Climate Mitigation Tokenization and Green Asset Wallet

Digitalisation and blockchain – moving into implementation for climate action

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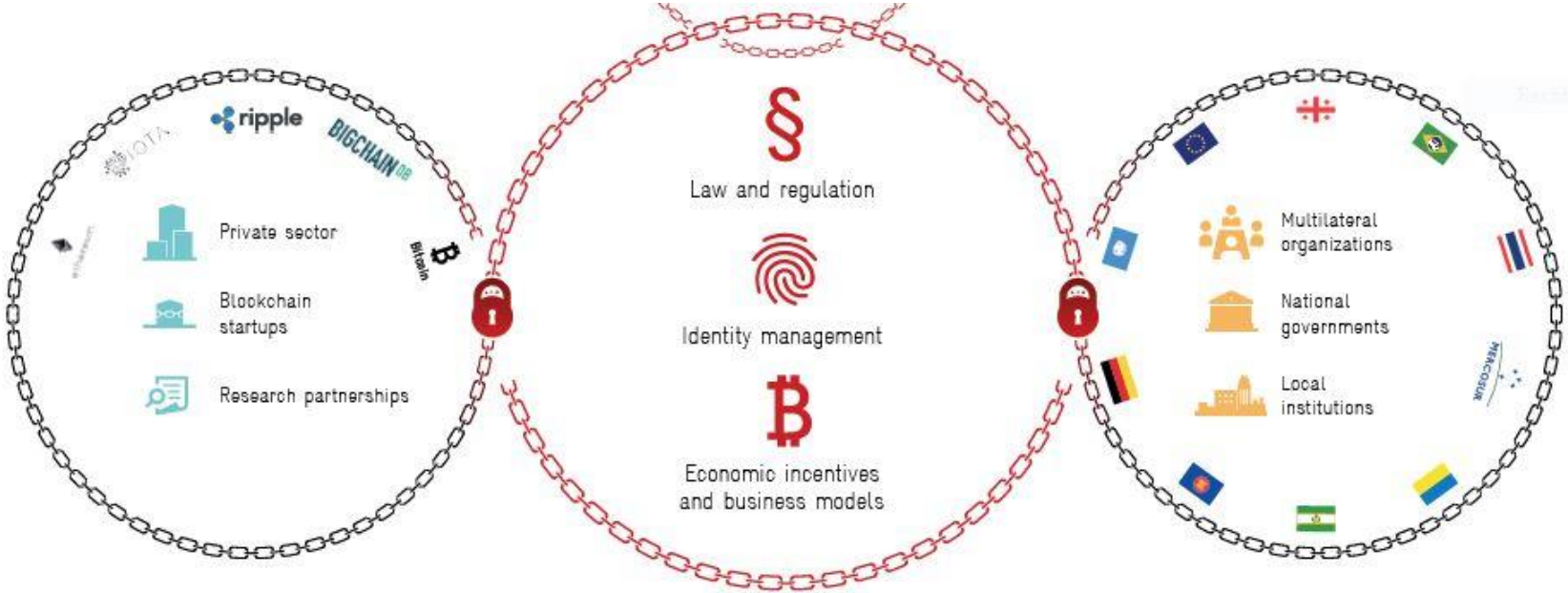
The GIZ Lab

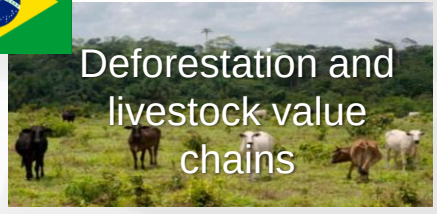

ripple
BIGCHAINDB
Private sector
Blockchain startups
Research partnerships
Law and regulation
Identity management
Economic incentives and business models
Multilateral organizations
National governments
Local institutions
The missing link in the chain between bits and atoms

1. Blockchain solutions for climate policies

Lessons learned from three case studies in Brazil, Costa Rica and Mexico

Potential Blockchain application

Strengthen transparency, accountability and trust



Unify information, provide transparency and confidentiality to transactions and sensitive data from farmers to retailers, with shared governance and financial support.

