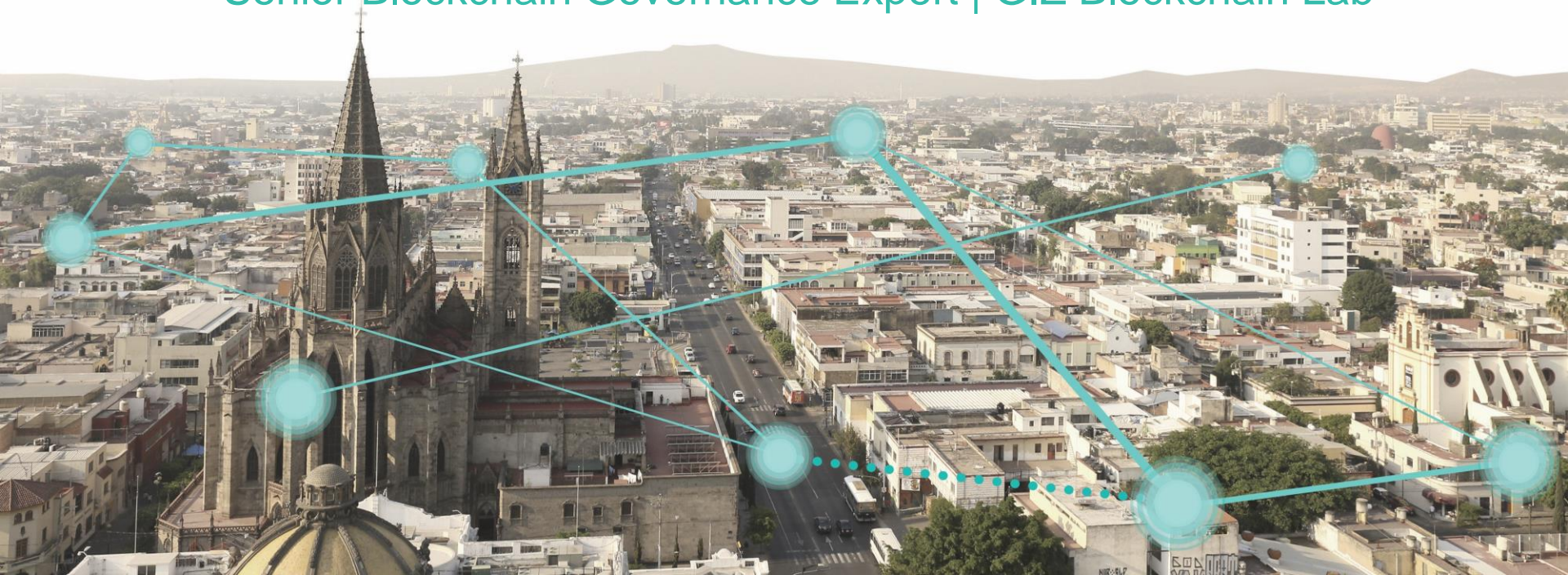




Blockchains as a game changer for electricity mini & micro grids?

Viktor Peter

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giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH



