

The background of the entire page is a dark blue network of glowing white nodes connected by thin white lines, creating a complex web-like structure. The nodes are of varying sizes and are distributed across the frame, with a higher density in the lower right quadrant. The overall effect is that of a digital or blockchain network.

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A PRACTITIONER'S GUIDE TO BLOCKCHAIN

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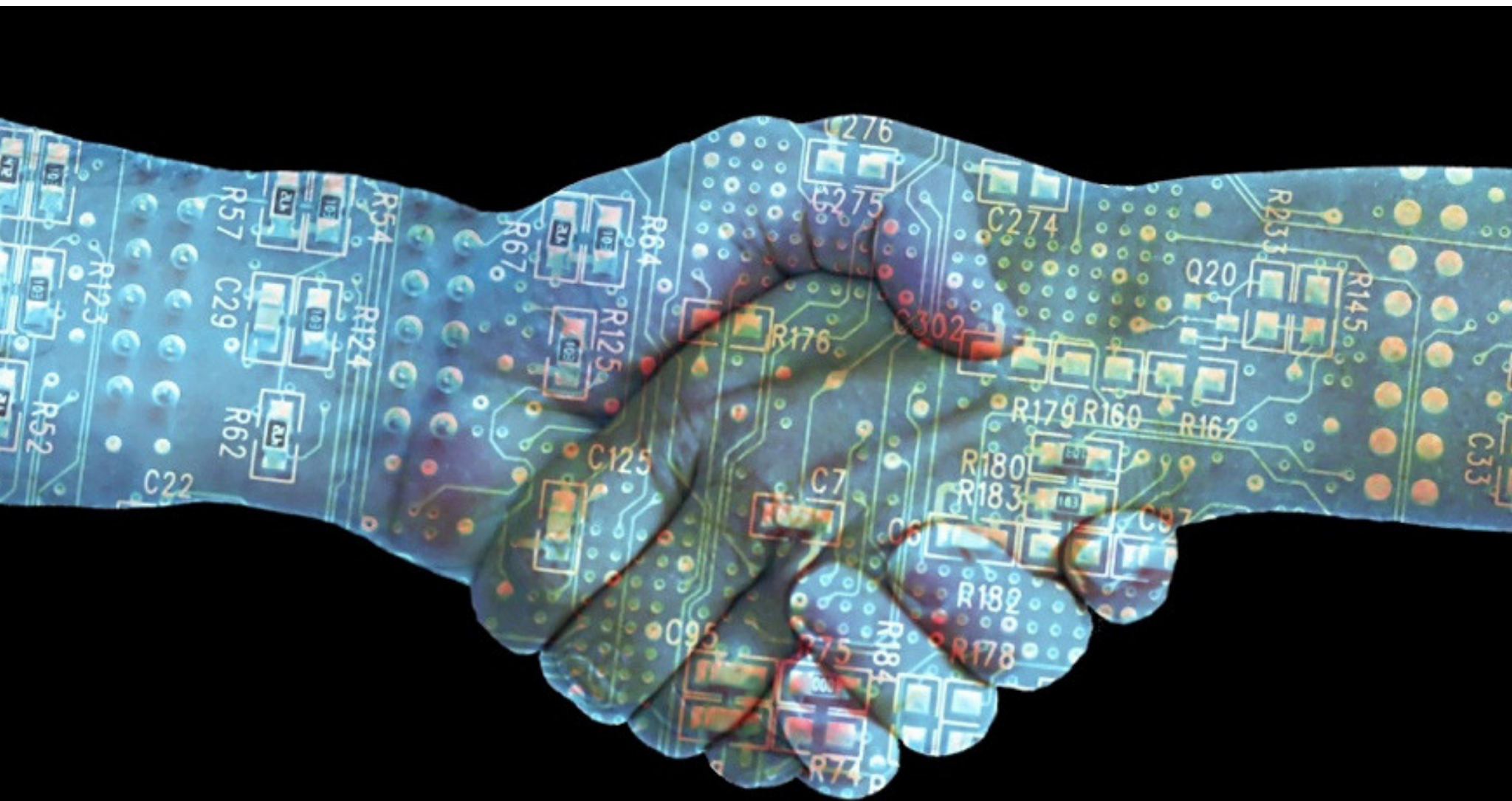
MERCY CORPS

A dark blue background with a complex network of glowing white and light blue nodes and connecting lines, representing a blockchain network. The nodes are small circles, and the lines are thin and connect the nodes in a web-like pattern. The overall effect is a sense of interconnectedness and digital technology.