Potential premium price and boost of fair-trade mechanisms with associated emission reductions, directly attributable to the NAMA Project.

Challenges

- BC operations are often **slower** than centralized solutions
- **Higher costs** compared to conventional databases.
- **Writing** into a distributed ledger needs to be done as **many times** as there are ledger nodes.
- Create the **multi-stakeholder discussion environment**
- **Governance** can become cumbersome
- Design of **business rules** that meet different interests.
- Engage the stakeholders to **adopt** the tool once it's available
- **Financial support**
- **Mistrust about technology**
- **Access** to digital infrastructure
- **Scarcity of** blockchain **developers**

Is blockchain suitable?

Criteria	Brasil (Live-stock)	Costa Rica (Coffee supply chain)	México ETS	México MRV GHG	México MRV Climate Finance
Database	●	●	●	●	●
Multiple writers	●	●	●	●	●
Lack of trust	❁	❁	❁	○	●
Disinter-mediation	❁	❁	❁	○	●
Interact. of transaction	●	●	●	○	●
Blockchain potential	●	●	●	○	●

● high ❁ medium ○ low

What kind of blockchain solution?

Require-ments	Brasil	Costa Rica	México ETS	México MRV Climate Finance
Are all actors known?	●	●	●	●
Immutability over efficiency?	○	○	○	●
Public transaction?	○	○	○	●
Multiple party consensus?	●	●	○	
Type of blockchain	**Private/ Consor-tium**	**Private/ Consor-tium**	**Hybrid (priv./ centra-lised)**	**Public**

● Yes ○ No

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Governance

	Brazil	Costa Rica	México
Political will			
Industry shaker	Ministério da Agricultura e do Abastecimento	Icafe Instituto del Café de Costa Rica	SEMARNAT Secretaría de Medio Ambiente y Recursos Naturales
Blockchain ecosystem	ABCB	Asociación BLKCHAIN Costa Rica; Brindando trazabilidad al café Costarricense con Blockchain	BxMx
Previous experience	SISBOV	Café de Costa Rica; Café de Costa Rica Trazabilidad & Sostenibilidad	SIAT-PECC | SIAT-NDC
Other information	Brazilian Beef; ABIEC	2018-2022	La Ley General de Cambio Climático

Small and homogeneous countries like Costa Rica are good laboratories for pilot studies!

2. Green Asset Wallet

A blockchain-powered transaction platform

Project partners:

- blockchain engineer ChromaWay,
- the climate research institute CICERO,
- the asset management firm Öhman,
- Swedish bank SEB.
- Role of GIZ: Financial support within GIZ's Emerging Markets Dialogue on Finance

Blockchain for Scaling Sustainable Finance

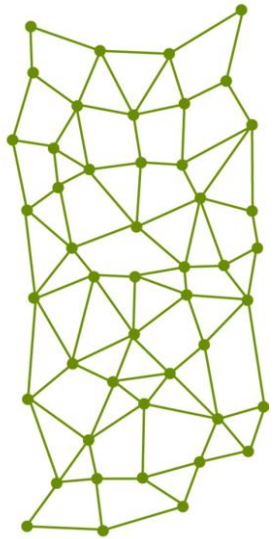
How can Blockchain Technology contribute to Scaling-Up Sustainable Finance?

