

Transforming Sustainable Trade Through Technology



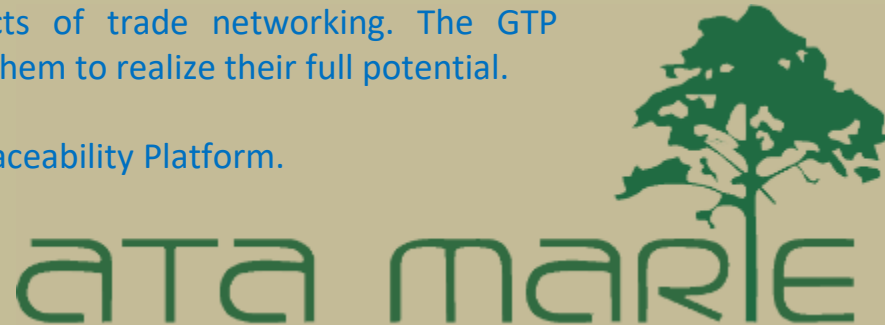
Transforming the Performance of Sustainable Trade Networks Through Technology

Ata Marie Systems Ltd is a technology firm specializing in delivery of organization management solutions for natural resource management in emerging economies. We are committed to the advancement of sustainable, ethical, and legal trade in natural resources throughout the world.

We work with regulators, institutions, trade networks and trading organizations to create the building blocks of sustainable trade through the design and deployment of systems and through enhancement of trade network's capacity with our training and support programs.

Ata Marie has developed the Global Traceability Platform (GTP) – a powerful and flexible, modular suite of applications that support all aspects of trade networking. The GTP transforms the performance of trade networks, allowing them to realize their full potential.

The following pages provide an overview of our Global Traceability Platform.



Introduction to Sustainable Trade Systems

Over the last of 50 years, standard processes, systems and technologies have evolved to support the implementation of sustainable trade, including:

- Land management techniques that enable sustainable production;
- Ethical social management practices that protect workers and communities, and that equitably share the benefits of sustainable production;
- Compliance management systems to ensure the integrity of sustainable development;
- Traceability from legal and sustainable sources through to end users.

Many trade networks have strong processes and procedures in place, but fail to realize their full potential due to poor support systems. Many processes, such as standards definition and auditing, have never been electronically systemized and to this day processes are largely administered using paper based systems. IT systems have been developed for other processes, but they are often poorly designed, fragmented, and disjointed.

Ata Marie System's Global Traceability Platform (GTP) is a toolkit that supports all aspects of sustainable trade in *ONE integrated package*. This greatly improves efficiency, transparency and effectiveness of trade network administration. The GTP can be configured for any industry level program supporting sustainability (e.g. FSC, MSC, RSPO), trade monitoring (e.g. FLEGT, Lacey Act compliance) or commercial product traceability.

GTP is built using leading edge database technology, allied with web and mobile applications. Ata Marie also offers Global Blockchain as an optional extra, providing secure copies of both intra-organization and inter-organization transactions.

Supporting Implementation and Management of sustainability standards

The **Global Traceability Platform (GTP)** has been developed to support individual organizations and trade networks to practice sustainable trade.

The platform allows users to define and administer standards of sustainability and traceability from within an IT system environment, .

Ata Marie's GTP has been developed to meet international standards of traceability, specifically **GS1 Global Traceability Standard**.

Global Traceability Platform

Ata Marie has developed the Global Traceability Platform (GTP) for the specific purpose of providing a unified platform for Sustainable Trade.

The GTP is not meant to replace existing supply chain management systems. It is designed to provide verifiable links between the different parties in a sustainable trade network. GTP is a distributed data platform that supports the following functionality:

Membership registration

Documentation of membership of sustainable trade networks who are committed to requirements of the sustainability and traceability of the trade network.

Source registration

Documentation of sources of product that have been verified as complying with the sustainability requirements of the sustainable trade network.

Chain of custody (COC)

Documentation of the movement of goods through the supply chain, from a sustainable source to its final destination. COC requires the mapping of the supply chain and the recording of material flows within the supply chain.

Audit and Compliance

Documentation showing compliance of membership, source and chain of custody activities to the requirements of the trade network.

The **Global Traceability Platform** (GTP), is a suite of tools that has been developed by the Ata Marie specifically to support the traceability of sustainably produced goods and services.

This system has been embraced by Governments and organizations throughout the world for a diverse range of products such as timber products, coffee, minerals, fisheries, bamboo and processed wood products.

A Blockchain module is currently in development to provide secure certification of membership and transactions between network members.

Membership Registration

Membership registration is the process whereby the participants in the trade network are documented. For sustainable trade groups, there are specific membership enrolment processes where applicants apply for membership and are formally accepted into the group and then allocated rights and responsibilities. The trade network may also wish to allow registration of second tier members who act as external traders with the group – either as suppliers or recipients.

The GTP manages:

- Membership application
- Applicant evaluation
- Membership registration. Membership status determines the activities that members can undertake within the trade group, e.g. Trade network administrator, supplier, processor, distributor, retailer, auditor etc.