BLOCKCHAIN BASICS



WHAT IS BLOCKCHAIN?





CHARACTERISTICS OF HIGH-POTENTIAL USE CASES



Shared repository

A **shared repository** of information is used by multiple parties



Multiple writers

More than one entity generates transactions that require modifications to the shared repository



Minimal trust

A level of **mistrust** exists between **entities** that generate transactions



Intermediaries

One (or multiple) intermediary or a central gatekeeper is present to enforce trust



Transaction dependencies

Interaction or **dependency** between **transactions** is created by different entities

VALUE DRIVERS



Operational simplification

DLT reduces / eliminates manual efforts required to perform reconciliation and resolve disputes



Regulatory efficiency improvement

DLT enables real-time monitoring of financial activity between regulators and regulated entities



Counterparty risk reduction

DLT challenges the need to trust counterparties to fulfil obligations as agreements are codified and executed in a shared, immutable environment



Clearing and settlement time reduction

DLT disintermediates third parties that support transaction verification / validation and accelerates settlement



Liquidity and capital improvement

DLT reduces locked-in capital and provides transparency into sourcing liquidity for assets









Fraud minimization

DLT enables asset provenance and full transaction history to be established within a single source of truth

KEY FINDINGS: WORLD ECONOMIC FORUM

- DLT has great potential to drive simplicity and efficiency
- DLT is not a panacea
- Applications of DLT will differ by use case
- Digital Identity is a critical enabler
- The most impactful DLT applications will require deep collaboration between incumbents, innovators and regulators
- New infrastructure built on DLT will redraw processes and call into question foundational orthodoxies

Current-state assumptions	Transformative characteristics of distributed infrastructure	Implications for market participants within financial services	
<p>Information silos drive the need for detailed reconciliation activities</p> <p>Lack of a single version of the truth and audit trails creates arbitrage concerns</p>	<p>a) immutability</p>	 <p>Eliminates need for reconciliation</p>	 <p>Provides historical single version of the truth</p>
<p>Asymmetric information between market participants drives the proliferation of central authorities</p> <p>Lack of transparency increases regulations on FIs</p>	<p>b) transparency</p>	 <p>Eliminates imbalance of information among market participants</p>	 <p>Increases cooperation between regulators and regulated entities</p>
<p>Lack of trust between counterparties creates the need for central authority oversight in contract execution</p>	<p>c) autonomy</p>	 <p>Ensures agreements are executed to agreed upon business outcomes</p>	 <p>Disintermediates supporting entities established to resolve disputes</p>

DISTRIBUTED LEDGER TECHNOLOGY WILL:

- Question the need for individual books of record through immutable and distributed record-keeping
- Significantly increase transparency between market participants
- Have implications for the cost of leverage by reducing information asymmetry between borrowers and lenders
- Transform the relationship between regulators and regulated entities, reducing frictions and improving outcomes
- Reduce the need for intermediaries by providing autonomous execution capabilities

DLT CAN PROVIDE:

- Minimized human error in document checks;
- Instant verification and reconciliation of records;
- Automatic execution of workflow steps through smart contracts;
- Instant, secure, low-cost exchange of data; and
- Increased transparency and accountability across parties





COMMITTED TO
IMPROVING THE STATE
OF THE WORLD

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WHY DLT?




To the extent that international NGOs function as guarantors of trust – trust that the funds donated will be used for an appropriate purpose, trust that the aid has been given to the right beneficiaries, trust that the development work that was contracted for was done on time and as specified – then NGOs too are poised for disruption.


A Revolution in Trust, Mercy Corps



WHERE WE SEE POTENTIAL

THREE BROAD AREAS

 **NEW WAYS TO BUILD TRUST AND REDUCE COSTS**
Enhanced transparency and accountability would boost trust. Moreover, the use of DLT to facilitate financial transactions and contractual arrangements could reduce transaction costs and promote efficiencies.

