

The blockchain ecosystem

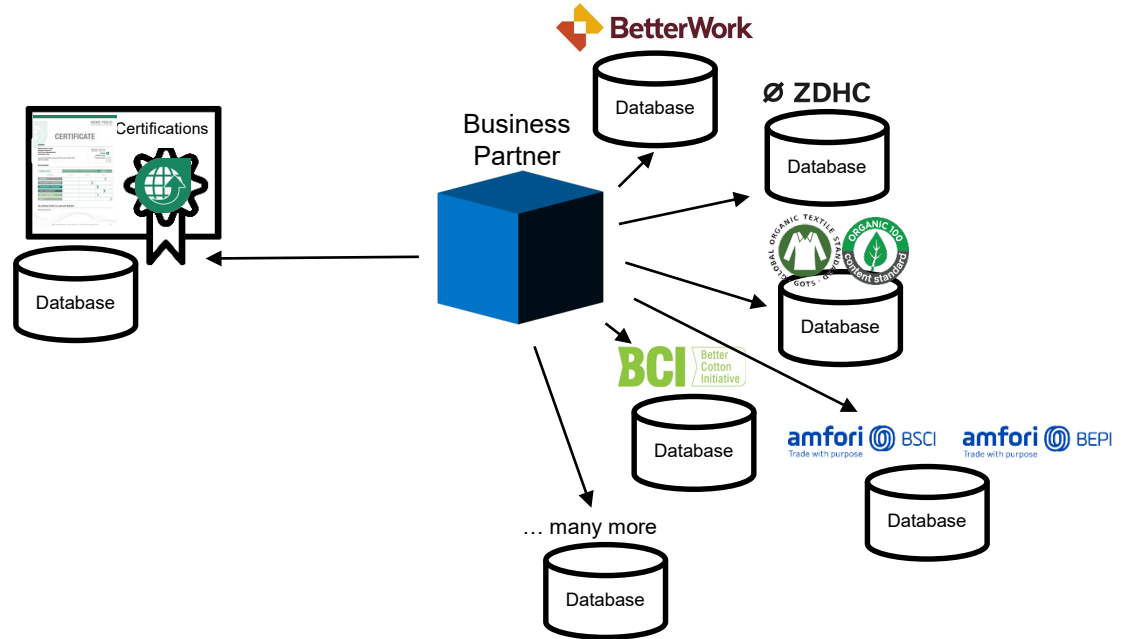
Enabler for transparent and efficient business practices

The textile value chain



The ecosystem

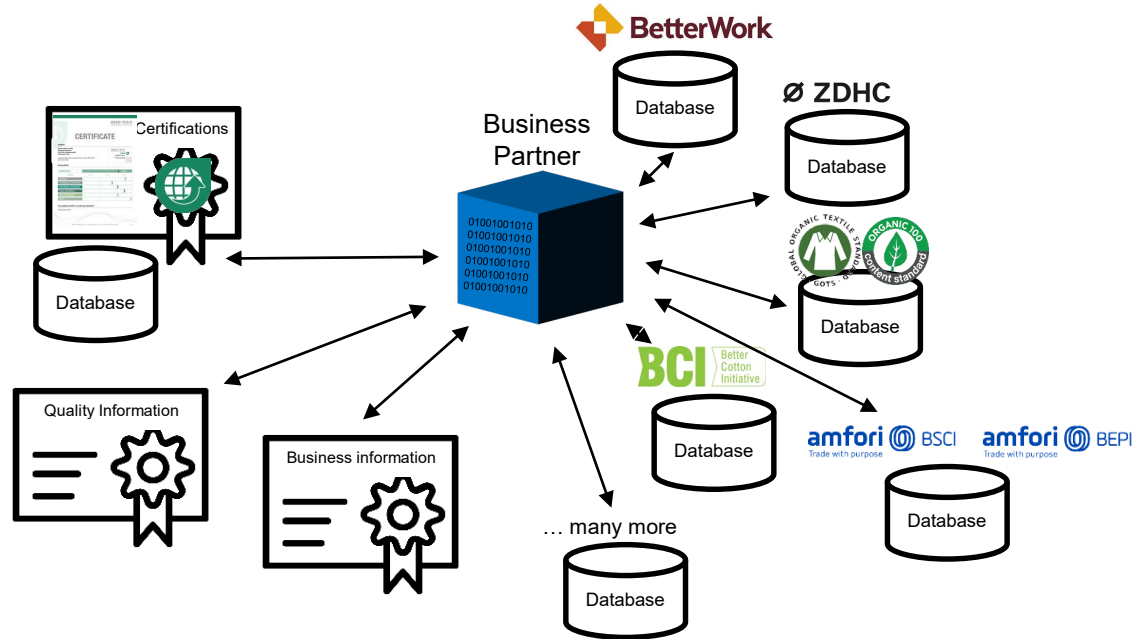
Compliance and business information is stored in proprietary systems



