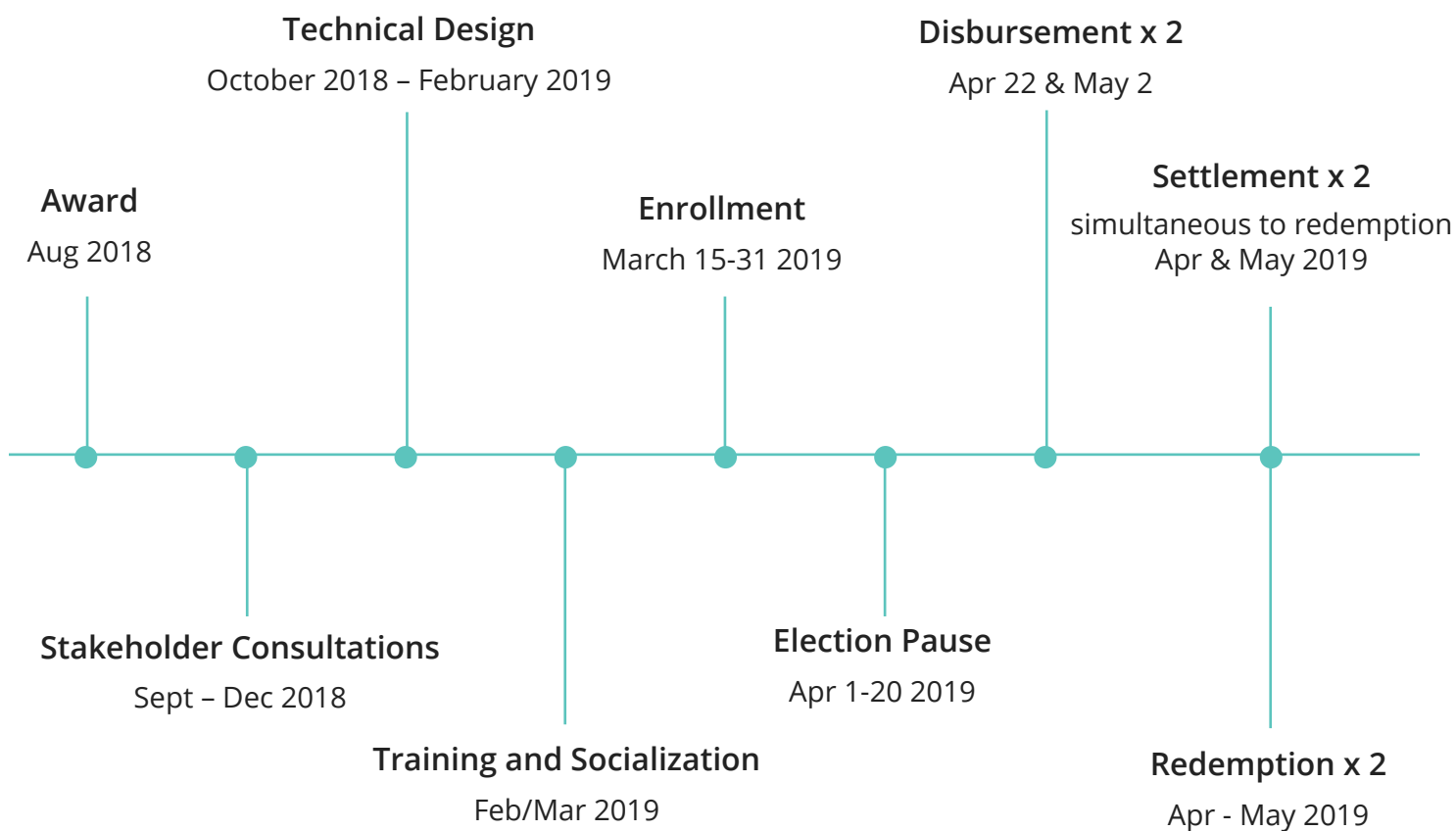CASE STUDY

Indonesia Leverages Everest's Platform to Streamline Subsidy program

Achievements

- Pilot demonstrated 99.99% accuracy, effectively eliminating leakage

- Real-time settlement of tokenized vouchers/stable coins with with bank accounts

