A governance-enhanced platform to support the humanitarian crisis in Venezuela aid

Pilot Report

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The Team

The pilot was implemented by **S4V Foundation**, a humanitarian organisation that strengthens and connects social organizations, companies, public administration, and people who work for sustainable development and/or respond to emergencies, so that their work achieves a greater impact, serving more people in vulnerable conditions.

The **FCDO Pioneers** involved in advising and supporting this pilot were **Vinay Anicatt** and **Jenna Saidi**.

The **Frontier Tech Hub coaches** on this pilot were **Constanza Robles Fumarola, Susan Long** and **Nicholas Veerapen.**

The Context

The problem the pilot sought to address

By April 2022, UNHCR reported that there were more than 6 million Venezuelan migrants and refugees in the world, the most significant migratory movement that has been experienced in the Americas. In addition, in 2021, the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) reported there were more than 7 million people within Venezuela requiring assistance to reduce their suffering and survive.

Due to the political and economic uncertainty in the country, Venezuela is a difficult operating environment for NGOs, who face a hostile political situation. Therefore, many donor agencies are wary of investing due their inability to track how aid is spent. As a result the Venezuelan humanitarian crisis receives disproportionately less financial support than it deserves, negatively impacting the lives of millions of Venezuelans in need.

In conversations with local NGOs, the team discovered that 80% of the organisations had difficulties raising funds, mainly because they lacked representation in Caracas, which, in turn, hinders their ability to interact and build trust directly with international donors. These international donors are the primary source of financing for social, humanitarian, and development projects.

There is a desire amongst NGOs to explore technological solutions to creating new sources of funding, but currently only the largest organisations have a stable online presence. And even those organisations use the web primarily as a communication channel to promote their work; not as a donation channel.

The idea conceived for this pilot

The team identified a need to create a channel for receiving, managing, and delivering donations to local actors through a platform that would promote trust and transparency amongst the various stakeholders.They believed this functionality, trust and transparency could best be provided using blockchain technology and cryptocurrencies.

The pilot's primary goal was to increase the number of low-budget projects that have access to financing, thereby stimulating and growing the national and local NGO fabric. It was their working hypothesis that, to develop new channels so these organisations could receive direct funding, any technological solutions must be easy to use, have standard formats, and have simple processes.

They sought to build a platform for the coexistence and interaction of donors and non-governmental organisations of humanitarian assistance, and identified stable cryptocurrencies as a potential means for

collection and periodic delivery of funds, as well as an opportunity to implement transparency and auditability policies.

The team discovered that many local NGOs already make use of technological tools for their project planning and management and that there is interest in learning more and using emerging tech to facilitate and/or improve the execution of projects. However, this interest was likely to be truncated by donor requirements and the various compliance procedures and controls that can be difficult for small organisations to manage with a small team that may be made up primarily of volunteers.

The NGOs also shared with the team that, if they could have the certainty that the funds were of legal origin, then they would be willing to receive donations in cryptocurrencies, even if this necessitated a paradigm shift and required additional training.

The team also spoke to a sample of Venezuelan immigrants who declared a low willingness to donate money to their home country. When asked why, they explained that it was due to a lack of transparency, a fear of corruption in the country, and the suspicion that their money might be wasted. These fears are not unfounded. The corruption perception index for 2021, published by International Transparency, ranked Venezuela 177th out of 180. In addition, political conflict in the country has undermined the credibility of many of Venezuela's institutions.

When asked about what it would take for them to donate money to humanitarian and development projects in Venezuela, the three main elements that arose were transparency (i.e. visibility regarding the use of money), operational capacity (i.e. that the organisations have a fit structure to manage projects efficiently and effectively), and reliability (in communication, in handling information and in results reporting). Just over a fifth (22%) of the sample of immigrants surveyed said they know and/or use cryptocurrencies.

The team's working hypothesis was that they could build trust in both groups through the governance provided by emerging technologies. For example, donors could be given decision-making power over the allocation of collective funds; and part of the financing and auditing process could be made autonomous (i.e. the platform itself would have no involvement with it). However blockchain solutions also carry certain restrictions, the most obvious being transaction costs.

