Digital Cash for Work Pilot in Laikipia, Kenya – Oct–Dec 2021

PILOT RESULTS - PRELIMINARY REPORT

Note: The final findings and evaluation of the pilot will be published in the upcoming weeks.

February 18, 2022

1. Context

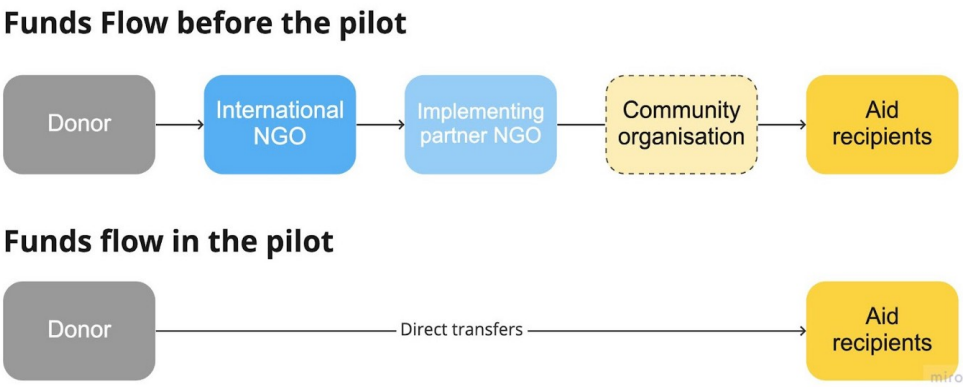
Celo and Emerging Impact have partnered with Polish Humanitarian Action (PAH) to pilot a blockchain-enabled digital cash assistance approach of delivering aid.

The Digital Cash for Work pilot took place across October-December of 2021 in Laikipia county. The pilot has been embedded within an existing long-term program focused on climate-resilient solutions to strengthen **small-holder farming communities** (CRESS), such as the Maasai, who have become a vulnerable minority impacted by climate change. CRESS program is centered around the construction of sand dams (built by Africa Sand Dam Foundation, PAH's local partner), which are the catalyst for soil regeneration, farming, and new business practices for the women-led Maasai community groups.

The pilot has thus introduced both the programmatic component of Cash for Work to support the ongoing activities, as well as the new digital modality – pioneering the new approach of Digital Cash for Work.