- Biometric verification, plus cryptographically signed transactions guaranteed efficiency of cash transfer

- Beneficiaries redeemed without a device; by using biometrics, beneficiaries visited agents to scan their biometrics on the agent's device

- First blockchain based solution implemented in the region for a subsidy application

- Other Indonesian ministries reviewing results for interoperable usage (health, voting, education, nutrition, etc.)

- First Disbursement, Redemption & Settlement
  - Programmatically delivered 5,083 conditional electronic vouchers (stable tokens) to users' EverWallets. Only biometrically verified beneficiaries redeemed vouchers/ tokens for tanks. BRI agents automatically paid in fiat, rupiah

- Second Disbursement, Redemption & Settlement
  - Programmatically delivered 5,136 electronic vouchers (stable tokens) to users' EverWallets was successfully carried out on May 2, 2019 and ran smoothly

- Settlement & Pilot Closure
  - Settlement was conducted with no failure to agents' Bank BRI savings accounts over the provided application programming interface (API)
  - Pilot Closure was conducted on 15 May 2019

- 78% female participation

Key Stats

Timeline

Technical Design
October 2018 – February 2019

Disbursement x 2
Apr 22 & May 2

Settlement x 2
simultaneous to redemption
Apr & May 2019

Award
Aug 2018

Enrollment
March 15-31 2019

Stakeholder Consultations
Sept – Dec 2018

Election Pause
Apr 1-20 2019

Training and Socialization
Feb/Mar 2019

Redemption x 2
Apr - May 2019

Locations

Tomohon

Bukittingi

Tangerang
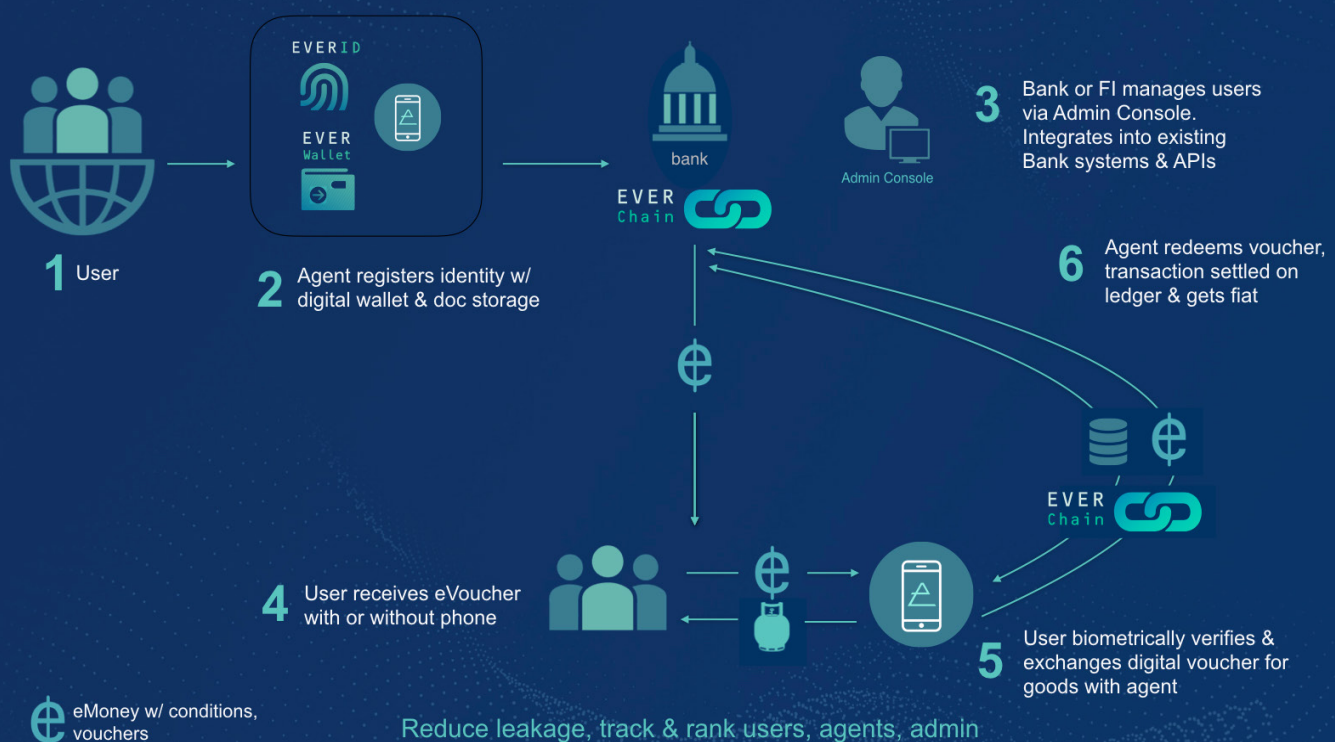
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Two to three billion people in the world are separated from the global economy. We've essentially created a 21st century bank for emerging markets. Our mission is to start bringing these people into the formal economy through affordable, appropriate products and services. What we're starting to see now are the breadcrumbs toward upward economic mobility for a lot of people.

