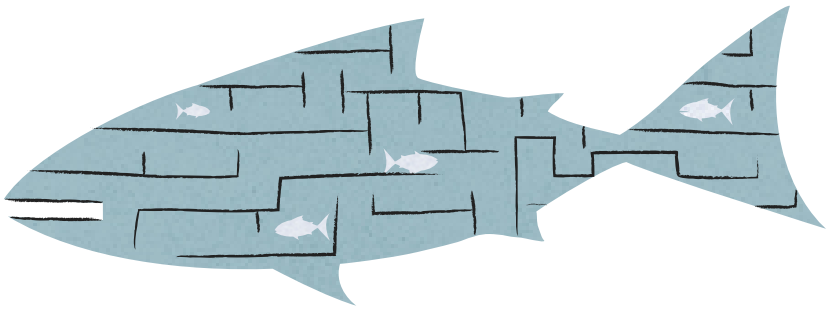
FUTURE of FISH FISH 101 BRIEF

Follow the Fish

five core business functions of robust end-to-end traceability



REPORTS OF OVERFISHING, Illegal, Unreported, and Unregulated (IUU) activities, human rights abuses, and fraud continue to tarnish the reputation of the global seafood industry. At the same time, companies practicing environmental and social responsibility are not rewarded for their efforts. Traceability is often held up as the answer to this broken system, but traceability tends to mean different things to different people, and rarely is deployed as a full-chain solution.

Through years of engagement with seafood businesses and technology companies, Future of Fish has developed five core business functions of traceability technology. All five must be in place in order to address seafood's social and environmental ills effectively. Not only must robust end-to-end traceability track products on a batch-level basis, but it also must provide a level of corporate transparency at each step in the chain. Here are the five core functions:

KEY STATS

» *12 to 25 percent of all fish are caught and sold illegally each year.*

» *33 percent of all fish in North America is mislabeled.*

» *Reports of slavery in seafood supply chains have become increasingly common in recent years, specifically for shrimp produced or processed by Thai companies.*

» *A 2014 market research report from TechNavio predicts that the global food traceability market will grow at a 9.88 percent mean annual growth rate through 2019.*

1. VESSEL-DOCK CAPTURE

THE ABILITY TO CREATE A SUPPLY CHAIN with verifiable, accurate, and traceable data starts with the capture of catch information at the point of harvest or with the first receiver (e.g., at the dock). Once collected, this information can be paired with a product and uploaded to a database, where it can be pushed through the supply chain via one or more traceability technology systems.

2. PRODUCT-DATA PAIRING

ONCE DATA HAS BEEN CAPTURED AT THE SOURCE, the physical attachment of product information to the product itself is critical for preserving the integrity of that data. This can be achieved with a barcode, RFID chip, QR code, or alphanumeric (human-readable) code that journeys with the product as it moves through the supply chain. Information thus accumulates through each step, eliminating the problem of data attrition that occurs with internal traceability.

3. INTERNAL TRACEABILITY

ALSO KNOWN AS ONE-UP, ONE DOWN PRODUCT TRACKING, internal traceability is prevalent throughout the supply chain as it assists with basic supply chain management and is required by multiple regulatory agencies for food safety compliance. Many IT companies have roots in this form of traceability, which largely is designed to support business services such as inventory control, and to assist with product recalls. Internal traceability is a core function of robust end-to-end traceability, but is not sufficient as a stand-alone.

4. SUPPLY CHAIN VISIBILITY

THE ESSENCE OF SUPPLY CHAIN TRANSPARENCY consists of information about the companies supplying products: where they are located, what they do, how they do it, and whether their licenses and practices fall within legal limits. The focus of this core business function is at the company or facility level, not at the product level. Its key value is proof of compliance is with particular requirements such as IUU and sustainability certification, and with risk management.

5. DATA VERIFICATION

THE CAPACITY TO CROSS CHECK product or company-level information at any point in the supply chain with data supplied by other players (or data vetted by third parties) is critical for proving the legitimacy of the data and for preventing what will inevitably develop as traceability fraud. Verification can include, but is not limited to: mass-balance, data entry checks, prohibition of belated data deletions and modifications, verification of data accuracy via fish tickets or landing documents, verification of legal fishing through vessel Automatic Identification System (AIS) operation, certificate status for sustainability, or health code compliance.

NEXT STEPS

Future of Fish is actively working with a group of traceability technology companies in a Traceability Pod to create a joint solution for robust end-to-end traceability. Such collaboration is necessary as no single traceability technology company can provide all five core business functions on its own. We are currently piloting several projects and are looking for additional opportunities to test and deploy the collective products and services that our Traceability Pod develops.

Visit **futureoffish.org** for more details