The Sustainable Finance Gap

Blockchain Solutions

- **Current Problems of Scaling Sustainable Finance:**
  - "Greenwashing" → lack of trust
  - Measuring and pricing externalities
  - Data and measurement of sustainable impact
  - Project-side: "on-top" transaction costs for structuring sustainable financial products
  - Investor-side: high search costs for identifying projects and assets

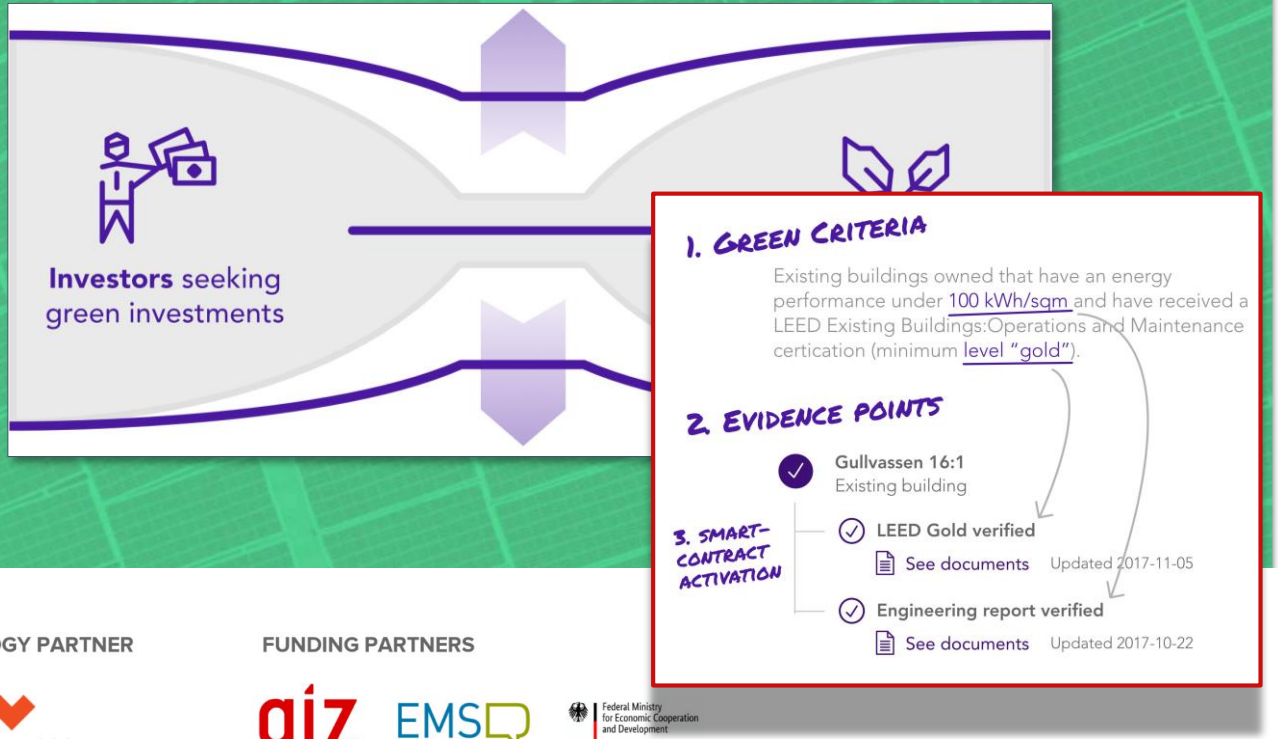
- **How Blockchain resolves these:**
  - It increases trust through *transparency*
  - It creates *immutable track records* and data points
  - It can *reduce transaction costs* considerably
  - **Matchmaking: It can *connect* projects with the investors across the globe at low cost**



Distributed (C)