Information is available but not visible to all supply chain partners and stakeholders -> missing transparency

The ecosystem: 1. Distributed Ledger Technology (DLT)

Decentralised public ledger of cryptographically secured transactions empowers companies with the ability to update and grant access to all relevant information, including compliance

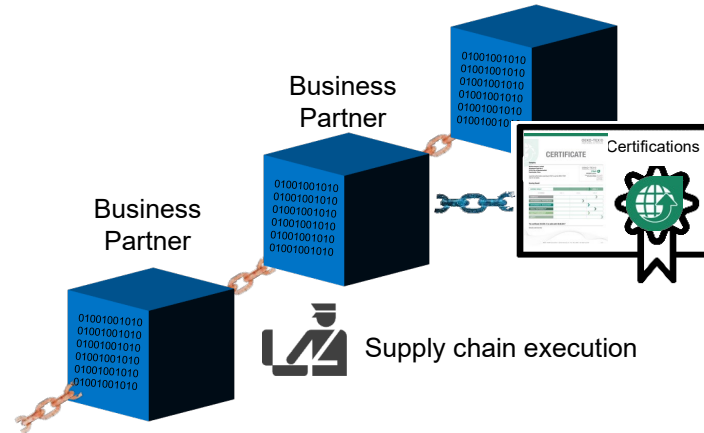


1. Distributed Ledger

- Business partners manage all their information for all stakeholders as single point of access
- Avoidance of duplication for multiple certification and auditing

The ecosystem: 2. Smart Contracts

Smart contracts allow the automation of repetitive tasks (e.g. order monitoring, delivery slips, bills of lading and customs clearance) secured by a distributed ledger



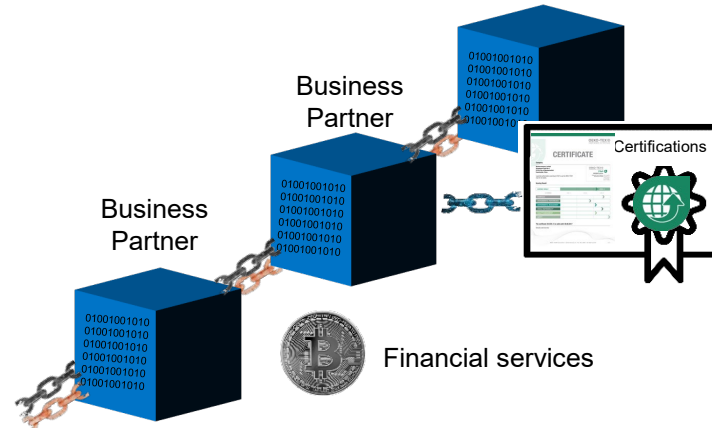
2. Smart Contracts

- Process automation and data exchange including third party service providers
- Enabling supply chain transparency as an integrated part of B2B transactions