The Blockchain Membership module provides:

A 100% secure and time stamped record of membership certificates for distribution to all members of the group.

Trade Network Membership

The GTP allows trade networks to design their membership registration systems according to their specific requirements.

Typically a trade network comprises:

- **Network administrators**
- **A Members list**, often classified into membership classes who have different rights and responsibilities, e.g.:
 - Full / Provisional membership
 - Raw material suppliers
 - Primary and secondary processors
 - Wholesalers
 - Traders
 - Retailers
- **Independent auditors**

Source Registration

Sustainable trade requires documentation of the source of sustainably product, whether it is a farm, a forest, a fishery or a mine – referred to as a “**registered source**”. The source data must be recorded and then classified in terms of its status (undocumented, subject to due diligence, or certified as sustainable, legal and/or compliant with a nominated standard).

The GTP manages:

- Source documentation and classification.
- These systems record the compliance requirements for sustainable sources, and records the baseline assessment and audit data that demonstrate compliance to the sustainable source requirements.

These software applications are principally used by the sustainable trade groups themselves, with members receiving member certificates.

The Global Blockchain Source Registration module provides:

A 100% secure and time stamped source certificates that identifies the source and its classification status. Classification status determines the sustainability claims that can be made for materials obtained from a registered source.



Source Registration



Documenting Product Source

The GTP allows trade networks to map the source of raw material, such as forests, farms, plantation, or mines.

Once mapped and registered, a source can be documented according to the requirements of the trade network:

- Tenure / ownership
- Compliance with baseline and due diligence requirements.
- Classification of the source according to user defined criteria

Chain of Custody (COC)

Supply chains are mapped in terms of nodes that can receive and dispatch products. Each node has can have specified capacity in terms the amounts of products it can receive and dispatch. Product flow is usually recorded as a transactions between nodes. One of two traceability methods– product segregation or mass balance, is commonly used.

The GTP manages:

- Documenting supply chain nodal networks.
- Recording supply chain transactions
- Traceability is recorded using the mass balance approach. Product segregation is accommodated as a variant of the mass balance approach.
- Real time reconciliation to ensure the integrity of the supply chain.

The software modules are principally used by the supply chain participants themselves.

The Global Blockchain CoC module supports two functions.

1. Provision of secure and time stamped certificates that register nodes and their capacities.
2. Provision of secure and time stamped certificates that register transactions between registered members of products moving between registered nodes.

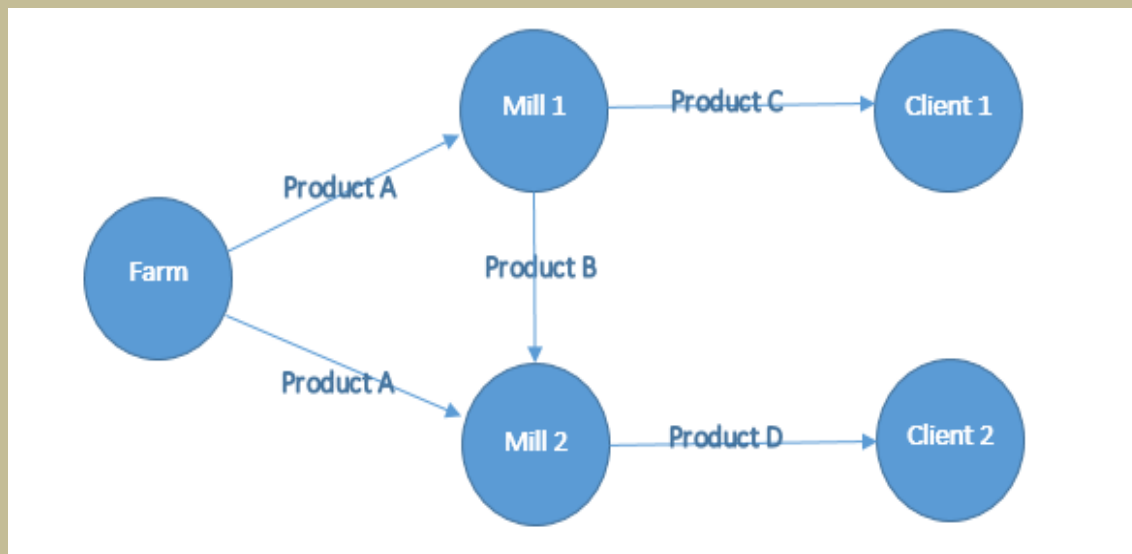
Ghana Wood Tracking System

The GTP was used to implement chain of custody for the Republic of Ghana.

This is the most comprehensive national forest traceability system in existence. It tracks legality of source documents, standing tree inventories, and tracks wood production from the standing tree, to felled log, to logs delivered to the mill, though processing and sale and delivery of processed wood to the final customer.

The Ghana Wood Tracking System was developed in accordance with the partnership agreement between Ghana and the EU under the FLEGT program.