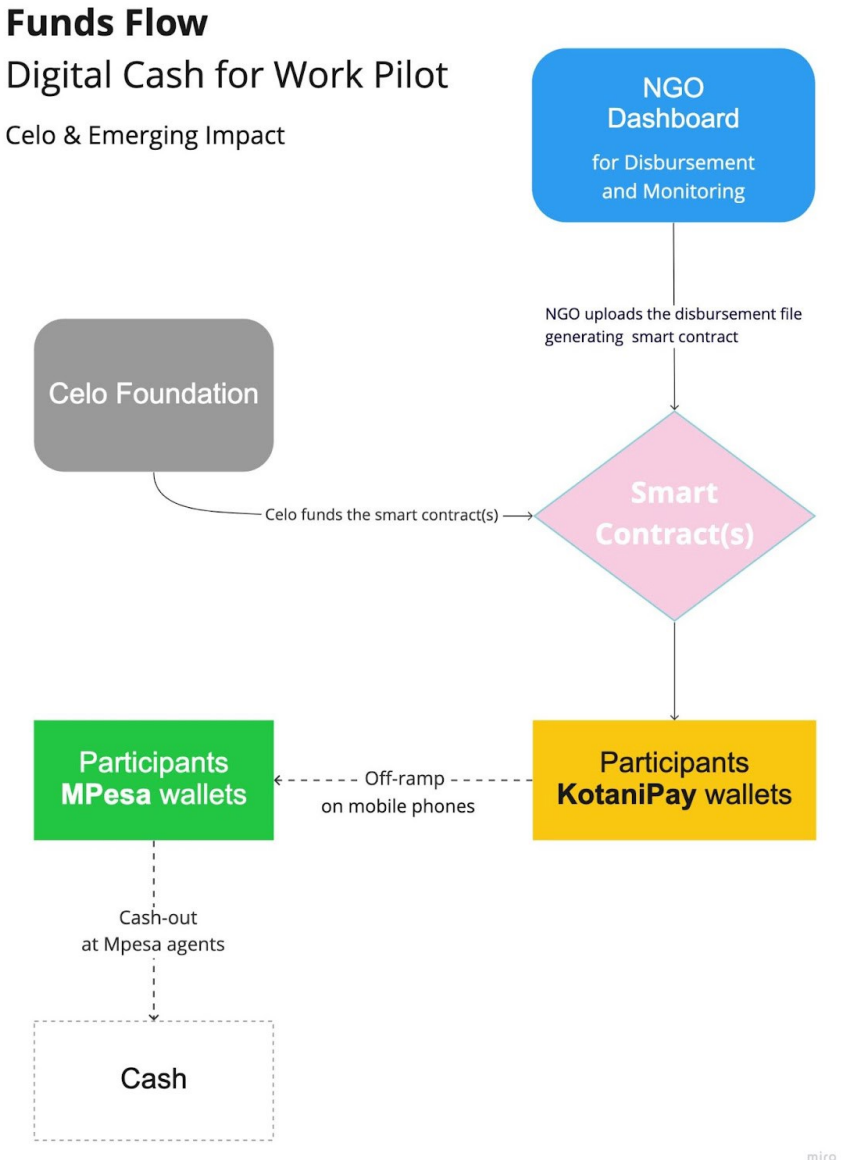
2. Pilot Design

The pilot has been testing the modernized approach to cash transfers – known as digital cash assistance, **leveraging Celo blockchain and cUSD stablecoin to improve speed of delivery (crucial in disaster relief), decrease cost of delivery (lower fees), and increase monitoring capabilities and transparency.**



The pilot utilized Celo transfer tool for NGOs and the KotaniPay USSD wallets that provided integration with existing mobile money system (MPesa) to provide evidence that digital cash transfers can empower local communities and contribute to their economic recovery.

Due to compliance challenges facing many NGOs globally, including PAH, the Emerging Impact and Celo teams proposed to test **direct donor-to-recipient transfers** leveraging the benefits of smart contracts. As illustrated in the Funds Flow the NGOs were creating smart contracts every time they wanted to make a payroll, while the donor was funding the smart contract, which released funds directly to participants' phones. This created **a coordinating mechanism that shortens the funds flow supply chain, lowering costs and increasing speed of delivering aid to end recipients**.



3. Pilot Objectives

The pilot objectives for the implementing NGO (PAH) were to:

1) Improve coordination
2) Enhance monitoring
3) Lower the costs and time of delivering cash assistance to participants

If the piloted approach has proven to be impactful, efficient, and easy to use, PAH will consider integrating it within its programming (where feasible) leading to institutionalization of the blockchain-enabled Digital Cash Assistance approach.

4. Pilot Participants Demographics – *baseline data from the start of the pilot*

- Location: Kenya, Laikipia North, conservancy: Maiyianat & Naibuga Lower.
- Target population (community groups): Rapunye, Tiamamut, Naiperere, Chui mama.
- Gender: 178 (99%) female, 2 (1%) male.
- Age: average (mean) 43, median 43, mode 35
- **Household (HH) size: average 7**, median 6, mode 5. (Min 2, Max 12)
- Head of HH: 70% male, 30% female – but decisions on HH expenditures are made jointly (by husband and wife) in 70% of the households; only by wife in 27% of the HH; and only by husband in 4% of the HH.
- Safaricom is the most commonly used Mobile service provider by the participants at 97%
- Phone penetration is very high – 97% of the community owns some kind of a phone.
- Digital literacy (Comfortable using mobile phone): with Assistance 30%, Basic 7%, Moderate 47%, Expert 16%.
- Access to finance is 95% through Mpesa mobile money
- Major source of income is sale of livestock 62%
- Mobile money (Mpesa) 22% and cash 20% are the common ways to pay for labor
- 100% of program participants did not have any knowledge of blockchain prior to the pilot
- **Only 1% of the families are able to meet their basic needs.** 18% are able to meet them sometimes, but the majority (76%) are able to do so for less than half of the time. 5% can rarely meet these basic needs.
- The needs that most families find difficult to meet are: education (57%), food (50%), clothing (4%) and 2% are unable to start sustainable livelihood sources such as small businesses.
- The main source of income for the families is the sale of livestock (89%), followed by casual labour (18%), handcraft (6%), selling milk (2%), selling charcoal (2%), small businesses (1%).

