

# How Can Blockchain Technology Support Local Economic Development Programs?

## Key Takeaways

**Moderator: Parmesh Shah**, Global Lead, Data-driven and Digital Agriculture CoP, World Bank

Thank you for joining everyone. Today we will explore emerging use cases for Blockchain both inside and outside of the World Bank. Bernhard, with the World Food Programme (WFP) is working with innovators around the world to accelerate their solutions to food security. Meanwhile, Alpen with Mercy Corps Ventures (MCV) is working on a number of innovations in blockchain to benefit vulnerable populations. Lastly, Joanne with the Innovation and Technology Lab at the Bank will explore the Bank's expanding work on blockchain.

Our speakers include:

- **Alpen Sheth**, Senior Blockchain Technologist, Mercy Corps Ventures / FinX
- **Bernhard Kowatsch**, Head of the WFP Innovation Accelerator
- **Joanne Martins**, IT Officer, ITSTI, World Bank

## Ignite Talks

**Bernhard:** The WFP innovation accelerator sources, supports and scales high-impact innovations to disrupt hunger. The goal is to both end hunger and make emergency aid more efficient. The accelerator entails 5 functions. Under frontier innovation, the accelerator explores emerging technology such as blockchain. Other functions include innovation sourcing, bootcamps, sprint programmes, and scale-up enablement. The Building Blocks project enables refugees to receive cash assistance securely and efficiently using blockchain-based cash distribution. Over 910,000 refugees have been reached to date and 98% has been saved in financial transaction fees. Meanwhile, Producers Direct connects smallholder farmers to markets using blockchain. This rebuilds the trust of a cooperative in a digital space, which enables and enhances the cooperative model. Blocks for Transport is an effort to digitize logistics processes and documentation in international shipping between Djibouti and Ethiopia in order to reduce delays in humanitarian transport and increase transparency in trade.

**Alpen:** FinX leverages Mercy Corps' 40 country offices to elevate our approaches to financial inclusion. To date, billions of people are excluded by the financial system which limits their ability to escape poverty. FinX seeks to advance innovative and responsible blockchain financial solutions to help people join the economy and escape poverty. We provide capital, co-design and pilot solutions, build capacity on blockchain, and engage in research and learning with universities and partners. We have learned that ventures have trouble piloting for impact objectives. We help them track impact rigorously using our in-house blockchain expertise. Currently, we are supporting companies that are scaling rapidly and enhancing financial inclusion. For example, Sokowatch is helping informal merchants access decentralized financial applications. Meanwhile, Acre Africa uses blockchain and smart contracts to expand microinsurance to smallholder producers. This results in much faster payouts, reduced premiums, and increased transparency. We are also exploring cross-border payments and remittances with Valiu and Celu. These companies enable low to no-cost cross border transactions via mobile phones and blockchain. Lastly, we are enabling producers to have more rigorous access to their supply chain via visibility and reduced transaction times.

## Fireside Chat

**Parmesh:** Generally, the perception is that Blockchain is just being piloted, and most people are only aware of cryptocurrency rather than blockchain's implications for development. How can these approaches scale? What are the challenges to scaling and is this really cost effective?

**Alepn:** Its true that there is skepticism surrounding blockchain and that it is over-hyped. There is still a need to verify emerging information and testing new approaches. However, blockchain has effectively scaled – just not in the places where we work. Bitcoin, Ethereum, and Stable coin-based trading, settlements, and lending are growing very rapidly. Blockchain has already proved a reliable way to engage in financial transactions at a much lower cost. Applications in trade and cross border traceability will become inevitable as value moves via blockchain. However, remote areas are at risk of being excluded if access to devices, connectivity, and digital literacy are low. There are also gender and economic disparities that need to be addressed. Meanwhile, biometrics and NFC cards look promising, but have limitations. There needs to be payment ecosystems to give people payment options that are integrated with existing payment systems. Lastly, a major barrier surrounds compliance. Governments should support responsible financial innovation and customer protection; but doing so with KYC models that crowd-in innovations rather than reinforcing punitive compliance measures that exclude poor populations unable to obtain traditional identification.

