ChariD

A Decentralised Charity Ecosystem

Whitepaper

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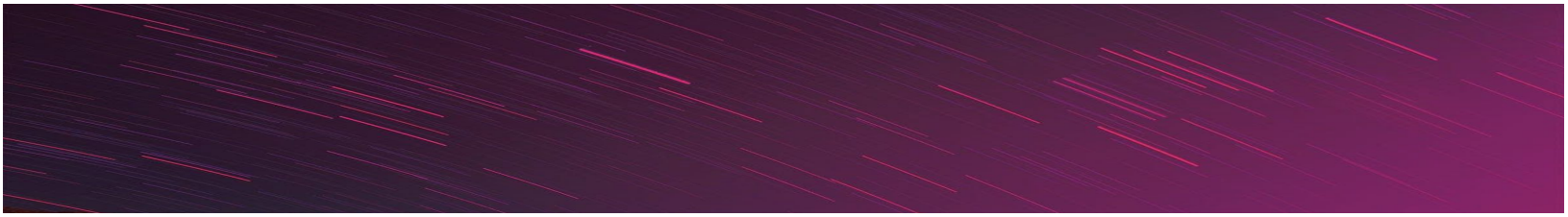
Mission Statement

Incentivize and empower society to eradicate food insecurity



Stars don't shine on us selectively

Abstract

Households facing food-insecurity seem to be a global phenomenon. Since food is a basic human need, we should aim for food security for everyone, regardless of their economic conditions.

Although food poverty is more widespread in poorer and developing parts of the world, even the developed and richer countries are not fully immune from it. The relatively more developed countries might not suffer from absolute shortages of food, but they still have a large number of people going hungry or unable to afford nutritional food. Many cases of obesity are also related to food insecurity. Ironically, on the other extreme, overeating is also a rising problem across the world.

Many charitable organisations and individuals have tackled this issue for a very long time. But the problem is so big that it cannot be sustainably solved only by charity. The charity sector also faces some ongoing and some growing challenges. The rising costs of administration and demand for more transparency increase cost pressures on charity organisations and reduce their effectiveness. It is also difficult for donors to ensure effective use of their charity, reducing trust in the system. Because of this, in many parts of the world, a large number of individual donors donate directly to recipients. That takes care of the trust and cost issues but reduces the donations going to larger and more longer-term charitable causes. Many charity organisations also struggle to sustain themselves and have to invest in continuous maintenance and growth of funding.

This whitepaper proposes a self sustainable decentralised cooperative organisation, using appropriate mix of technology, economic models and social incentives to take care of food distribution locally and internationally. This decentralised organisation/platform will bring together all participants, including government agencies, private institutions and individuals. Even the donors and end-recipients of charity will be part of this platform.

A decentralised digital cryptocurrency, the Ster, will work as the store of value being generated and transferred on this platform. Ster tokens would be gained in return for any activity contributing to the mission (in contrast to being paid for 'mining' in other popular decentralised platforms). For examples of contributions are development and maintenance of the platform, donating charity The economic model will incentivise activities contributing to the eradication of food poverty.

The use of distributed-ledger technology will fill the need of having trusted intermediaries. The intermediaries we see today will take a more focused operational role and facilitate the achievement of the mission in collaboration with all other participants. The transparency that such a system will provide will also motivate good behaviour and effective use of the donations.

In the true spirit of decentralisation, the cooperative will be governed by a governing body with all technology being developed as open source. Any profits realised in traditional currency will be reinvested towards the accomplishment of the mission.

During the initial years, people actively involved in the development of this cooperative might have to be compensated using the standard methods. Gradually, we hope to completely phase out the use of fiat currency. The success of the platform will contribute towards increased valuation of Ster, the exchange of which shall become the only way to benefit from all sorts of investment (monetary or work) in this platform.

After this decentralised platform is set up, it provides opportunities for further social good. It can be used for exchange of products and services, providing transparent and efficient fair-trade opportunities. Further, once food poverty is being effectively addressed, provision of other basic needs (including accommodation and education) may be added to the mission. In comparison to other alternatives, a platform like this would be one of the most efficient ways to address all such needs globally. It would also self-sustain as all the participants would be rewarded for contributing to the development, maintenance and running of the system as well as using the system for doing social good.

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We are made of star-stuff.

– Carl Sagan

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Introduction

Food Insecurity

Food security is the consistent and certain availability of food necessary for an active and healthy life. We use food insecurity in this document as a broader term that envelopes food poverty, hunger and starvation.