Cashless loops, reaching all users

EVER ID
EVER Wallet

1 User

2 Agent registers identity w/ digital wallet & doc storage

bank

EVER Chain

Admin Console

3 Bank or FI manages users via Admin Console. Integrates into existing Bank systems & APIs

6 Agent redeems voucher, transaction settled on ledger & gets fiat

EVER Chain

4 User receives eVoucher with or without phone

5 User biometrically verifies & exchanges digital voucher for goods with agent

eMoney w/ conditions, vouchers

Reduce leakage, track & rank users, agents, admin

The client

Working in conjunction with BRI Bank, the largest bank in Indonesia, TNP2K, Indonesia's National Team for the Acceleration of Poverty Reduction, financial regulators, central bank officials, and local government officials, Everest's solution was awarded a pilot program in 2018 to address transparency, accountability, cost effectiveness and responsiveness amongst urban, peri-urban, poor and vulnerable populations that lacked digital devices and full identification. Everest's device-free biometric identity platform with cashless, end-to-end value transfer technology is an ideal solution for cash transfer in emerging markets. With funding from ID2020, Everest presented a proposal to the Government of Indonesia to work in conjunction with BRI to address a pressing desire to reduce leakage, biometrically verify users and yield efficiencies in the LPG gas subsidy program and eventually expand it across the breadth of Indonesia's population.

The challenge

In 2007, the Government of Indonesia began a kerosene-to-LPG conversion program with the objective of reducing large kerosene subsidies to provide low-income households a cleaner source of fuel. Growing from 42m to over 60m households nationwide, the program has been impactful, creating almost IDR 200 trillion in kerosene subsidy savings, whilst creating tremendous demand for the 3kg natural gas canister as a cleaner alternative.

In order to continue its sustained growth, the Government had to address transparency, accountability, inclusivity, availability and cost & delivery efficiencies – all naturally found in large scale, national level subsidy programs. The Government also wanted to ensure international best practices were incorporated, including the ability to i.) link the LPG subsidy program to national poverty databases and national welfare programs; ii.) link the LPG subsidy program to other ministries and their subsidy program databases to better triangulate beneficiaries and, iii.) develop data stratification capabilities to better assess and target beneficiary subgroups including poor women and specific geographies.

