



World Food
Programme

INNOVATION
ACCELERATOR



GBBC
GIVING

FOOD FOR CRISIS

A Web3 Initiative

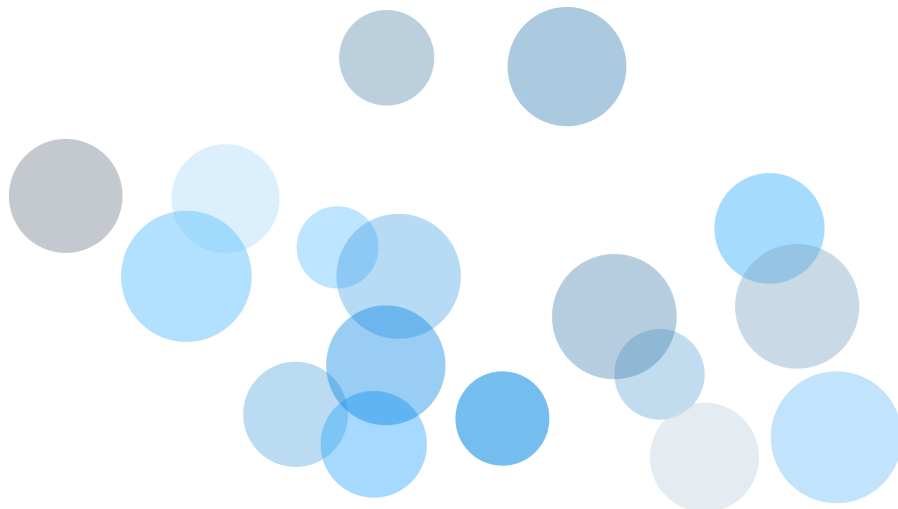


FOOD FOR CRISIS OVERVIEW

Food for Crisis was a collaborative initiative developed between 2023 and 2025 by the **World Food Programme (WFP) Innovation Accelerator** and **GBBC Giving**, a nonprofit organization under the aegis of **Global Blockchain Business Council**. The initiative explored how **blockchain** and **Web3** approaches could strengthen transparency and accountability in humanitarian financing, particularly by improving traceability of funds from donor to end beneficiary.

The initiative was designed in response to rising and increasingly complex food insecurity needs. The UN's flagship **State of Food Security and Nutrition in the World 2025 (SOFI 2025)** estimates that **around 673 million people experienced hunger in 2024**, equivalent to **about 8.2 percent** of the global population (with progress uneven across regions, including continued deterioration in parts of Africa and Western Asia). In parallel, WFP's operational environment continues to be shaped by conflict, climate shocks and economic instability, with acute food insecurity affecting hundreds of millions of people.

Food for Crisis examined how emerging digital technologies could improve end to end traceability of humanitarian transactions and reporting, with the aim of reducing inefficiencies, strengthening donor confidence and enabling clearer visibility across the delivery chain. Conceptually, it proposed a **blockchain agnostic** approach capable of tracing both **fiat and digital asset** flows in near real time, with a longer-term vision of an **open source dashboard** integrating multiple payment rails and platforms.



FOOD FOR CRISIS PROOF-OF-CONCEPT IN PERU

Starting in November of 2024, Food for Crisis implemented a Proof-of-Concept (PoC) at the WFP Country Office in Peru, with WFP staff in collaboration with the Swiss-based technology company AIDONIC. The pilot tested an NFT-based traceability solution designed to record and verify humanitarian fund flows from donor to recipient. The solution combined decentralized storage, tokenized data integrity, and privacy-preserving, end-to-end transparency to demonstrate how emerging technologies can strengthen trust, improve accountability and enhance efficiency in aid delivery.

The PoC used Filecoin's decentralized storage network and blockchain to mint NFTs that immutably recorded donation and distribution data. The process represented fiat donations as digital twins on the blockchain, enabling tracking without using on-chain financial transfers.

NFT Traceability Solution

AIDONIC's ImpactNFT system created an end-to-end traceable chain of accountability by connecting the *First Mile* (donation management) with the *Last Mile* (aid distribution). The solution includes:

Two Types of NFTs

These NFTs allow both donors and aid organizations to maintain transparent, verifiable, and tamper-proof records of aid activities.

1) Donor NFT - Serves as an immutable record of a donor's contribution.

- Contains metadata about the donation, images or project visuals, and a summary of the donation's impact
- Includes a QR code linking to the donation receipt and related updates

2) Distribution NFT - Owned by the aid organization, representing the verified distribution of aid.

- Includes metadata and blockchain verification details
- Contains a QR code linking to a detailed distribution report saved on decentralized storage that records each recipient transaction and other details of the distribution, keeping the necessary level of individual privacy

Verification and Data Integrity

The Last-Mile platform ensures the accuracy and authenticity of distribution data through:

- Automated capture of time, date, and GPS location data during distributions
- Possibility of integration with financial partners for digital cash transfers
- Optional facial recognition for recipient verification
- Real-time synchronization with blockchain technology
- Decentralized, tamper-proof storage using Filecoin

Privacy and Security

While transparency is central, the system maintains strict data privacy through the following:

- Personally identifiable information (PII) is kept off-chain and separate from public records
- Transactions use unique identifiers to protect recipient identity
- Visibility settings can be customized for different stakeholders

PHOTOS FROM THE WORK IN PERU



AIDONIC workshop participants *(Photo: WFP/Peru)*



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RESULTS AND LEARNINGS

The PoC in Peru demonstrated the technical feasibility of using NFTs for humanitarian aid traceability. The pilot validated that blockchain technology can create verifiable, tamper-proof records of humanitarian assistance while protecting recipient dignity and privacy. Key takeaways show that the project confirmed the potential of blockchain and decentralized storage to strengthen humanitarian aid systems in the following ways:

End-to-End Transparency

The NFT-based system successfully linked donation and distribution records through blockchain and decentralized storage, providing a clear, auditable chain of transactions.

Enhanced Donor Engagement

Donors could track the impact of their contributions in real time, fostering trust and ongoing participation, building trust and encouraging continued support.

Data Protection

Privacy-preserving architecture met the dual objectives of accountability and beneficiary security, ensuring sensitive information remained protected.

Potential for Operational Integration

The system showed flexibility to connect with traditional financial rails (e.g., mobile money, bank transfers), demonstrating readiness for future scale-up and integration into existing workflows.

FUTURE OPPORTUNITIES

Following the success of the PoC in Peru, there are promising opportunities to use blockchain and decentralized storage technology for humanitarian aid, especially in the following ways:

- Integration across blockchain networks and stablecoin systems for broader traceability coverage
- Development of an open-source, blockchain-agnostic dashboard capable of aggregating data from multiple platforms
- Expansion of pilots across different regions and types of humanitarian aid
- Potential applications beyond food aid — including economic development, financial inclusion, and remittance tracking

In the long-term, a global traceability framework could ensure every donation, whether in fiat or crypto, is transparently tracked, while keeping a privacy-first mindset . This would require continued testing, deployments, and collaboration across major stakeholders.

CONCLUSION

Under the Food for Crisis initiative, the AIDONIC NFT Proof-of-Concept in Peru demonstrated the real potential of traceability based on blockchain and decentralized storage technology to improve the efficiency and integrity of humanitarian aid. By combining transparent, tamper-proof records with strong safeguards for recipient privacy, the model offers a scalable pathway towards a higher standard of global aid accountability. The initiative highlights how public-private collaboration and Web3 innovation can generate measurable impact in tackling food insecurity and supporting economic development, while contributing directly to the achievement of UN Sustainable Development Goal 2: Zero Hunger.