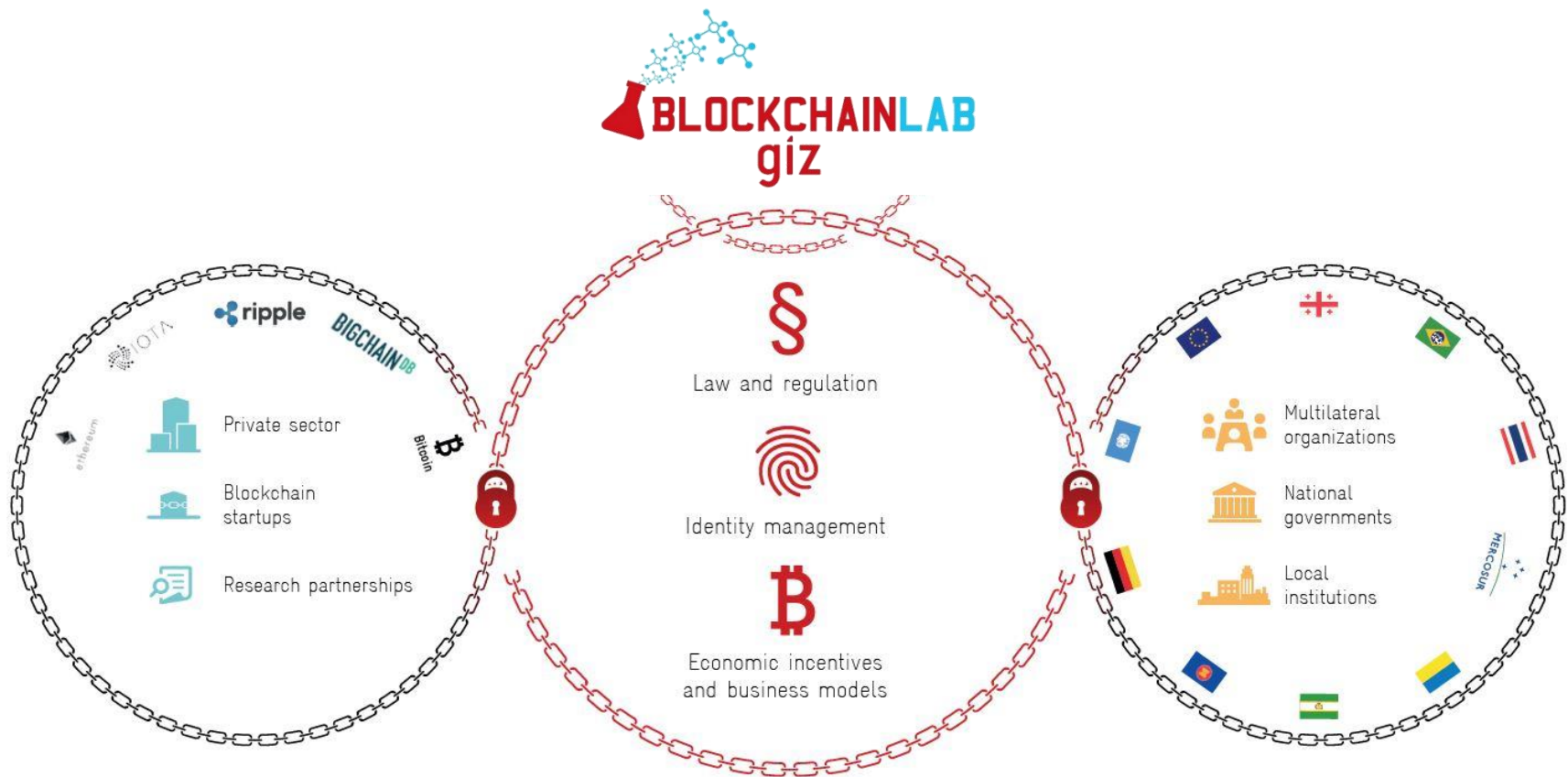
Connecting Bits and Atoms for Development