5. Methodology of evaluation

Please note that this report presents results and preliminary findings and is not a final evaluation

The pilot is being evaluated through few lenses, or groups of indicators: impact, efficiency, user experience.

1) **Impact — Programmatic indicators:** Part of evaluation that focuses on the social impact of the pilot and programmatic objectives on the participants livelihood. Data has been collected before the pilot using baseline surveys and baseline report and then analyzed against the post-distribution monitoring (PDM). It is a standard monitoring mechanism to collect and understand humanitarian aid recipients' feedback on the quality, sufficiency, and effectiveness of the assistance provided. PDMs are widely used to evaluate distributions, cash or in-kind, from participants selection to utilization of assistance.

2) **Program efficiency**: This section refers to the efficiency and efficacy of the pilot cash transfer modality in relation to the achieved impact (1). The evaluation uses qualitative methods to analyze the NGO user feedback (through Forum Group Discussions, Project Logframe, user interviews, Learning Needs assessment, reflection meeting with the NGOs); and quantitative methods are used to analyze the financial transactions data, including a cross-comparative cost analysis of blockchain-based and non-blockchain cash transfers systems.

3) **End user experience:** Assessing the end user (pilot participants) feedback of the pilot, specifically around the tools but also the processes, trainings and performance. Data is being collected from: Baseline Surveys, FGDs, CEA Training evaluation, PDMs, community exit meetings.

6. Pilot Results — *Digital Cash Transfers*

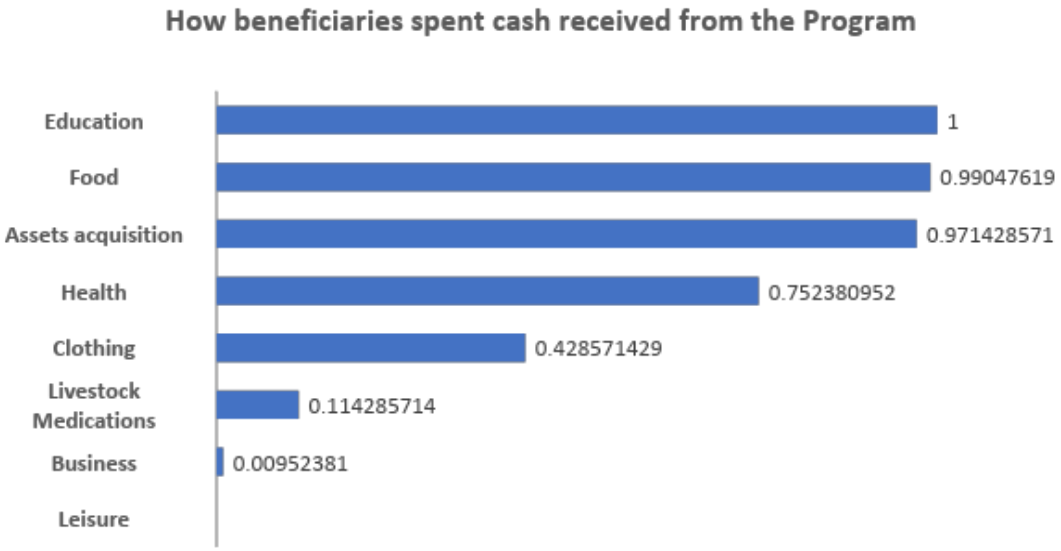
- A total of **$27,738.90 cUSD was transferred** in this pilot.
- The intended disbursements amounted to $27,479.60 cUSD (gross pay) — the difference of $259.30 cUSD covered the corrections (few payments were sent to a wrong number).
- Pilot participants earned a total net pay of $26,214.03 cUSD (i.e. Ksh 2,915,000).
- The average weekly payout to a participant was Ksh 2,500 or 22.48 cUSD, of which the distribution costs were **4.66%,** of which only 2.03% were fees on blockchain.