For example, creating a contract on the Ethereum platform can (at the time of writing) involve costs equivalent to fifty times the average monthly donation of a typical donor. Circumventing these transaction costs (for example, by only executing a contract when a critical amount of donations has been reached) would have the downside of reducing transparency and speed.

Goals of the pilot

The pilot explored the following key questions:

- Could this kind of platform improve the reach and scope of smaller NGOs by providing them with access to additional finance; while also encouraging donors to be more engaged in how projects are progressing and performing?

- Can Blockchain technology be used to create a robust and scalable platform that's accessible and intuitive enough for the intended users; and incorporate a reliable governance system that's trusted by those users?

To answer this, the team sought to measure and compare crypto currencies and smart contract platforms through research, before creating and testing an initial proof-of-concept version of the platform to test if:

- A fiat-based cryptocoin could be built that anyone can buy but which can only be transferred to certified recipients, who are the only ones allowed to trade it back to base fiat currency

- The platform could run smart contract transactions with close to zero cost-per-transaction

- Any FX fluctuations that might happen between Crypto and FIAT currencies could be mitigated
- The technology could be made accessible via smart-phone for off-grid, remote, non-laptop users
- Engagement could be secured from regulators, and a governance-based incentive system could be designed to encourage donors to participate and engage with the platform
- A user-friendly platform could be built that NGOs could also easily engage with, and which removed the access barriers of crypto

Key Activities

Activities took place over four sprints:

Sprint 1 (February 2022 - March 2022): Research to understand how to better measure and compare crypto currencies and smart contract platforms (with the aim of mitigating FX fluctuations between Crypto and FIAT currencies). Discovery and initial design towards the creation of an NGO-friendly platform

Sprint 2 (May 2022 - June 2022): Creation of an initial proof of concept and testing of that proof of concept on Ethereum's Polygon platform and the Loom network. Exploration and design of the 'fiat currency - stablecoin - fiat currency' process.

Sprint 3 (August 2022 - December 2022): Design of MVP, non-blockchain platform with governance policies and processes that mirror the decentralised solution (see below for more on why this was necessary). Assessment of perception and impact of these policies with Venezuelans abroad. Launch of MVP platform to selected group of local NGOs

Sprint 4 (January 2023 - March 2023): Analysis of the results from the MVP launch and prioritising of new functionality. Review of the 'back end' functioning of the platform and payment system. Exploration of potential to attract sponsors to finance the project. Creation of marketing strategy and social media campaign and analysis of campaign performance

Findings from pilot activities

Finding 1: The proposed solution could be attractive to NGOs as it has the potential to improve their reach, drive more donations, and create more engaged donors

Key questions the pilot sought to a test

The pilot sought to test whether the solution might:

- Encourage Venezuelans' living abroad to donate to social, humanitarian, and development projects; and to be more engaged in how the projects they are donating to are progressing and performing.
- Increase the trust and engagement of donors by applying blockchain governance policies across the platform

The methods used for testing:

To explore the key questions outlined above, the pilot first met with seven NGOs of various sizes with an operational presence in different country regions, to learn how they plan, present, and execute humanitarian and development projects according to their areas of expertise.

The team then surveyed 74 Venezuelans currently living in Spain or the United States. The pool was made up of 47 women and 27 men, with representation from across all age groups from eighteen upwards.

The team then began to design the governance policies and processes for the platform and tested these policies with the pool of Venezuelans living abroad. Their responses and perceptions were recorded and fed into the design of a prototype version of the platform.

A set of 3 NGO projects was selected to take part in the initial donation pool which was tested using the prototype platform. The performance of the site and the reaction of the test 'donors' was measured and the results analysed. As a result of the learnings from this sprint, additional functionalities were prioritised, added and tested on the prototype platform.

Key findings from testing:

These conversations highlighted the benefits of leveraging the willingness to volunteer, promoting the organisation's work, networking, and relational work.

Attitudes and behaviours of donors and NGOs

Two-thirds of the Venezuelans living abroad stated that they were willing to undertake voluntary work (either in person or remote), and just under half were willing to donate supplies.However, less than a third of respondents were ready to make financial donations however (when asked why, they stated issues including lack of transparency, corruption, and money wastage).