Our vision: decentralized governance models for a better world



GIZ as an „honest broker“ in the blockchain space



The missing link in the chain between **bits** and **atoms**



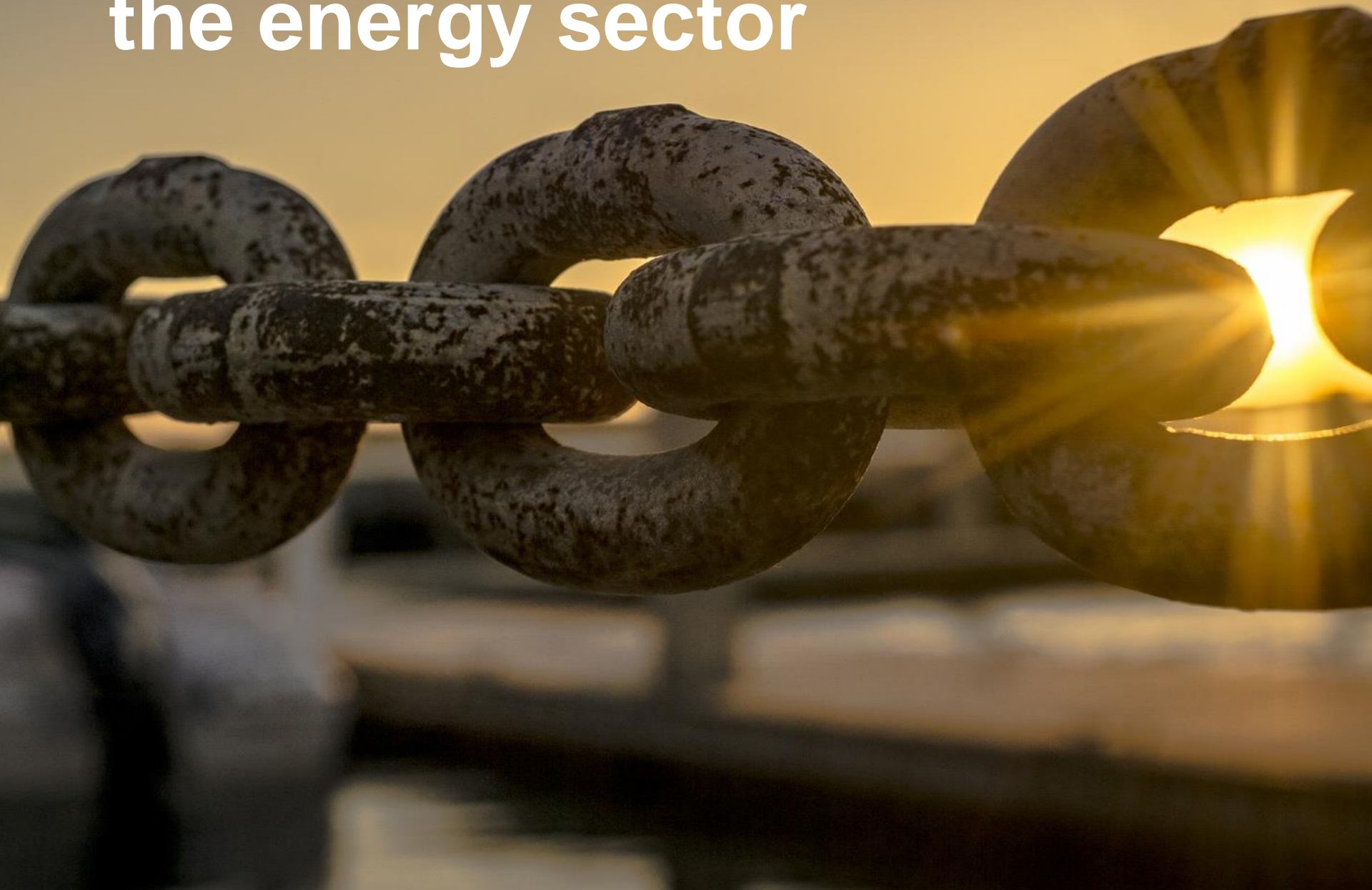
The GIZ Blockchain Lab

Connecting bits and atoms for development

The Blockchain Lab examines and develops **governance models** für **Distributed Ledger Technologies (DLTs)** in the context of the **2030 Agenda for Sustainable Development**.

At the interface of the startup ecosystem, public partners, research institutions, and the private sector, the Lab identifies the most promising blockchain use cases and create **bridges** between **innovators** (*bits*) and **societal stakeholders** (*atoms*).

GLZ projects within the energy sector





Distributed Ledger Technologies

An innovative IT-solution to transform the way we handle data

A blockchain is a constantly growing **list of transactions** which are **stored in blocks** and are secured through **cryptography**. A **decentralized network of computers** is processing, verifying and validating all entries.

Promises of DLT-solutions

- **Transparency:** Traceability of transactions
- **Disintermediation:** „Creating trust through technology, not through authority“
 - Crypto-economics: incentive structures and game theory as a vehicle for new forms of collaboration
- **Resilient and secure IT-infrastructure:** e.g. less blackouts
- **Inclusion:** lowering potential entry barriers
- **Automation** of contracts or processes (process efficiency)



DLT as a useful tool for electricity mini grids?

Setup: Rural Electrification in an African country (GIZ-project)

- Off-Grid locations
- Mainly diesel generated electricity
- Little to no grid connectivity
- Little to no incentives to invest in renewables
- Payments and the systems underlying it are limited





DLT as a useful tool for electricity mini grids?

DLT & Finance Solutions

- Asset Financing
- Payment Settlements

DLT & Grid Solutions

- Grid Monitoring
- Grid Balancing

DLT & New Electricity products

- P2P-Trading (local energy markets)
- Certification of green energy





Thank you!

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