Chain of Custody (CoC)



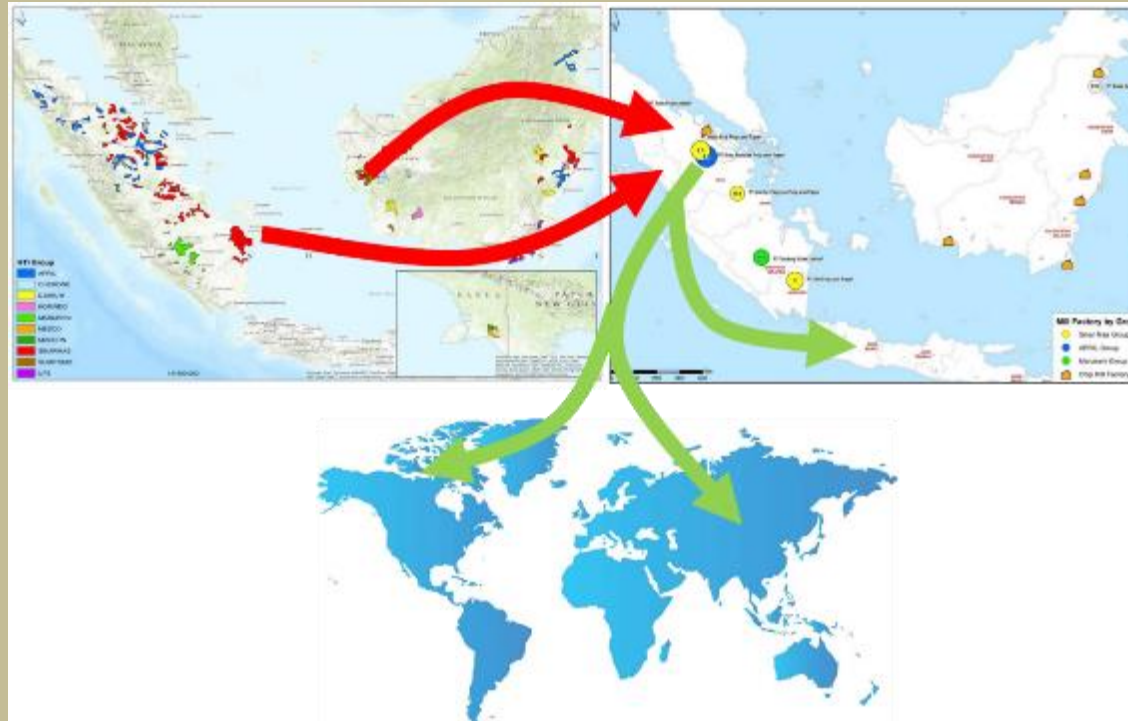
Network Terminology

The structure of trade is typically described using **nodal networks**.

- A **node** describes a location through which product flows.
- A **process** describes a change in the physical and ownership status of the product at a node.
- **Product flow** records the movement of product between nodes.

Chain of custody provides oversight over the network from the source to the final destination.

Chain of Custody (CoC)



What is Chain of Custody ?

Chain of Custody (CoC) is the process of tracking a product from a known and certified source through the various stages of trading, manufacturing and warehousing to assure the end consumer that claims being made about a product accurately reflect the certified content or sourcing of that product.

The Global Traceability Platform supports the main CoC models including identity preservation, product segregation and mass balance.

Audit and Compliance

Audit and Compliance monitoring is an essential component of any sustainable trade program. Audits and monitoring are required to verify that:

1. Members are organizing their affairs according to the stipulation of the trade network.
2. Sources are being managed according to the agreed principles criteria and procedures of sustainability.
3. Proper and accurate records are being maintained to ensure chain of custody.

Ata Marie has existing applications for audit and compliance documenting supply chains, recording supply chain transactions, verification of traceability.

Global Blockchain Audit and Compliance module supports three functions.

1. Provision of secure and time stamped audit certificates for membership, sources and COC.
2. Provision of secure and time stamped audit certificates that record audit non-compliances, corrective action requirements, corrective action status (in process, completed, expired) and the implications (none, warning, suspension etc.).
3. Provision of reconciliation that compare and report actual COC transactions against nodal capacities (e.g. actual purchases and sales against nodal capacity).



GTP Access and Features

Member Portal

Members of trade networks have controlled access to the Global Traceability Platform through a security controlled member's portal. The member portal provides password controlled, secure access to a trade network's administrative functions according to the members status and security level.

Public Dashboard

The public dashboard is a web based application which allows the public to access information on the trade network. The information in the dashboard is "live" and automatically updated. Typically the following information would be displayed on the public dashboard

- **Trade network documentation** - A list of documentation about the trade network itself, its aims and objectives, procedures and performance.
- **Trade statistics** - A graphic display of statistics for the trade network. Quantities of products traded by source, destination, certification status and other publically available, non-sensitive information.
- **Marketing information** - A forum for members of a trade network to share information about themselves and the sustainable product that they supply to the market. This is a mechanism that will allow members to maximize the market benefits of trade network membership.
- **News and announcements** - Links to news items pertaining to the trade network or of interest to the general public as well as trade network or industry sponsored events can be published to provide information and stimulate interest.

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Forest to Factory
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