Around 80% of NGOs surveyed expressly reported difficulties raising funds, mainly because they lacked representation in Caracas (Venezuela's capital). This, in turn, hinders their ability to interact with international donors directly, who are the primary source of financing for social, humanitarian, and development projects. Only the largest organisations had a stable presence on social networks and the Internet.

However, they perceive it more as a communication channel to promote their work than as a channel to receive donations.

Just over a fifth (22%) of the Venzuelan's abroad said they know and/or use cryptocurrencies. While most local NGOs the team spoke to stated that they did not have direct knowledge of technologies such as blockchain and smart contracts, many affirmed that they would be willing to receive donations in cryptocurrencies, even if it represents a paradigm shift and requires additional training. Of course, the NGOs would have to be certain that all the funds donated were of legal origin.

Finding 2: While an accessible and usable donation mechanic could likely be developed on the blockchain, the resulting cost-per-transaction is too high

Key Questions the pilot sort to test

- Can a fiat-based cryptocoin be built that anyone can buy and which can only be transferred to certified recipients, who are the only ones allowed to trade it back to base fiat currency?
- Could smart contract transactions be run with close to zero cost-per-transaction?
- Could any FX fluctuations that might happen between Crypto and FIAT be mitigated?

The methods used for testing:

Smart contract transactions

The team met with blockchain developers and specialists in order to understand how to measure and compare crypto currencies and smart contract platforms. That knowledge was used to create Best/Likely/Worst case scenarios for comparable project budgets and individual donations and to create a view of critical transaction cost values that would allow the team to validate smart contracts as a viable solution

Research was undertaken on the cryptocurrency markets for blockchains that support smart contracts and a comparative matrix was created to evaluate entry costs, creation process, costs per transactions, volatility, FIAT currency relationship and adequation to NGO and project budgeting requirements

A proof of concept joint donation process was deployed to test these three use cases:

- Create a smart contract in a progressive way by incorporating stakeholders until a key amount is reached.
- A group of stakeholders vote on which account to transfer the key amount to.
- Request validation from stakeholders on an evidence they receive from the account for them to rate it

Accessible, fiat-based cryptocoin:

To determine the feasibility of using a blockchain system that would be usable for the wider public i.e. those using financial instruments such as credit cards or bank accounts, the team needed calculate the amount of money that could 'fall by the wayside' due to commissions associated with the use of blockchain through platforms and bank fees.

The team met with legal and financial specialists to assess feasibility of and design the process for donors receiving fiat-currency and turning it into stablecoins and also spoke to organisations in Bolivar, Tachira, Zulia and Caracas about their use of cryptocurrencies to manage donation funds.

The team then determined the administrative fees according to the provisions of banks, donation platforms and crypto exchanges.

Key findings from testing:

Tests were made on Ethereum's layer 2 platform, Polygon; and also on a local Loom network blockchain.

When deploying on an ethereum blockchain, FS4V as the platform owner would assume a cost of around $20 for every donation pool transaction. Additionally to this, every time a user made a donation on this ethereum blockchain, they would incur a fee in the range of $2-$6.

Deployment on Loom has $0 related fees, instead S4V pays a recurring fee. However the transferring of currency is subject to the same fees as those found in the Ethereum platform.

Testing showed that the average percentage of donations taken in commissions ranged from 16–22%. For this reason the pilot team was forced to class this route as not cost-effective. Additionally, the team discovered that none of the organisations in Bolivar, Tachira, Zulia or Caracas were currently using cryptocurrencies to manage donation funds.

As a result, it was decided that this kind of solution would only make sense when a large part of the population commonly used cryptocurrencies as a transaction channel. As this is not the case for the majority of Venezuelans living abroad, the team decided to see if their pilot solution could be built as a more traditional web platform (one not based on cryptocurrencies or a blockchain).

Finding 3: A web application with the relevant governance in place could achieve the same benefits for both NGOs and donors as the crypto-based solution

Key questions the pilot sought to test

At this point the pilot pivoted to see if donor trust and engagement could be increased through a 'non crypto' platform that nonetheless featured similar governance policies.

The team also wanted to see what kinds of marketing strategies might best connect with potential donors and encourage them to join the platform.