Additional challenges included developing a cashless, closed transactional loop, integrating existing bank accounts, targeting beneficiaries with limited technical literacy, no digital devices in use to either establish their identities or to conduct transactions and, largely as a result of cultural factors, addressing relatives acting as proxies for family members.

Listening, reading, consulting and exchanging on these challenges through stakeholder consultation sessions, provided Everest with the design parameters it needed to develop the hard-side technology infrastructure alongside the soft-side programmatic elements of the pilot.

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This solution is needed by the Government of Indonesia to provide an option for one of the potential mechanisms for disbursing LPG subsidy. The solution that will be tested by utilizing digital ID of the beneficiary and is expected to transform the current mechanism by ensuring the right targeting. This way, only those who are entitled (poor and vulnerable household) can enjoy this subsidy and could save more than USD 1.3 billion in government subsidy funds.

- National Team for the Acceleration of Poverty Reduction (TNP2K).
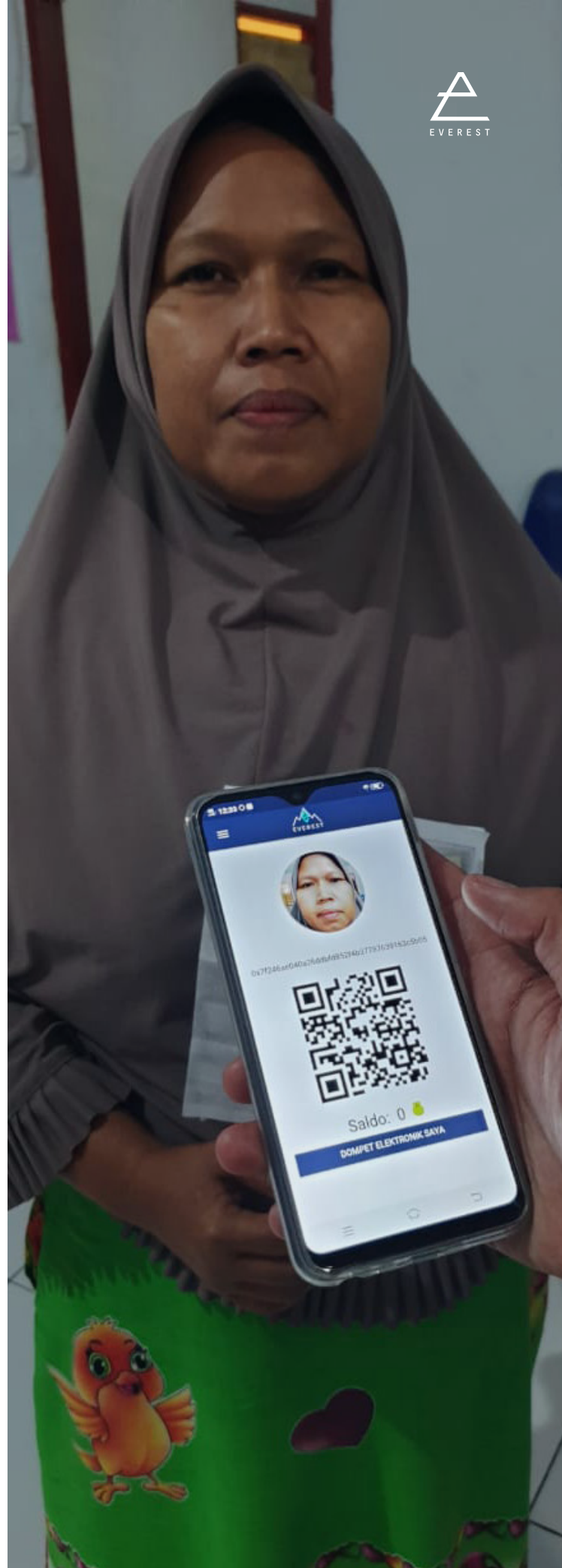
The solution

Following the technical and programmatic design to create a cashless, end-to-end transactional loop, extensive local consultations were conducted to identify three separate Indonesian communities for participation in the pilot. – an urban, rural, and a suburban settlement. Approximately 20,000 households were invited to enroll from each community for a total of 6000 household participants.