**Bernhard:** Often, people get carried away with seeking a blockchain strategy. It is important to be problem-centric rather than employ blockchain unnecessarily. We also need to ensure that the technology used does in fact benefit the most vulnerable people. Second, the WFP has built up a scale-enablement capacity. It can be hard to support technological innovations. Thus, it is necessary to have a good concept, team, and strong partnerships. It is also important to recognize that existing plans may not survive roll out in new contexts. Lastly, the WFP works on blockchain with various teams rather than centralizing blockchain exploration. Basic knowledge of the technology and its use cases are also limitations. Perhaps its most prominent strengths are the ability to enable trust actors and increase transparency.

### **World Bank and Blockchain**

**Joanne:** The Technology and Innovation Lab provides a safe place for Bank teams to explore the potential for emerging technology. We help teams learn about the technology and operationalize solutions. We explore blockchain, artificial intelligence, 5G, AR, VR, 3D and more. We have piloted blockchain for the World Bank trust fund disbursement and traceability, health results-based financing, micro-pensions in Kenya, and Agri-value chain. First, we experiment with clients to help them better understand the challenge they face and whether emerging technology is the right fit. Next, we help incubate and plan to scale based on the outcomes of experiments in the lab. We use design thinking to explore stakeholders, develop a lab-based prototype, and, if successful, we take the solution to the operationalization phase. This includes incubation and scaling. Together with teams, we explore the digital readiness of their real-world project area, stakeholders, and integration with existing technologies. Our lab-based prototype on micro-pensions in Kenya has led the government to move forward with a blockchain platform. In Singh, Pakistan, we tested blockchain for tracking agricultural equipment, which is now being implemented after having increased transparency. Lastly, we are exploring opportunities for blockchain in fund disbursement in world bank projects in order to trace funds down to the local level.

### **Audience Q&A**

#### **What is the value proposition of blockchain?**

**Bernhard:** Blockchain distributes ownership so that different partners have greater agency. Irrevocable transactions are tamper-proof. Blockchain is built for collaboration. Blockchain transactions are slower

than centralized transactions, but in light of an entire business process, can result in much faster operations due to its transparency, immutability, and real-time auditing. There are many unique use cases where the benefit appears via collaboration and overcoming low levels of trust. Data can also be encrypted to secure privacy.

**Alpen:** Motivations to use blockchain differ between organizations like the Bank and beneficiaries or participants in the blockchain. There has not been systematic research on whether these technologies result in improved results for end users. FinX is conducting such research sharing results widely. For example, in the case of insurance with Acre Africa, we are seeing benefits in reduced premium costs, immediacy of payouts (applicable to disaster response), and automation. Indeed, automated payments can reduce costs in many contexts including cross-border remittances. Valiu works in Venezuela and Colombia and has substantially reduced costs. Generally, we are seeing the emergence of a new decentralized basis for transferring, saving, and lending value. People can conduct typical bank functions using blockchain without needing to trust a single corporation like a bank or mobile network operator. This combines local governance and ownership with access to global financing and resources. Cost reduction is the most substantial benefit for the end user. However, the initial friction for an organization to shift its systems to blockchain comes with more complicated tradeoffs.

**Parmesh:** What is your advice for the World Bank to engage in exploring blockchain solutions?

**Bernhard:** The WFP is very open to collaboration. For example, the WFP seeks to openly disseminate learnings, which are available on their website.

**Alpen:** We are already seeing positive outcomes from our pilots and programs, which could be scaled through Bank support. MCV is excited to collaborate and share insights.

**Parmesh:** Thank you to our panelists for a stimulating discussion! We hope that our World Bank teams can collaborate in the same geographies in which you are working to harmonize our approaches. It is also important that we use Joanne's work on fund disbursement and traceability in Bank projects more broadly.

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