Globally, the problem is a fairly shameful reflection of how we have fared as the most intelligent life form known to us. There is one person losing their life about every second due to either starvation or causes related to lack of good food.[1] According to Food and Agriculture Organisation of the UN, more than 820 million people in the world are chronically undernourished.[2] In the USA, a little over 10% of the population, including 11 million children, face food insecurity.[3]

Food insecurity is a global problem which apparently the current political and economic systems don't seem to be able to solve on their own. Sadly, these systems might even be contributing to the problem by incentivising individual gain disproportionately. Further, because these systems seem to work for the large majority of people, it is wishful to expect these systems to be changed. Food insecurity is also a complex problem which many times does not exist in isolation and could be indicative of "overlapping issues like lack of affordable housing, social isolation, chronic or acute health problems, high medical costs, and low wages."[4]

Charity

Charity, or voluntary help in various forms, is an important institution for the functioning of society. Nearly all forms of governments, social and economic systems have some form of taxation to be spent on common good. Even religious beliefs incorporate charitable

[1] http://www.theworldcounts.com/counters/global_hunger_statistics/how_many_people_die_from_hunger_each_year
[2] http://www.fao.org/3/ca5162en/ca5162en.pdf
[3] Coleman-Jensen, A., et al. (2019). Household Food Security in the United States in 2018. U.S. Department of Agriculture Economic Research Service. Available online at: https://www.ers.usda.gov/webdocs/publications/94849/err-270.pdf?v=963.1
[4] https://hungerandhealth.feedingamerica.org/understand-food-insecurity

instruments in different forms. Individuals as well as groups of people going through a difficult time have relied on charity to help them out ever since the dawn of civilisation.

Charity has now become even more important as other aspects of modern life have failed to ensure (or in some cases even hindered) the equitable distribution of resources. Many charity organisations work locally, nationally, regionally or internationally to address a multitude of issues.

The act of giving to charity has a lot of benefits for the donors as well. It helps them feel happier by contributing to a good cause and increase awareness about the overall social conditions. People contributing to charities also experience more gratitude, humility and spirituality. Many people want or like to contribute to charity just for increasing a sense of being.

Problems and Issues Facing the Charity Sector

This section mentions some of the issues being faced by charity organisations, donors and recipients.

Systemic Sector Challenges

The first obvious problem is that non-profit charity organisations are not sustainable on their own. Charities continuously need to invest in collecting donations from their regular donors while also getting new ones.

An ongoing issue for charity organisations is the cost of regulatory compliance and administration. Additionally, the governments in many countries are getting more vigilant about the source as well as the use of donations. In some countries, the financial reporting requirements are stricter for non-profit organisations as compared to those of private companies. Governments also explicitly expect all costs of the increased compliance to be borne by the charities.[5]

Other technical (e.g. newer IT systems) and regulatory developments (e.g. GDPR compliance) keep on increasing the cost pressures[6]

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[5] https://www.accountingweb.co.uk/business/finance-strategy/charity-compliance-charities-should-pay-regulatory-costs

[6] https://www.theguardian.com/voluntary-sector-network/2017/jul/03/five-big-issues-all-fundraisers-face

The average administrative costs of non-profit charities are about 37%.[7]

The charity industry also has to rely on multiple third parties, which costs time as well as money. These third parties can be in the form of banks or online payment systems. Cross-border donations also incur additional costs, including the currency exchange charges.

Source of Funds

Individual donors are increasingly skeptical of charity organisations. This is more pronounced for smaller charities, particularly in developing countries. Most donors prefer giving directly to recipients or to only the most famous and older charities. The donors do not have full trust in their donations making a real impact. In many countries where people have low levels of trust in institutions, the bulk of charity is given directly. This lack of trust persists even in more organised countries. For example, in New Zealand, the trust in charity organisations is rated as only 5.9 out of 10.[8]

Big corporations are increasingly engaging in their own CSR (Corporate Social Responsibility) programs. As a result, more people are contributing their time and money towards charitable causes at their workplace. This is reducing the supply of funds for non-profit charity organisations, especially the ones working in poorer parts of the world.

Donors preferences and expectations are also changing with time. They now expect more transparency and visibility into the use of their donations. There is an increasing trend in donors researching the charities that they want to support.[9]

Technology has also allowed donors to bypass charity organisations and contribute directly to helping out when and where the help is needed. Individuals can now also create their own charitable projects on fundraising platforms. Some of these platforms are becoming a competition to the more organised and bigger charities who are better positioned to deal with bigger issues.