Underlying architecture - A decentralized platform that leverages two Ethereum blockchains with IPFS distributed storage and API integrations with BRI for bank accounts, was used to provide the underlying rails, security, accountability, and transparency for the end-to-end solution. To further reinforce privacy and security and in accordance with the UN's Principles for Sustainable Data Management, Everest leveraged its two blockchains - EverID for identity and EverChain for transactions.   To accommodate for multi-household-individual proxies for the collection of the subsidy (key family member needing to work, ill, injured, etc.), EverWallet was made to be multi-signatory. The resulting solution allowed for tank redemption by both the female and male heads of household on the same account without double-spending. This was accomplished by registering separate,

biometrically verifiable identities, both associated with the same EverWallet. The resulting system is cashless, user-centric and permission-based. Each participant has access to their own account information, and that data can also be securely used to establish the foundations for other uses such as microloans, microinsurance and other subsidies. The EverWallet also travels with the individual wherever in the world they may find themselves, and does not require a device by the user at all.

Utilizing a network of local BRI bank agents as enrollers (who were also enrolled), each of these beneficiaries were provided EverIDs + EverWallets, by creating a digital version of an individual's identity using biometrics, reinforced wherever possible by other records including medical, educational, EKTP birth and more. Biometrics included facial and fingerprint biometry, both established with high fidelity by a simple Android smartphone camera. Prior to distribution, field side training of trainer's exercises were conducted along with beneficiary socialization of the Everest application. Once the beneficiary was enrolled, their EverID + EverWallet was accessible to ONLY them via their own smartphone, or a device by BRI bank agents.
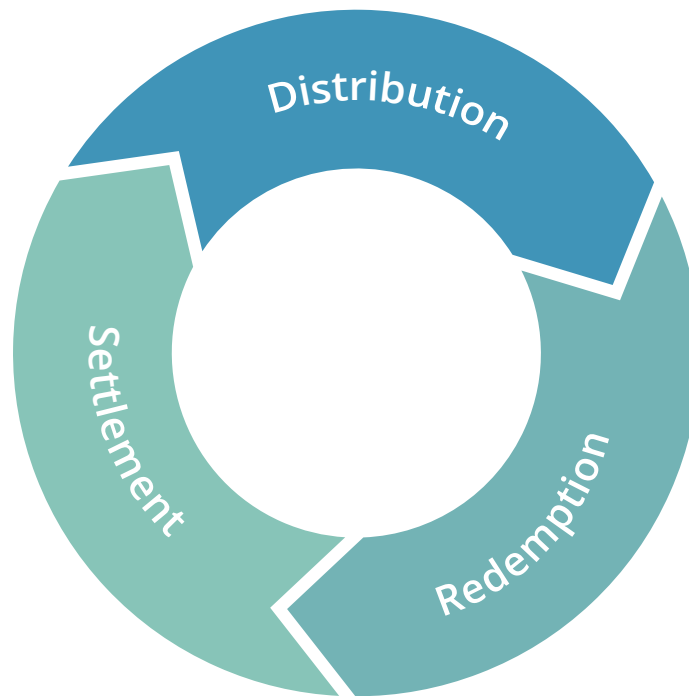
Distribution - Everest conducted two rounds of distribution of the digital coupons to approximately 6,000 households - the cash equivalent of which was held, awaiting redemption at BRI Bank. These digital coupons were conditional stable tokens, which could be redeemed ONLY for LPG gas tanks, did not fluctuate in value and passed e-money regulatory scrutiny.