The methods used for testing

'Minimum viable product' testing

A prototype of the web application (named Fondo Ciudadano) was launched with the minimum necessary functionality. After an open call to 70 national and local NGOs, a selection of projects was chosen to participate in the fund. Each project was encouraged to share the prototype of the platform with potential donors so the performance and impact could be monitored and measured. The results of the testing were analysed, existing functionality was verified (including the payment system) and new functionality was added to the prototype site.

Marketing strategy

A marketing strategy was created to reach an initial target audience of Venezuelans in the USA, a group of approximately 400,000 people. The specific messaging and reach tactics of the strategy were developed and in an iterative process, and a minimum conversion rate of 0.15% was arrived at for the goal of financing a fund within four months.

Key findings from testing:

The fourth sprint was delayed as the Stripe payment module could not go into production until permission to receive donations was obtained from the State of Illinois. This meant that there was not enough time to bring the MVP platform fully online and the deliverables of the marketing strategy were affected.

Conclusion

The pilot was able to ascertain that, even though the Venezuelan diaspora already donates to humanitarian projects in Venezuela, a lack of trust means that they tend to donate to organisations or individuals they are already familiar with. Although they are willing and interested in donating to others, they require a degree of control over what they invest in and have to have a large amount of trust in the platform they donate through.

The information gathered from NGOs of various sizes with an operational presence in different country regions yielded a detailed view of the thinking and processes involved in planning, presenting, and executing humanitarian and development projects. Research and interviews also established that local NGOs in Venezuela are largely unable to access humanitarian funding, and often rely on their own funds or 'friends and family' donations. As a result these NGOs are interested in accessing additional funding and growing their capacity.

However, the pilot identified that, at this time, the use of cryptocurrencies and blockchain technology is not suited to overcoming the challenges of humanitarian funding in Venezuela. This was primarily because of the relatively high commission fees that would be extracted from donations (approximately 16–22% per donation) and the lack of potential donors (Venezuelans living abroad) who already commonly used cryptocurrencies as a transaction channel.

The pilot found that, despite local NGOs and potential donors within the Venezuelan diaspora expressing interest in using blockchain and cryptocurrencies, they lacked the capacity and know-how to really work with and engage with these technologies. More time is needed for these technologies to tackle the challenges faced in humanitarian funding and create value reliably and consistently within humanitarian contexts.

It is the pilot's belief that the characteristics of blockchain technology can be replicated using governance policies and transparency practices. In order to 'build trust' with the diaspora and NGOs.

Recommendations for further work

The next steps for Fondo Ciudadano would be to

1. Fully launch the platform as intended in the last sprint. Test and iterate the usability of the platform through the behaviour of recurring donors, and add new functionality based on those interactions.

2. Build on relations within the diaspora donor community to foster a culture of donating to local NGOs

3. Raise and disburse an initial fund to a local NGO.

4. This would enable the team to prove its concept to international donors and its community members, and continue to sustain and grow its operations beyond the US and to other NGOs.

Pioneer Reflections

The project was timely given the wider context of ODA cuts. With fewer resources available globally to address the full spectrum of humanitarian challenges, and with civil society directly feeling this pressure, it is important that we keep looking for innovative ways to raise funds and channel them through locally effective actors. We used this project to explore whether blockchain could help us overcome some of the common barriers that prevent people donating to important causes; barriers like a lack of transparency, corruption risks, and limited control over how money is spent. Through this project, we created a Minimum Viable Project and conducted numerous focus groups that helped us test key assumptions around the viability of using blockchain to overcome these hurdles.

The project provided good insights into the type of pre-conditions needed to make blockchain use feasible in a situation like this. Transaction costs are a significant barrier, and the model works best when donations are large. While there are some clear benefits around accountability and localisation, not everyone will be confident donating to humanitarian causes with this new technology, and so it would be important to complement activities with upskilling/education in the technology. In some cases, the model may be better suited to institutions/foundations than individuals.

The FT sprint methodology was perfect for this pilot. It is not an approach to programmes that the FCDO normally applies, but it is a great way to test experimental ideas and innovative solutions at a small scale. Knowing from the outset that the pilot was about the journey and the learning just as much as the destination allowed us to take risks and test difficult assumptions. It was invaluable to have an experienced and supportive team, with a really broad range of expertise, on hand to guide us through the process.