Verifying recipients of cash assistance through Voice ID: Pilot project lessons and outcomes

PILOT PROJECT DATES

March to July 2020

Through a partnership convened by the GSMA, partners CARE International and Telesom developed and deployed an innovative solution that utilises a user's voice as verification for cash and voucher assistance (CVA). The solution was designed to address key issues in verifying recipients of cash payments in Somaliland; getting timely responses from recipients for proof of payment and addressing logistical and security issues through regular outreach to recipient households in rural areas.

PARTNERS

CARE International works around the globe to save lives, defeat poverty and achieve social justice. CARE has been providing life-saving assistance to the Somali people since 1981.

Telesom was established in 2002 and is the leading mobile network operator in Somaliland. They launched their mobile money service, Telesom ZAAD, in 2009 and by 2017 more than three quarters of the population use the service.[1]

FUNDING

USAID - The CARE cash programme that piloted the Voice ID solution was funded by USAID/FFP.

UKAID – The GSMA Mobile for Humanitarian Innovation team, as well as this evaluation, are funded by UK aid from the UK government.

Telesom – The costs related to building and piloting the Voice ID solution were covered by Telesom.

1. World Bank (July 2017). Mobile Money Ecosystem in Somalia.

PARTNERS

FUNDING

PROJECT

Working together, the partners collaborated to develop 'Voice ID' for remote, voice enabled verification. Using a user's voice signature (instead of thumbprints and signatures) and delivered using interactive voice response (IVR) technology, the solution collects verification data from all households ahead of distribution and acts as a trigger for the release of payments. This provides gold standard reporting for data and gives recipients the ability to release payments when convenient for them.

The project piloted the solution, in two phases, with drought affected households receiving cash assistance from CARE across 17 villages in the Sanaag and Sool regions of Somaliland.

KEY STATS

VOICE ID

2,000

households used Voice ID to verify their cash assistance

99%

of recipients were satisfied with the time it took to receive their cash

SUCCESS

99%

of recipients reported receiving their cash successfully through Voice ID

RECOMMENDATION

91%

of recipients would recommend Voice ID for future CVA programming

REGISTRATION

83%

of recipients felt the registration process was easy

COSTS

CARE estimated Voice ID reduced verification costs by

50%

BIOMETRIC DATA

The project partners are committed to the ethical use of biometric data[2], something which was reflected on to a great extent during this project. Throughout this pilot (and into future uses) there were clear responsibilities, with Telesom leading on the collection, storage, protection and use of biometric data.

The process was designed to ensure the data flow was secure and responsible, with all sensitive data stored on Telesom's secure servers. All biometric data is linked only to cash programming with Telesom, and is not available for other use cases (as it is deleted at the end of the programme).

Consent is gathered from end-users at registration, after extensive sensitisation on what the system is and how to use it. Alternative verification approaches are available for those who do not consent or struggle to use the system. Additionally, this evaluation was one exercise of listening to and responding to the opinions of the communities, something that will be an ongoing process.

2. Oxfam (2021). Oxfam biometric and foundational identity policy.

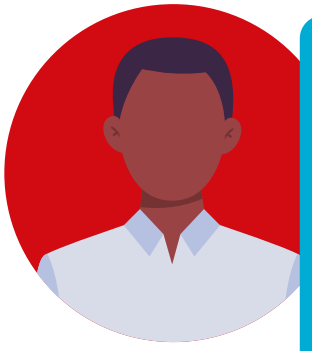
CASE STUDY

Ladan Female Sool

Muse lives in a remote village community. She is illiterate and had never used a phone, including mobile money services, before becoming a recipient of the Voice ID cash programme. She was really happy to be included in the cash programme and whilst at first she thought the Voice ID solution was too complicated, she found the community was easily able to adopt it.

Whilst everything was new to her during the programme, she was trained by CARE and Telesom and reported that she faced no challenges in using the system to access her cash. She liked that the verification for payment was totally remote, as it meant members of her community that regularly travel were always able to use it.

After using mobile services for the first time as part of this project she reports that she now uses calling and mobile money services daily.