Average weekly payout to a single participant *(actual costs in week 3 and 4, when 180 participants were paid for 5 days of work)*							
1. Cash for Work earned (net pay in KSh)	**2. Digital Cash earned** (net pay in cUSD)	**3. Operational fees** (mpesa withdrawal fee, airtime, exchange rate margin) (cUSD)	**4. Transaction fees** (2% fee KotaniPay) (cUSD)	**5. Total fees** (sum of 3+4)	**6. Digital Cash received** (gross pay in cUSD)	**7. Digital Cash off-ramped to MPesa** (KES)	**8. Cash withdrawn from MPesa agent** (net pay, KES)
Ksh2,500.00	**22.48**	$ 0.66	$ 0.46	**$ 1.12**	**$ 23.6**	Ksh2,537.00	Ksh2,509.00
Distribution costs	% of the net pay	2.63%	2.03%	**4.66 %**			

7. Preliminary Findings

1) Impact

- 180 participants (178 were women) have been paid in crypto during 6 weeks of the pilot – providing financial assistance to 1,260 people.
- All surveyed participants reported a positive impact on their livelihoods!



- Households (HH) used the earned cash for various purposes including paying for education (100%), buying food (99%), asset acquisition (97%), health (75%), clothing (43%), buying medications for the livestock (11%) and starting small business (1%).
- The project has enabled the participants to meet their daily basic needs (87%), improved their health (45%) since they can pay for the visit to the doctor, enhanced the family relationship (39%), improved access to balanced diet (22%), and allowed them to have group support (3%)
- Apart from one, all the interviewees think that they were compensated well for the work they did (i.e. 500 Ksh/day).
- Digital literacy has improved (1%) of the recipients had not owned a mobile phone before start of pilot. At the end of the pilot all recipients(100%) owned a phone and were able to make mPesa transactions.

2) Program efficiency

- Timely disbursement of cash transfers to participants from 4 different communities in very remote rural locations. Participants were paid exactly on the morning after their last day of work week cycle. The pilot succeeded in automating the payment process delivery and increasing speed of delivery. All participants highlighted the speed of delivery, which meant

"being paid the next day" (in fact the next morning) as a major benefit of the piloted solution.

- The digital cash assistance modality (i.e. blockchain based) provided lower transaction fees when compared to any other digital modality used by the participating NGO, particularly PAH, which delivers cash transfers in other countries. The total transaction costs in this pilot is below 5% of the distributed funds, of which blockchain costs were 2.03% and approx. 2.63% were operational costs related to the programmatic requirements (i.e. airtime, mobile money fees).

- The pilot substantially increased transparency and monitoring capacity of PAH through the transfer and monitoring dashboards, which enabled PAH teams to manage and monitor the cash transfers remotely from few different countries, with only the implementing partner ASDF being on the ground in Kenya.

- Donor-to-recipients direct transfers have proven to be a viable solution in light of compliance restrictions faced by many NGOs worldwide (for example risking losing a non-profit status). Despite the time-zone difference of ca. 10 hours between Celo team and PAH team, which extended the operational time for funding the smart-contract, the entire cash distribution process was still very fast and took a few hours.