Redemption - Upon either receipt of a notification, electronic or in person on particular date, the beneficiary redeemed their coupon (digital stable token, conditional to LPG gas tanks, and uniquely assigned to each user), with an agent in return for a gas tank. Redemption did not require the beneficiary to have a device and they could redeem and receive their subsidy, with only their face and fingers via a BRI agent scan. Redemption accuracy was 99.99%, delivering cryptographically signed digital coupons to dual biometrically verified users.

Settlement - The final step involved the BRI Bank settlement with Everest. Agents redeemed their full set of coupons/tokens over EverChain, which subsequently settled with associated agents' accounts in BRI. Agents automatically received their commission in IDR directly into their account. Since EverChain is a permissioned, layer 2 transaction ledger, settling digital token/coupon redemption occurred in real time, triggering fiat/rupiah payments to agents, thereby closing the cashless loop. Furthermore, participants gained near real-time insights into whom, where, how many, etc. redemptions and payments were occurring.

The Result

Upon completion of the stakeholder consultation, technical design, engineering and training, the operations phase of the pilot began with voucher distribution.   The distribution of coupons/tokens was made with unfailing, 100% accuracy. Redemption and Settlement occurred thereafter with real time settlement with BRI Bank. The resulting transactional reporting for the pilot accounted for every transaction conducted, the identity of each party within the transaction, timing and location stamp of the transaction and the value of the transfer.   Women were deliberately targeted as beneficiaries for the program, and constituted 78% of its participants. The pilot demonstrated the ability to stratify populations by various socioeconomic filters, such that more vulnerable populations could be specifically targeted and prioritized for

enhanced financial and gender inclusion. Everest's technology also demonstrated that the subsidy could be delivered in a cashless, closed loop with local partners to beneficiaries that did not possess a digital identification or smartphones.

This trial and accompanying transactional reporting provided the client with the level of transparency and accountability needed to de-risk the subsidy program such that it could cost effectively scale up.

The resulting infrastructure is now available for multiple other parties to use including NGOs, humanitarian organizations, hospitals, schools, banks and even other government agencies for distributing their services.

Next Steps

To avoid the appearance of favoritism, the program was intentionally paused in April 2019 as the country experienced national elections. The practical consequences for the gas distribution program are not yet clear; with new officials currently moving into place. However, from a functional standpoint, the program successfully demonstrated its proof of concept and that it could be successfully implemented at scale, within an emerging market context.

About Everest

San Diego-based Everest is a fintech company with a decentralized platform that incorporates a massively scalable payment solution, EverChain, a multi-currency wallet, EverWallet, and a native biometric identity system, EverID, and a stable token, able to represent fiat currencies with or without conditions. The firm uses blockchain for know-your-customer (KYC) purposes. Its platform supports identity, KYC, anti-money laundering, e-wallets and transactions. That platform ensures regulatory compliance to enable money transfer operations for cross-border payments. The company offers the world's only device-free, globally accessible, digital transaction protocol with built-in identity. It is supported by a global network of financial institutions, humanitarian organizations, governments, and business partners.

"We are very excited to work with the Government of Indonesia to deliver its LPG subsidies," said Everest CEO Bob Reid. "By delivering subsidies to biometrically validated digital wallets and savings accounts over a transparent and low-cost blockchain, the government is modernizing government service delivery, cutting down on leakage, and enabling banking services with enhanced financial inclusion. We look forward to working with our integrated banking partners and the government to bring additional services to Indonesian citizens over the next few years."

ID 20 20

The ID2020 Alliance is a global public-private partnership committed to improving lives through user-managed, privacy-protecting and portable digital identities. ID2020 supports innovative pilots which directly impact individuals, generate needed evidence, and otherwise accelerate the implementation of good digital ID. All supported projects must adhere to our ethical principles and technical standards.

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In the Indonesia LPG subsidy program, we recognized the potential for a good digital identity platform to give users greater control over their own information while improving access to subsidies. The insights from this pilot should inform subsequent programs and facilitate the adoption of good digital ID   in other settings.

- Cornelius Saunders, Program Manager, ID2020