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[7] https://bizfluent.com/info-8677687-percentage-nonprofits-use-administrative-costs.html
[8] https://www.charities.govt.nz/charities-in-new-zealand/public-trust-and-confidence-in-charities/
[9] https://www.theguardian.com/money/2017/dec/18/millennials-give-more-generously-and-carefully-to-charity-study-finds

Misalignment of Self Interest with Global Interests

Most people want to do good, but they also are selfish and don't have access to full information to make informed decisions. Ultimately, it is leading to an increasing economic gap. Despite the effort put into solving poverty, the numbers are still quite striking. According to some estimates, on the one hand, the world is collectively spending over $3.6 billion dollars annually to mine Bitcoins[10], while on the other hand there is one person dying as a consequence of hunger every second[11]. Out of these people, every 5th person is a child under 5 years old. (Unfortunately, many would have died while just the reading of this). At the same time, looking at the other end of the spectrum, we see that about 2.8 million people are dying each year due to causes related to over-eating and obesity[12].

Although many individuals realise this, bigger problems cannot be solved by individual donations. Despite a growing awareness about charities[13] and people donating more time, money and goods than ever before, there is still an increasing inequality almost all over the world[14].

[10] https://digiconomist.net/bitcoin-energy-consumption

[11] http://www.theworldcounts.com/counters/global_hunger_statistics/how_many_people_die_from_hunger_each_year

[12] https://www.who.int/features/factfiles/obesity/en/

[13] https://www.theguardian.com/money/2017/dec/18/millennials-give-more-generously-and-carefully-to-charity-study-finds

[14] https://theconversation.com/global-inequality-is-on-the-rise-but-at-vastly-different-rates-across-the-world-88976

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Never doubt that a small group of thoughtful, committed people can change the world. Indeed, it is the only thing that ever has.

- Margaret Mead

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Proposed Solution

Decentralised Ecosystem

ChariD is a decentralised platform using state of the art technology to bring together all participants of the charity sector. The platform is a not-for-profit cooperative, collectively owned and run by all participants. Various incentives for each participant will be ensured to achieve the mission of meeting all basic needs of everyone.

We see this solution to have many benefits and solve all the problems listed above.

First and foremost, it will incentivise the contributions by all participants, especially donors, by rewarding them with Ster tokens (the crypto currency of the platform). These rewards may be proportional to the amount of contribution and/or randomly awarded periodically. This seemingly simple reward mechanism will introduce gamification to the experience. More elements of gamification may be added gradually to further increase participation. As a result, the platform will be able to sustain itself in the long run.

The administrative and regulatory compliance costs of charity organisations will reduce dramatically as they benefit from more reliable and easy-to-audit records stored in the distributed ledger. Further cost savings may be realised by having a low-cost way of transferring donated values geographically without needing to exchange currencies and going through payment systems and banks.

New forms of charity projects will also become possible in which individuals and groups of people with good intentions would be able to start working towards a cause as soon as they identify one. Their performance will be visible to the donors who may also have the choice to contribute either money, time or material towards the cause. The charity project is then enabled efficiently without worrying about the management and administrative overheads that may slow down or hold back people with good intentions. The historical performance of people working on projects and causes will be maintained on the platform. In the case of a bad actor(s) abusing the platform, their future projects will not be able to attract donors.

The platform will enable charity organisations to embrace new technology cost effectively while contributing towards diversification of their income in a relatively more sustainable

manner. The donors will still experience contributing directly to a cause or individual recipient directly, accessing them through the charity organisations.

The charity organisations will be provided by the main tools needed to become part of this decentralised platform. But they will also be free to add more functionality and grow the platform further. They may also provide customised applications (using the services on ChariD decentralised platform) to their own stakeholders and donors.

The platform will also allow better engagement by the private corporations and charity organisations, where the decision makers will be better informed of the charity options to contribute towards, while also getting more transparency on the use of the contributions and the results achieved from them. This is expected to motivate longer-term meaningful partnerships, rather than one-off CSR or marketing exercises.

The spirit of Effective Altruism will be incorporated in the platform so that the benefit of contributions may be measurable in better ways. For example, instead of just using the amount of money donated as a measure of contribution, the platform hopes to bring out accurate information of the real impact that the contribution has, including (but limited to) school days, accommodations provided and lives saved.

This solution will not just channel the resources in a more equitable way, but also bring about a fundamental change in considering everyone as an equal participant of a bigger ecosystem. It should be able to help the obese, as well as the hungry - providing them both a sense of community. Having supportive communities is considered a very important predictor of achieving goals (whether personal or collective).

The transparency of the system will not just ensure high visibility of the use of donations, but allow donors and recipients to even connect with each other, if they want and their privacy settings allow. The donor would be able to see the person they helped - the recipient would be able to see the donor who helped out.

