		X	X	X
Transshipment Authorization			X				
Landing Authorization				X			
Existence of Human Welfare Policy	X	X	X	X			X
Human Welfare Policy Standards	X	X	X	X			
TRACEABLE OBJECT INFORMATION							
Species	X	X	X	X	X	X	X
Product Form	X	X	X	X	X	X	X
Item / SKU / UPC / GTIN	X	X	X	X	X	X	X
Linking KDE (batch, lot or serial number)	X	X	X	X	X	X	X
Weight or Quantity	X	X	X	X	X	X	X
Unit of Measure	X	X	X	X	X	X	X
TECHNICAL							
Event ID	X	X	X	X	X	X	X
Event Date, Time & Time Zone	X	X	X	X	X	X	X
Event Read Point (Geo Location)	X	X	X	X	X	X	X
Product Ownership	X	X	X	X	X	X	X
Information Provider	X	X	X	X	X	X	X
CATCH DATA							
Catch Area	X						
Fishery Improvement Project	X						
Vessel Trip Dates	X						
Date(s) of Capture	X						
Gear Type	X						
Production Method	X						
TRANSHIPMENT DATA							
Transshipment Location			X				
Dates of Transshipment			X				
LANDING DATA							
Landing Location				X			
Dates of Landing				X			
PROCESSING DATA							
Expiry / Production date		X					X
Product Origin		X					X

To enable
"event-based" traceability

Event-Based Traceability:

- Divides supply chains into series of “events” at which data must be captured
- Product is identified at each event in lots that can be combined or disaggregated into other lots
- General types of events (in non-technical terms) include making, aggregating, disaggregating, transforming, and using/disposing
- Data is captured at each event in common vocabularies and formats
- Traceability is achieved by linking a continuous series of events



GDST 1.0 is based on **GS1 EPCIS**

event-based traceability

EPCIS is by far the most widespread and well-developed approach to event-based traceability available globally.

GDST 1.0 is based on GS1 EPCIS event-based traceability

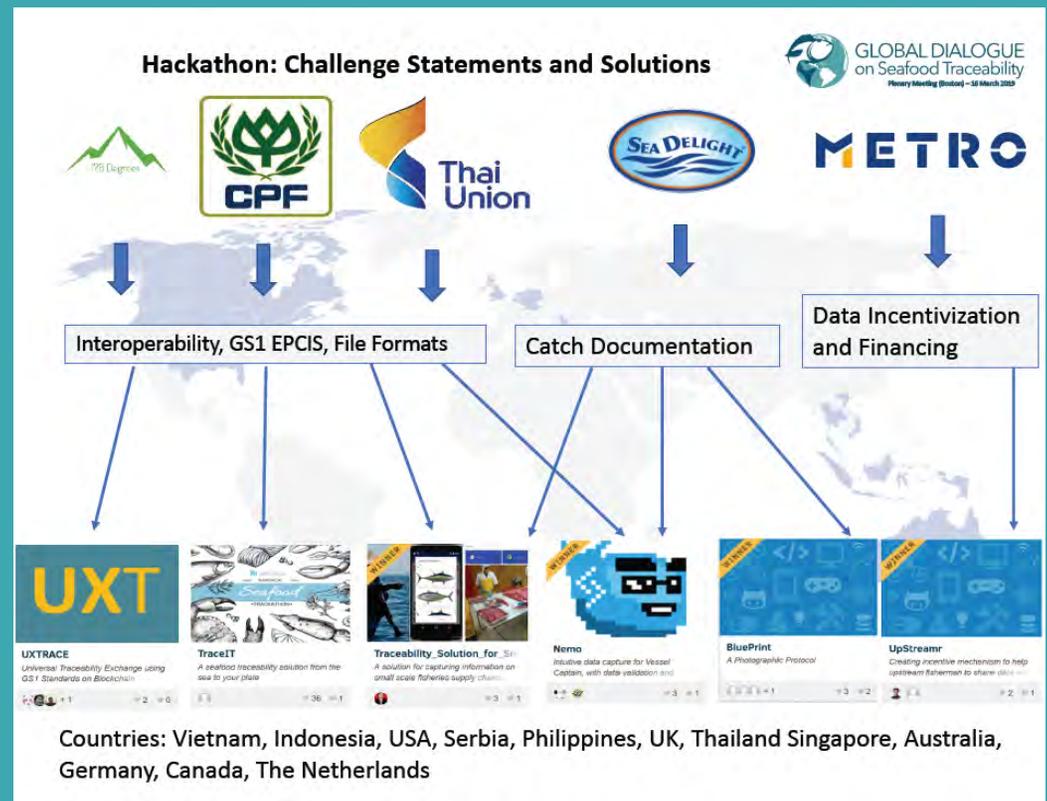
- Advantages of EPCIS
 - The most widespread and well-developed approach available globally
 - Linked to GS1 bar codes and to GS1's "object and location identifiers" used widely, esp. by retailers
 - Supported by the GS1 global network of organizations and partners
- But GDST's innovative approach does NOT require the use of GS1 proprietary identifiers