1. Distributed Ledger

The ecosystem: 3. Tokens

Tokens bring together procurement, compliance and financial transactions by using so-called cryptographic tokens unfolding the real potential of a blockchain ecosystem



3. Token Economy

2. Smart Contracts

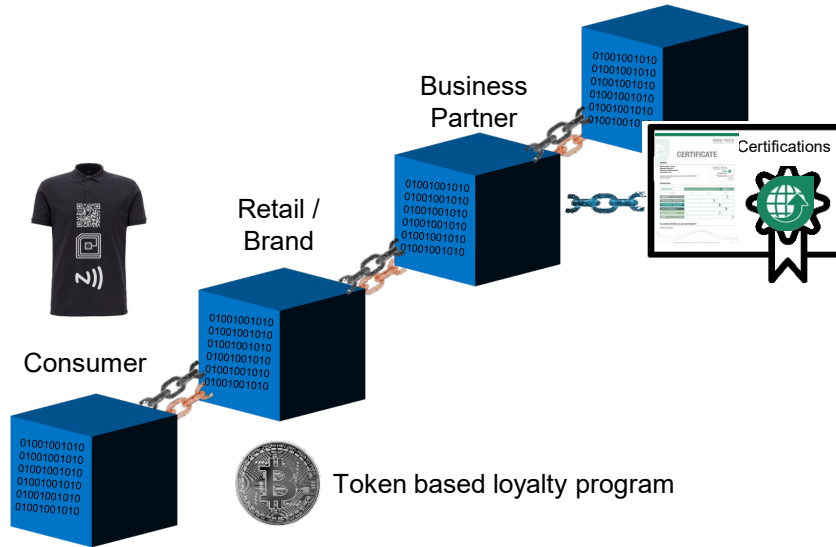
1. Distributed Ledger

- Minimise third party financial services like letter of credits
- Incentivisation for responsible business

The ecosystem for the consumer engagement



Transparent, secured product story available with all necessary key elements



3. Token Economy

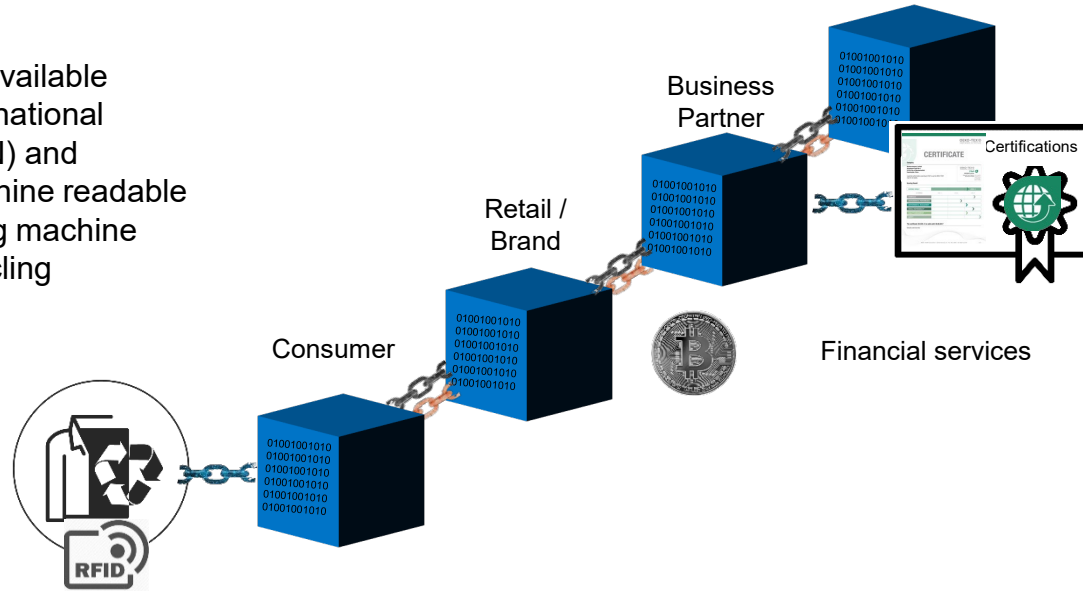
2. Smart Contracts

1. Distributed Ledger

- New digital engagement with consumer possible on product but also on brand level