 **NEW WAYS TO GIVE**
Digital currencies and the ability to tokenize assets opens up new ways for donors to give.

 **NEW WAYS TO ADDRESS SOCIAL PROBLEMS**
Digital identity management can reduce disenfranchisement and empower individuals. DLT and digital currencies open up new avenues for protecting wealth and facilitating financial inclusion.

MORE SPECIFICALLY:

- Financial Inclusion
- Land Titling
- Authentication
- Enhanced transparency of donations
- Better beneficiary onboarding
- Reduced beneficiary fraud
- Tracking of support to beneficiaries from multiple sources
- Delivery of social welfare
- Transforming governance systems
- Micro-insurance
- Cross-border transfers
- Cash programming
- Grant management and organizational governance
- Voting

WHAT IF...

Donor expectations change?

If the fungibility of donations decreases, what impact will it have on NGO operations?

WHAT IF...

Cash transfers happen directly?

Money goes from donor to beneficiary, using a combination of digital wallets or other distribution methods.

How does the NGO business model change?

WHAT IF...

Grants were administered via DLT?

Using an open ledger you share all transaction data with the administering parties.

How will that affect NGO operations and your process?



CHALLENGES TO ADOPTION & IMPLEMENTATION

KEY BARRIERS

- We are still in the early adopter phase of this technology.
- Network dependency is a critical failure point. The technology requires Internet access and robust network infrastructure.
- Social, legal, and regulatory frameworks are in their early days and remain an area of uncertainty.
- Adequate data storage coupled with an effective means for data retrieval is a necessity.
- Shortage of DLT-related talent.

OTHER CONSIDERATIONS



Governance Issues



Operational Risks



Compatibility & Interoperability



Risk Management & Regulatory Compliance



A CALL FOR ACTION

THE BIGGER OPPORTUNITY

- If we merely try to retrofit DLT into our existing infrastructure, we will potentially miss the larger opportunity.
- Existing processes reflect the centralized structure of most NGOs, and were never designed for exploiting the sort of opportunities DLT brings.
- To truly maximize the benefit of DLT, we need to think bigger and reimagine our processes so that the beneficiary is the central point of the data systems, and the ability to collaborate across the sector is fundamental.

WE NEED SECTOR ACTION

The discussion needs to occur at a sector level with a fresh look at the relationship between processes, beneficiaries, and organizations and how the use of DLT will allow agencies to improve efficiency and reduce costs across the sector.

DOWNLOAD THE PAPER

<https://mercycorps.com/research>



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A REVOLUTION IN TRUST
Distributed Ledger Technology in Relief & Development

"The principal challenge associated with (DLT) is a lack of awareness of the technology, especially in sectors other than banking, and a lack of widespread understanding of how it works."

- Deloitte

Executive Summary¹

In 2016, the blockchain was recognized as one of the top 10 emerging technologies by the World Economic Forum.² The potential of the blockchain and distributed ledger technology (hereinafter "DLT") to deliver benefits is significant. Gartner estimates that DLT will result in \$176 billion in added business value by 2025; that total reaches \$3.1 trillion by 2030.³

Investment in the field reflects the widespread belief that the technology can deliver value. Numerous trials, and some deployments, can be found across multiple sectors.

- Over two dozen countries are investing in DLT
- More than 2,500 patents have been filed in the last 3 years⁴

The Upside

In a recent report, Accenture surveyed cost data from eight of the world's ten largest investment banks, with the goal of putting a dollar figure against potential cost savings that might be achieved with DLT. The report concluded that the banks analyzed could reduce infrastructure costs by an average \$8 to \$12 billion a year. The survey mapped more than 50 operational cost metrics and found the savings would break down as follows:

- 70% savings on central financial reporting
- 30-50% savings on compliance
- 50% savings on centralized operations

THANK YOU FOR JOINING!

**WANT TO CONTINUE THE CONVERSATION?
HAVE IDEAS FOR FOLLOW-UP COVERAGE?
GET IN TOUCH.**

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