CASE STUDY

Maxamed Male Sanaag

Maxamed lives in a small village in Sanaag with his family. When he was first presented with Voice ID, he had a lot of questions to help him understand why it was being rolled out, however he found that it made the process of receiving payments through mobile money more simple, which he appreciated. Whilst he did not personally face any challenges using the Voice ID, which he was surprised about given he had a very basic phone, he thinks that older people in his community found it more difficult to use.

CASE STUDY

Hodan Female Sool

Hodan is currently living in a settlement for internally displaced people in Sool with her husband and children. She has a hearing impairment which impacts the way she pronounces words.

When Hodan first heard that she was to be included in the CARE cash distribution she was a little worried when she heard about the new Voice ID element being included. Because of her impairment she struggled to get the system to accept her voice and in the end required a relative to register in her place.

Whilst Hodan thinks that Voice ID should be improved to help older people and others like her with disabilities to more easily access it, she thinks that overall the system was a positive change as it enabled her to access her money at a time that was convenient.

Project Outcomes

OUTCOME

End-users liked Voice ID and recommended it continue to be used

Virtually all (99%) end-users in the survey said that they successfully received their cash through Voice ID, and the same number of them said they were satisfied with how quickly they received their payment. A slightly smaller majority (83%) found the process of registering on the system to be easy overall. It was also clear that the training provided, which included face-to-face sessions as well as instructional voice messages, helped users easily adopt the new process.

"We first thought it would be a complicated system that would confuse us. But, it was easy and provided for us prompt access to our cash. We were easily trained how to register. There are good project teams from CARE and Telesom, and we liked the system that was developed and the way we were trained to adopt it. CARE and Telesom teams made it very easy for us."

Kowsar, Female, Sool

It was then not a surprise that most end-users (91 per cent) recommended that Voice ID continue to be used for future cash programmes.

"Voice ID supported our community through its simplicity in accessing our cash. It is [a] workable system that requires less effort on our part, because we are able to simply use our voice to receive our money, I prefer this system because of how quickly we received the money, and how easy it was for us to access it."

Jama, Male, Sool

Investigating the qualitative data, there were a number of positive reflections from users ranging from being happy to use modern technology through to a greater sense of control and privacy when compared to the previous process.

"The thing I liked most was becoming engaged with modern technology in an easy way through my phone."

Abdirisak, Male, Sanaag

"I liked the new Voice ID system because I knew when my payment would be coming through from the time the text arrived on my phone. Then, after entering the voice password the process was very swift to receive the funds."

Ismail, Male, Sool

OUTCOME

Voice ID was a ‘win-win’ for the project partners

Through the pilot, the Voice ID solution was shown to be a cost-effective and accurate solution for CARE, whilst maintaining commercial potential for Telesom.

For CARE, the Voice ID solution presented great value for money, demonstrating notable improvements in both effectiveness and efficiency.

Voice ID was **effective:**

There was a notable increase in the number of cash recipients who were successfully verified using the Voice ID system, compared to previous field visits to collect thumbprints and signatures. It also gives the team greater confidence, pre-distribution, that they are definitely sending money to those identified as in the greatest need. This also means that the solution strengthens accountability to donors by improving quality and quantity of reporting.

It also enables both Telesom and CARE to monitor payments in real-time, enabling the quick resolution of any payment issues. They are able to identify when users have failed to use the system and work to manually verify their identity and trigger payments, without needing to go to the field or have it raised directly by the user.

Voice ID was **efficient:**

Previously, CARE staff regularly travelled hundreds of kilometres to gather incomplete verification data consisting of thumbprints and signatures collected after cash disbursements, this came with a degree of danger for staff members, who have previously been attacked. Though CARE staff members still need to travel in order to reach communities for mobilisation and registration purposes, Voice ID removed the requirement for CARE to send staff for verification, reducing potential danger for staff members and additionally, during the pilot led to savings of **12 working days (96 working hours) for each staff member**.