3) User experience – Participants' feedback

- All participants had positive feedback about the technology, despite the challenges experienced. Users appreciated a fast and responsive support form KotaniPay team. The challenges that participants experienced were ones of:
    - lost PINs (text were blocked or deleted by accident)
    - not receiving access to the wallet on time. A total of 8 out of 180 participants did not have their wallets created on time due to their data (phone numbers) not being verified correctly. Field monitoring identified this and wallets were created and all earned funds paid in subsequent disbursements.
    - Some participants could not cash out from Mpesa due to lack of airtime – this programmatic cost was eventually included in the transfer cost.

- All surveyed participants said they would like to continue using Kotani Pay. The main reasons they cited were: it is **safe and secure** (83% of respondents), ease of managing it (11%), and ease of access (5%). One respondent cited that the technology helped them and they intend to use it on their own.

- All the interviewees consider Kotani Pay to be a safe option in their area and reported feeling safe accessing the assistance through this modality.

7. Participant testimony

Jackline Merinyi Nana is 35 years old and has been a member of Rapunye Women Group since 2011. She is the Co-ordinator of the group.

"I am happy to have taken part in testing the new technology. The lessons learned from my participation in the Digital Cash Pilot Project will help validate the technology and improve it as an efficient way to deliver aid."

"We have been involved right away from the beginning of the project and our ideas were put into consideration during the implementation of the project."

"During the training those who understood the use of the technology were given the opportunity to explain to others on the use of the technology. My selection to explain the technology to the other community members made me understand it's use more. The reference materials in the local language were also useful for reference to ensure that one clearly understood the cash transfer process."

"I understand the benefits of the technology as a secure way of efficiently transferring funds to beneficiaries. However, given the opportunity for a future project I would wish to learn the following;

- *The transfer of funds and as well transacting within the platform (Kotani Pay to Kotani Pay).*
- *Learn more about the digital cash process and become a trainer to the other community members.*

8. Lessons Learned

- More time and attention should be given to the awareness and community sensitization process, which in this pilot was combined with the user training (demonstrations).
- Verification of participants data by the NGOs (field officers) should be done diligently and in advance, so that it allows the technology provider (here: KotaniPay) to create digital wallets and verify if participants can access them. This in turn would enable more effective and participatory training sessions.
    - Participants targeting i.e. identification, registration, verification and wallet creation should be done and confirmed much in advance before disbursements to reduce the risk of lost funds (sending the funds to wrong numbers/people) and improve the user experience.
- Training sessions with participants, who are the USSD wallet holders, should take place after the following actions are completed: (1) new devices, if provided, are operational and

distributed first, (2) participants are made aware of the technology provider in advance, (3) their phone numbers are verified to enable wallets creation, (4) wallets are successfully created – confirmed by the provider, (5) PIN numbers are distributed in safe and user-friendly way e.g. slip of paper and text message.

- Training sessions should be practical so that they resemble as much as possible the actual user flow; a small amount of funds could be transferred during the training to enable the users to practice all actions such as transfer or withdrawal (offramp).
- Implementing NGO should be actively engaged in the field to improve project management; and see how the pilot impacts other processes (not only payments), in order to maximize the innovation learning curve.
- Training of trainers (implementing partners) should be completed prior to training of participants, testing the entire solution, a dry run would eliminate risks and allow more ownership and learning for the NGO partners.

9. Conclusion

The digital cash for work system designed and tested in this pilot allowed for a timely and automated disbursement of aid funds to remote rural communities, therefore increasing the access and capacity of NGOs to provide humanitarian assistance to more people. The pilot has had a positive impact on the livelihood of the community allowing the participating households to meet their basic needs.

The pilot has increased transparency of cash transfers and the monitoring capacities of NGOs, while proving that donor-to-recipient direct transfers are a viable alternative in compliant challenging circumstances. Additionally, the pilot has proven to lower the costs of delivering assistance when compared to other modalities used by PAH (e.g. cash, vouchers, mobile money).

Overall, the preliminary results suggest that **the pilot has been successful in its objectives to deliver cash assistance faster and cheaper, while improving its coordination and monitoring.**