The sharing of timely information would also end up making everyone a better decision maker. It is known that the availability of the right type of information makes us behave in a more conscious and enlightened manner. This effect has been noticed in how the use of

nutrition labels on food contributing to lower fat intake[15] and visualising the energy consumption leads to more ecologically responsive behaviour[16].

Benefits of Decentralisation

The world has historically faced localised events of food insecurity many times in different parts. Back then, it was very much a local problem. The more prosperous regions could not effectively and timely respond to a food emergency only a few hundred kilometers away. Additionally, in many cases, the decision makers of those prosperous regions did not even feel inclined or motivated to help out.

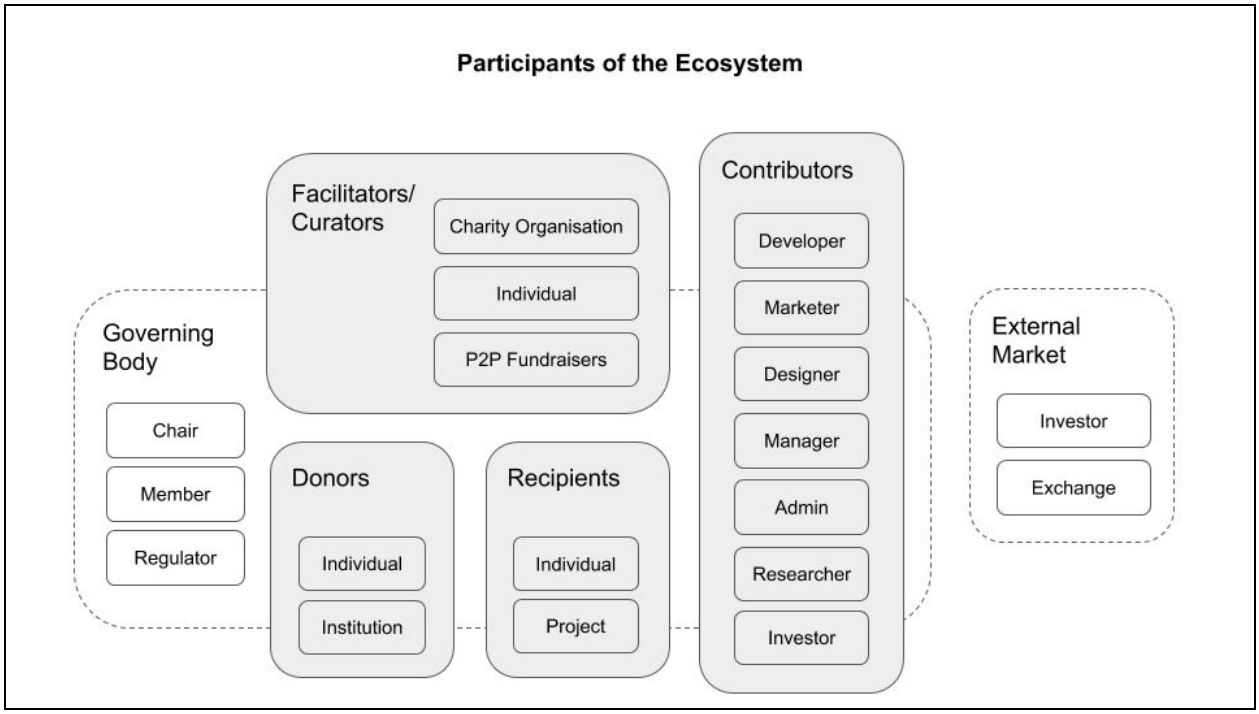
Things have changed drastically now. People from all over the world feel more connected with each other than ever before and can be empowered to help out whoever and wherever they wish to.

- Build a robust and self governing community of donors, recipients and all charity organisations
- Distributed system to reduce reliance on third parties
- Maintain trust collectively without relying on trusting an intermediary
- Maintain reliable records of transactions (keeping record of money trail), using blockchain or related technologies
- Maintain proof of money utilisation

Roles

Four main roles are envisaged for being a part of the platform, as presented in the figure. These four roles will be defined natively within the platform. Anyone would be free to join the platform as any of these roles. In addition to these four natively-defined roles, there will be a governing body and the external market which shall also influence the performance and success of the platform.

[15] Neuhouser, M. L., Kristal, A. R., & Patterson, R. E. (1999). Use of food nutrition labels is associated with lower fat intake. *Journal of the American Dietetic Association*, *99*(1), 45-53.
[16] Holmes, T. G. (2007, June). Eco-visualization: combining art and technology to reduce energy consumption. In *Proceedings of the 6th ACM SIGCHI conference on Creativity & cognition*(pp. 153-162). ACM.