➔ GDST allows integration with world's leading event-based traceability standard system but protects independence and commercial freedom

IT Guidance: Digital Interoperability

Designed for Multiple Use Cases:

- Enabling interoperable digital data capture on small scale vessels
- Linking case/pallet identifiers with downstream systems
- Linking GS1 with non-GS1 systems
- Ensuring blockchain pilots are not siloed
- Linking legacy systems and new web and blockchain systems
- Enabling digital Chain of Custody certification
- Matching labeling requirements with inputs from suppliers



“Point to point, full pedigree” architecture

All data flows from custodian to custodian, growing at each step, along the whole supply chain.



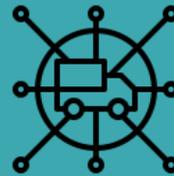
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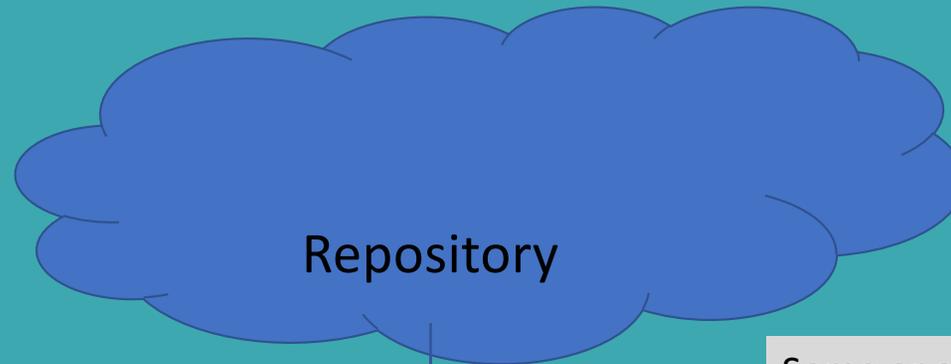
Major Brands



Retail / Food Service

“Third-Party Repository” architecture

(“It’s a cloudy day!”)



Some or all actors share data through repository controlled by a vendor or government