Bridging Demand with Supply via the blockchain

green assets wallet



AN INNOVATION PROJECT BY

Stockholm Green Digital Finance

TECHNOLOGY PARTNER

ChromaWay

FUNDING PARTNERS

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EMS EMERGING MARKET SUSTAINABILITY DIALOGUES

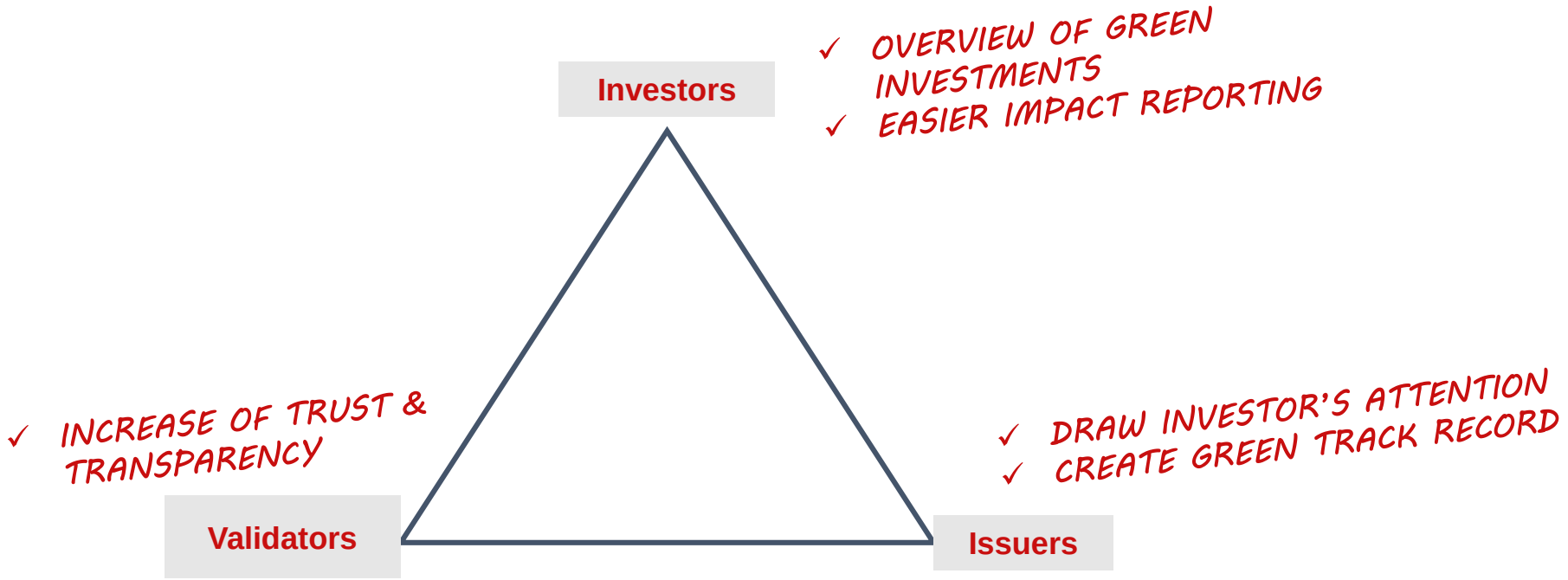
Federal Ministry for Economic Cooperation and Development

The Green Assets Wallet (GAW)

Benefits of the GAW

- Verification of environmental impact on the Blockchain increases trust and transparency
- Impact reporting on the GAW
- Decentralised power with increased accountability
- Projects by new entrants can create a track record to draw attention from investors
- Investors have an overview of all their green investments
- Matchmaking

The Green Assets Wallet (GAW): Blockchain for Scaling Green Finance



Why did we finance the Green Assets Wallet?

- According to the latest IPCC Report, we have **12-14 years** to limit global warming.
- Scaling finance for achieving the SDGs and the Paris Agreement is of utmost importance.

1. **Efficiency gains** through a reduction of the transaction costs and increase in trust

2. Facilitation of **market entry for new issuers** in developing and emerging economies

3. **Matchmaking** of capital seeking entities in developing and emerging markets with investors around the globe

4. **Safeguarding of environmental integrity** of green investment products through verification of impact on the blockchain

The GAW has the potential to significantly **scale green financial flows**, thus to increase sustainable economic activities and to contribute to global agreements on climate change and sustainable development.

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