

Transport and Trade - Monitoring and Certification



Whenever a sales transaction occurs, or whenever a bag containing certified minerals/precious stones crosses a province border or checkpoint, state agents use their phones equipped with MineralTrace software to scan the identities of those traders involved in the transaction, the bag containing the raw materials, and their own IDs as witnesses of the transaction.



The phones automatically determine the place and time where the transaction happened using their integrated GPS sensors.

Transaction data is then stored on the transport bag itself, and is transmitted to the GOTS Global Database.

Processing, Treatment & Export - Monitoring and Certification



Actors processing raw materials and precious stones must be audited by a state agent at the moment of purchase of raw materials for processing, treatment and export.

As the materials arrive, their transport bags are scanned; together with the identities of the selling and buying parties, and the state witnesses involved.

Further Information about the GOTS MineralTrace™ Solution



With more than 30 years experience in the fields of Raw Materials, IT, Good Governance and eGovernment, Prof. Dr. Reinhardt Nindel is the director of International Projects at GOTS parent company Ibes AG; and is in charge of conceptualizing, implementing and overseeing the implementation of MineralTrace internationally.

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<http://www.secam.de/en/gots-gold.html>

GOTS
TRACKING PORTAL



GOTS

Good Governance
Mineral Value Chain



Tax Revenue from
ASM formalization
for precious stones
and gold

MineralTrace™ Internet of Things

Formalisation & Internal Revenue
from Artisanal Small-scale Mining

Trade Documentation and Proof of Origin for
Transparency, Accountability and certified Compliance

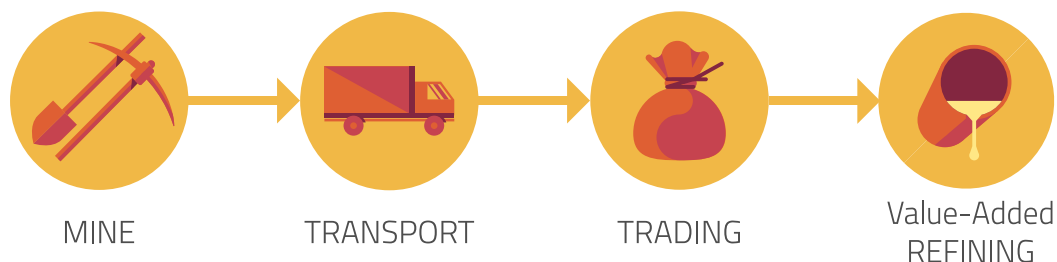
The Importance of Certified and Fair Mineral Trading Chains

Responsible mineral value chains formalize Artisanal Small-scale Mining, add moral sense by **preventing conflicts and the abuse of human rights**, adding value for good governance:



Artisanal and small-scale miners (ASM) get better prices for their production, governments perceive urgently-needed tax revenue, and industries in importing countries can reliably audit that their supply chains conform to local and international due diligence law.

GOTS MineralTrace™ Solution



Our economic MineralTrace™ Solution provides a law-conform technological platform and auditing/certification framework that implements a secure trade documentation and proof of origin system over the mineral/precious stones supply chain, following an open-market approach.

Real-time monitoring of traded minerals from certified mine sites allow efficient on-the-ground assessment to identify compliant trade of gold and precious stones. This gives state institutions the tools needed to formalize ASM mining operations and improve tax and royalty collection.

Thanks to our unique combination of highly secure and low-cost RFID tagging, rugged standard smartphones, offline operation capabilities, and a world-class geolocation web portal, GOTS MineralTrace for Gold has been successfully piloted and implemented in the African Great Lakes Region.



Extraction point monitoring and certification

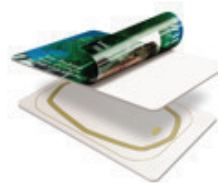
Independently certified mine sites are registered from the state authorities to sell their production as conflict free and tax compliant authorized for legal trade, processing and export.

State agencies in charge of tax collection and monitoring of mining sites are providing the proof of origin and tax compliance directly at the point of production and/or point of sale. Mine representatives, traders and state agents are pre-registered and identify themselves by tamper-proof digital ID cards.

After ID-reading, weighing and tax payment, the precious material is packaged in sealed tamper proof plastic bags with integrated digital bag-ID at the point of production.

The state officer reads the ID data of the trade partners, witnesses and the digital bag-ID using their authorized smartphones. The data recorded from the IDs bag, weight, timestamp and GPS location is then written to the bag-integrated chip and transmitted to the GOTS™-database.

If the connection to the GOTS™ database can't be established the data is stored to a queue in the smartphone for later transmission at the first possible connection to the GOTS™ database.



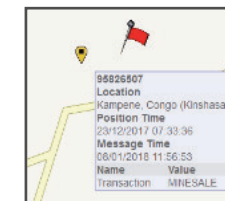
Secure cards with **RFID** chips identify trading actors and state agents through the trading chain.



Rugged phones with MineralTrace software identify persons and bags; as well as certify and audit transactions.



Tamper-proof **RFID** equipped bags protect and uniquely identify minerals/precious stones during transport.



GOTS Global Database with easy to use web interface allows easy reporting.