The ecosystem for the circular economy

Products information is made available securely, connected to an international article coding system (e.g. EAN) and garments equipped with a machine readable tag (RFID, bar code,..) enabling machine separation for an efficient recycling



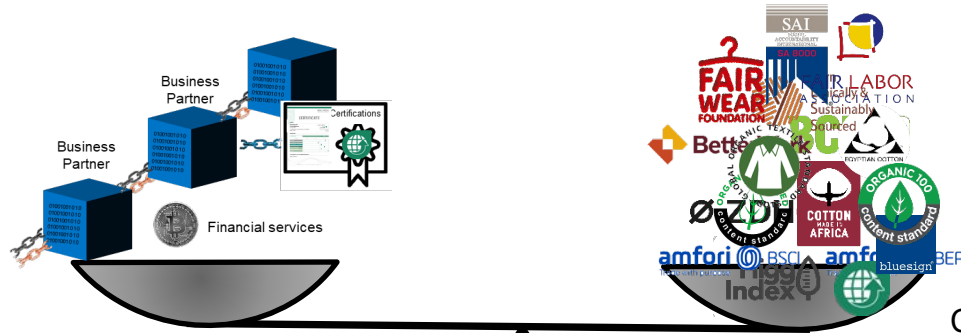
3. Token Economy

2. Smart Contracts

1. Distributed Ledger

- Enabler of the circular economy at any life cycle stage making product information available
- Garments need to be equipped with machine identification for achieving economy of scale

The ecosystem build on security and credibility



Blockchain (opensource)

Consortium (UNECE / OECD)

- 3. Token Economy
- 2. Smart Contracts
- 1. Distributed Ledger

- Define rules for: incentivisation , resp. business, access, ...
- Steer the future development based on an open-source approach
- Connect to international and national organisation

The pilot: UNIDO Egyptian cotton project

Implementing agency	United Nations Industrial Development Organization (UNIDO)
Donor:	Italian Agency for Development Cooperation
Total budget:	Euro 1,500,000
Duration:	24 months
End date:	30 June 2020 (Scale Up until 2022 is confirmed)
Government counterparts:	Ministry of Trade and Industry (MTI), Ministry of Agriculture and Land Reclamation (MALR)
Other stakeholders:	Cotton Research Institute (CRI) Cotton Egypt Association (CEA) Textiles, Apparel and home-textiles export councils National Council for women (NCW) Better Cotton Initiative (BCI) 17 manufacturers, brands and retailers (local and international) along the Egyptian cotton value chain

Sustainable Egyptian Cotton

- Organic cultivation
- Better Cotton Pilot and scale up 
- Premium quality
- GMO Free
- Biocontrolled



Sustainable Industrial Processes, Traceability and Transparency

- Promoting social compliance
- Enhancing cleaner production, chemical and wastewater management



Circular Economy

- Recycling practices
- Waste reduction
- Circular design



Innovation and Green Technologies

- Promoting value addition
- Enhancing technology transfer
- Investing in green technologies



Strategic Cooperation

- Business alliances along the value chain
- International stakeholders support



Skills for Sustainability

- Develop skills of youth for a sustainable cotton value chain



<https://open.unido.org/projects/EG/projects/160068>

The pilot: UNIDO Egyptian cotton project

- Part of an existing development project managed by UNIDO
- In loco structure is given by the UNIDO project structure and its involved partners
- Covers all the major steps from cotton field to final product
- Includes important initiatives like GOTS, BCI, zdhc, oekostep and others
- It's a proof of concept (POC) with limited complexity
- Scale up through the UNIDO project is feasible



Thank you

<https://group.hugoboss.com/en/responsibility/>

Heinz Zeller