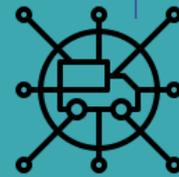
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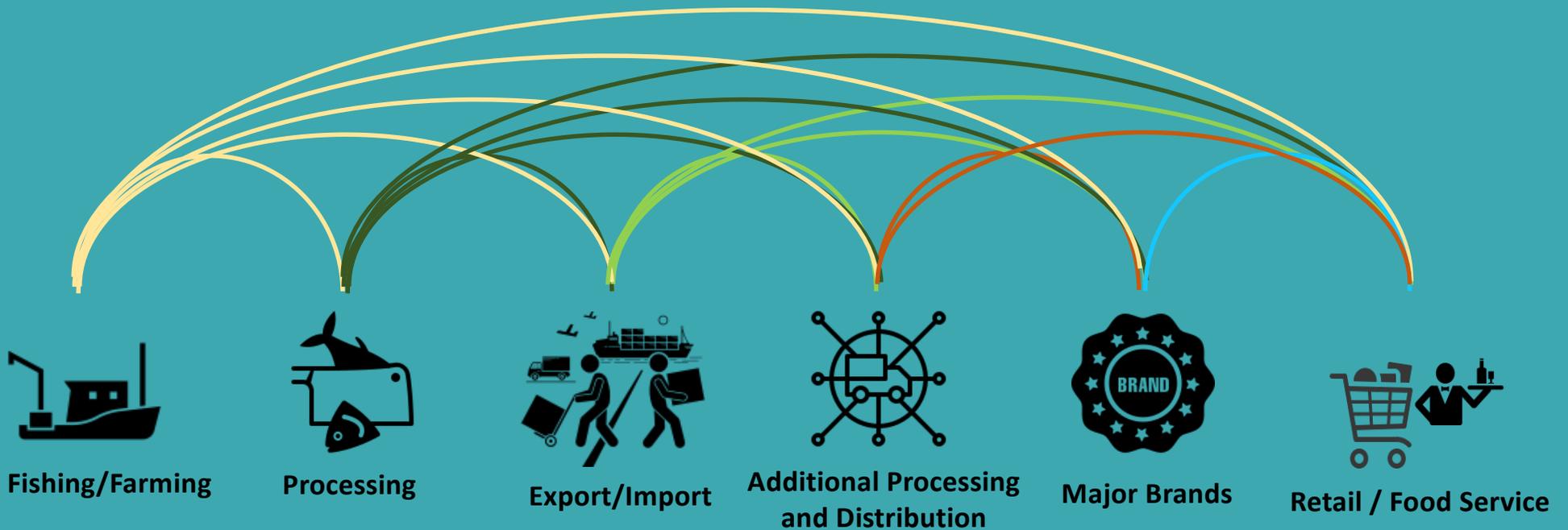
Major Brands



Retail / Food Service

“Distributed Server, Query-based” architecture

Actors maintain their own data, make it available to others upon authorized query



Release of **GDST 1.0** is coming soon

Bottom Line

- Read-to-use technical standards supporting interoperability and verifiability
- Based on but not slave to the leading event-based standard (EPCIS)
- Standardizing data and formats but platform and architecture neutral

FAQs

Q: Does supporting the GDST 1.0 Standards mean a company has to comply with all of them immediately?

A: No – It is clearly understood that implementation of the standards may take years to complete, and that companies will move through implementation at different speeds. Endorsing the standards now means agreeing that these are the standards that should be applied across the seafood sector, but **endorsing GDST 1.0 will not commit companies to any specific timeline** or specific action for implementation. While all companies should begin the process of implementing the standards as soon as possible, the standards set a goal for the future, not an immediate requirement for today.

FAQs

Q: Do GDST standards support compliance with SIMP and EU IUU Regulation?

A: Yes – both EU and US import controls were considered in developing the KDE lists

Q: Do GDST KDEs cover labor and human rights issues?

A: Yes, in a preliminary way – GDST wished to avoid setting standards for labor and human rights policies, but include KDEs to reveal whether human welfare policies are in place and subject to audit.

Q: Does completion of GDST 1.0 mean the GDST is done with its work?

A: No – GDST members have expressed the desire to see important elements of GDST work continue, including:

- Formulating best practices for KDE verification
- Promoting government policies and regulations that support interoperability and verification

Q: Who will own and maintain the GDST standards?

A: The GDST industry Steering Committee is now developing a plan for the institutional future of the GDST



Formal release at SENA '20 (Boston)
March 16

The industry-wide benefits of GDST 1.0 depend on broad adoption by companies like yours and others across the supply chain

Learn more . . . and then get on board!



Thank you for your attention!



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Q&A



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