The team is now able to use this time on other activities such as assessments, monitoring, reporting and documentation. As Voice ID scales, this will lead to notable time savings, allowing the team to focus on other work.

Whilst cost savings are difficult to calculate as the pilot did not include commercial payments for the service to Telesom, it is estimated that, once scaled, Voice ID will result in savings for CARE of up to 50% of their standard monthly costs for verification.

"Previously, CARE would assign field teams to undertake payment verification through physical thumb print collection from recipients. There were operational costs associated with this such us vehicle hire, staff per diems, fuel and accommodation costs. With the Voice ID, CARE's operational costs were reduced by 50%."

CARE Somalia

For Telesom, the pilot project was an opportunity to work with a humanitarian partner to create and refine a technology solution that directly addresses a need. In working so closely with CARE they were able to ensure that Voice ID is functional whilst opening the door for future commercial relationships with CARE and other humanitarian organisations as the solution scales.

"We are glad that we have used Voice ID technology in humanitarian projects and helped both CARE and [their] recipients see the benefit such technology brings. It has opened up doors for new commercial projects and we are willing to scale-up and use [this technology] in other fields as well."

Telesom

LESSON

Voice ID, as with all technology solutions, should constantly reflect on how it can adapt to improve inclusivity of all groups

The evaluation highlighted that some older people and those with certain disabilities which impact on their speech or pronunciation faced the greatest barriers to using the Voice ID solution. This was something brought up in the majority of qualitative interviews, including those who do not fall into these groups.

"It would be great if the service can be simplified for people who suffer from a stutter, cleft palate, or deafness. Voice ID is very difficult for those people."

Xaali, Femal, Sanaag

"I had a few concerns for the elderly people using Voice ID. They can›t say the voice password correctly, and because of this the system will not register [or verify] them. Also, it is sometimes difficult for them to remember what to say and do. I would argue that the system needs to be improved in a way that can support the elderly people because they are the weakest of the social groups here."

Saed, Male, Sool

This was also reflected in the survey data, where individuals over 50 were significantly more likely to report finding the process of using Voice ID as 'difficult' (22%) compared to those under 50 (10%). Additionally, women were also more likely to report finding the process difficult (14%) compared to men (4%). This may be a reflection of the fact that at the start of the pilot, the algorithm had not been 'fed' enough women's voices and as such struggled to recognise them – a fact that demonstrates the importance of considering inclusion when building a solution, so that you do not inadvertently exclude certain groups.

With these inclusivity barriers, the communities found informal workarounds. For example, young people emerged as playing a key role in supporting older family and friends to register for and use the technology. This was somewhat reflected in the survey where younger people demonstrated greater confidence. Only 2 per cent of those under 26 reported feeling any concerns when hearing about the solution compared to 9 per cent of those over 26.

"Youth who understood the Voice ID system were voluntarily willing to help those members of the community who found it challenging to complete the registration process"

Telesom staff member

FUTURE

The future of the Voice ID project in Somaliland

After a successful pilot, and taking on the recommendations for how the system can be improved and made more inclusive from the third party evaluation, the project partners have a roadmap to continue to test and scale Voice ID.

- The partnership between Telesom and CARE in Somaliland continues to grow. Voice ID is being scaled across CARE's cash programmes, with an additional 13,000 households already included and more to follow.
- In Puntland, Telesom is working to support using the solution across networks alongside local operator Golis, as well as with CARE and supported by GSMA.
- GSMA is supporting partners to identify whether they can work with other mobile operators and humanitarian agencies across Somalia to identify if the Voice ID solution can be successfully used and scaled
- GSMA will publish a full case study documenting the lessons, successes and challenges of the Voice ID solution once it scales and replicates.

DATA SOURCES

- ***CARE and Telesom reporting and monitoring:*** *Project data and documentation; and*
- ***Pilot evaluation designed and conducted by Transparency Solutions:*** *The sample for the evaluation consisted of 451 end-user survey interviews (using a randomly drawn sample, representative of the programme participants by gender and region, conducted over the phone), 24 qualitative in-depth interviews with users, and 14 stakeholder interviews.*