
SUPPLY-CHAIN SOLUTIONS FOR FOOD, AGRICULTURE, FORESTRY, ECOLOGICAL AND ENVIRONMENTAL PRODUCTS



**You cannot manage what you
do not measure, verify and track**

THE PROBLEM

Product attributes claimed by vendors serving the retail public all too often prove to be untrue: Seafood that involved the use of slave labor or child labor. Farmed fish that was raised in unsanitary conditions or that was not antibiotic free and then becomes part of the global supply chain. These revelations all too often hurt brands, destroy goodwill, and damage the reputation of senior management.

For example, in a recent review of claims by Greenpeace of companies' performance in meeting their claims (March 2016):

“What we found was a bit alarming. Only a few companies are making significant headway towards ensuring that there is no deforestation in their palm oil supply chains, and most are moving far too slowly.

It turns out, some companies might think that making a promise is easy - and that no one is going to notice if they don't keep it.”

Firms want to demonstrate responsible corporate citizenship, but they do not have adequate supply chain information relating to food quality, deforestation issues, child labor violations, *de facto* slavery, and a host of other environmental and ecological problems.

For example, the number one deforestation challenge is the verification across all entities in the global supply chain that products originate farms with sustainable agriculture practices. Legacy technology systems do not support traceability through the convoluted chain-of-custody of products through their supply chains. Today no practical way exists to verify that a commodity originated from a sustainable source.

In fact, the United Nations asserts that this problem is ubiquitous and supply chains must be better managed. The UN argues:

“It is possible to see a future where technology enables the full product and supply chain information that consumers expect, and traceability will be the norm. Tools already exist to enable people to use their smart phones to scan a barcode and learn more about a product from a sustainability perspective; it is easy to see this trend evolving as technology improves, and as the ability to collect, analyze and share data becomes easier and cheaper.”

We assert, what the United Nations saw as the future - is here today.

THE SOLUTION

eTrios is envisioning a simple, cost effective approach to verification of claims that can revolutionize food, agricultural, and forest sustainability claims by providing real-time transaction traceability with verifiable accuracy.

Recent advances in information technologies called “blockchain” hold the promise to solve this heretofore intractable problem.

Since the development of computers, data tracking has been done with centralized database systems. These systems have many limitations such as the difficulty in managing security, linkage with other systems, and simplicity of use – essentially an inability to transfer updated, verifiable information to thousands of users in a secure, real time environment.

A solution to the centralized system problem now exists with the invention of a distributed

ledger which is the core functionality of blockchain. Just as the internet revolutionized communication technology, blockchain technology can radically transform how transactions are consummated and recorded with high and enduring fidelity. The implications are tremendous.

Blockchain will revolutionize chain-of-custody transactions, provide transparency and guarantee integrity on an unprecedented scale. While, the technology was invented in 2008, it has only recently begun to proliferate. Blockchain is starting to replace traditional centralized legacy systems and is creating a tsunami of re-engineering. The technology is a security rich, platform independent protocol that allows for record immutability and extreme flexibility.

Our application, based on blockchain technology, can be utilized by anyone with a computer, smartphone, or feature phone anywhere in the world. This feature is critical in proving provenance. Transactions are immediate, time-stamped and are tamper proof. All or parts of the transaction record can be public or private and immediately and easily visible to all authorized parties.



This system will provide the ability to track product qualities from the grower to the end-product producer. By way of example, it will distinguish products sourced from documented zero-deforestation areas from those that are not.

The system will support third party auditing recognizing responsible corporate citizenship, driving others to meet the same best practice standard using this “best knowledge” tool.

Specific data to be tracked will vary according to the sustainability measure. Typical tracked data will include, for a commodity:

- Commodity attributes might include the use of pesticides, slavery inputs, water management attributes, greenhouse gas emission reduction, size, weight, quantity, quality, etc.,
- Unique identifiers for any and all person(s) and firms entering data,
- Time, date and location of data entry,
- Testing/measurement/certification protocols used,
- Third party attestations (if any), and
- The technical predicate for Internal and external auditing to confirm data authenticity.

A BLOCKCHAIN SOLUTION PROMOTES EVERY ASPECT OF SUSTAINABILITY

There are three pillars of sustainability: social, environmental, and economic. Today, firms, industry trade associations, non-governmental organizations, financial organizations and other stakeholders have concerns regarding firms’ adherence to internationally accepted standards to meet sustainability goals.

Compliance with sustainability standards has become a *de facto* standard for many firms. However, in some cases, firms have a *de jure* obligation. For example, Financial Accounting Standards Board (FASB), the International Accounting Standards Board (IASB) and others strongly encourage public companies to disclose data on sustainability factors.

Others organizations such as Global Reporting Initiative (GRI) are voluntary, so too are the guidelines from the Sustainability Accounting Standards Board (SASB).

The International Standards Organization (ISO) has several sustainability standards, but in all cases, these standards highlight the truth in the cliché: “You can’t manage what you do not measure, verify and track.”

Documenting the veracity of supply chain claims is no longer an add-on to sustainability programs. Documenting the veracity of claims must be built in, sector-by-sector, product-by-product.

ETRIOS LLC

eTrios provides advisory and transactional services. We focus on controlling externalities such as bad environmental outcomes, bad ecological outcomes, bad health and bad safety outcomes.

We focus on market-based and trading based solutions to the control of undesirable outcomes.

Today, we are investigating the application of blockchain to complement other management tools. We are developing blockchain solutions to capture and track sustainability-related data and financial data from “birth” to ultimate-use across an entire sector.

To that end we are working with sector-specific experts within the business-sector and among NGOs.

YOU CANNOT MANAGE WHAT YOU DO NOT MEASURE, VERIFY AND TRACK

For more information contact:

John Palmisano
jpalmisano@etrios.com.com

or

Howard Burris
howard.burris@gmail.com