Donors

These are individuals and institutions who are willing to contribute in any way for helping out in fulfilling a basic need for anyone. The contributions may be in time, money or goods. The donors can join and use the platform for free. A very small transaction fee will be charged only for the money donated on this platform. In blockchain parlance, this transaction fee will abstract away the setup and gas costs for the donors. The transaction fee is planned to be 2% in the beginning, and as the volume grows, incrementally reduced to 1%.

Facilitators

Any individual or institution organising the meeting of needs can work as a facilitator. This group of users will be primarily motivated by achieving their own objectives in a more efficient way using this platform. They can bring on donors as well as recipients on to the platform. The traditional charity organisations and the relatively newer peer-to-peer charity providers can all become a facilitator. They can subscribe to the platform for a

subscription fee (in Ster) some of which they will be rewarded back with, when using the platform and contributing towards the mission.

Contributors

These are people who perform various activities to build, grow, maintain and support the decentralised platform. The contributors may be full-time or part-time. Only full-time contributors are expected to be paid for their contribution in fiat money. Ideally, we would prefer to avoid any use of fiat money, but the Ster might not be a fair way to compensate them in the initial stages. Until the time when the Ster tokens become useful and valuable enough, we would need to compensate the full-time contributors in a fair way, using fiat money. We may then gradually switch to compensating in Ster and stop any use of fiat money by the platform itself.

Recipients

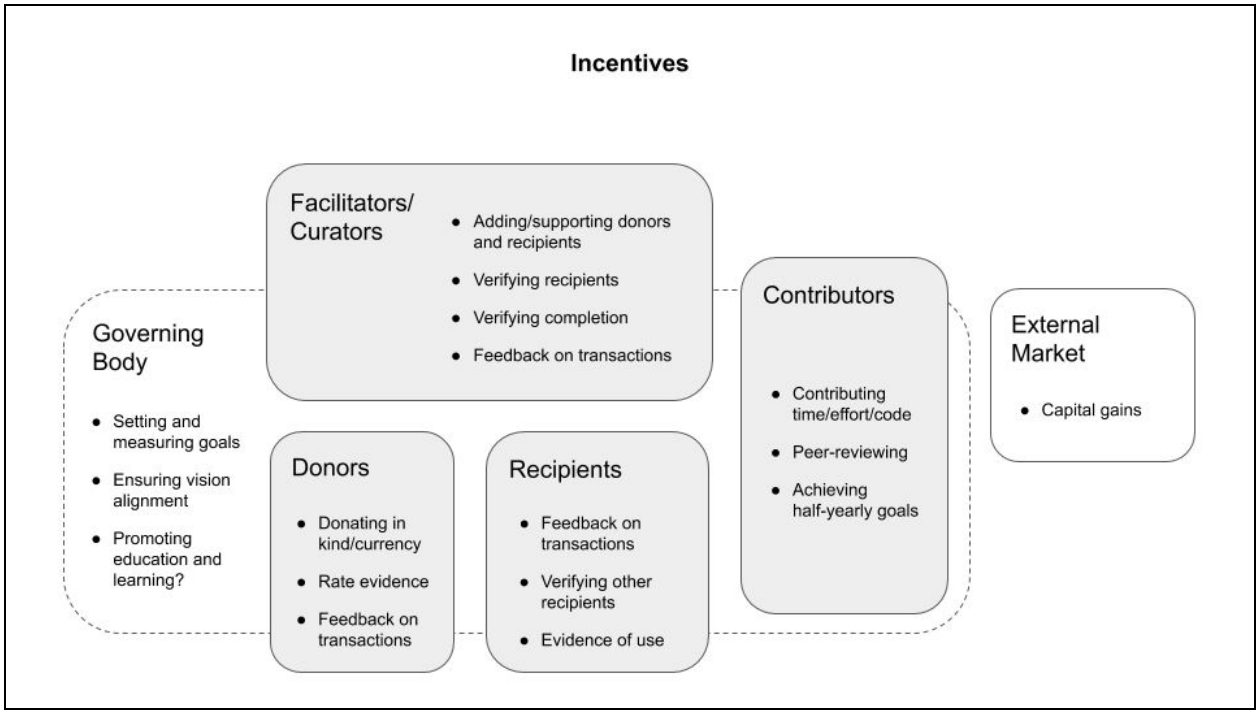
This group of users is fairly self explanatory. It is important to note that the recipients may be individuals, a community or charitable projects. Even when contributing through a charity organisation, the donors would have to choose the recipient community of the project that they would like to donate to.

Economic System

- Ster, a decentralised digital currency will be used to transfer value on the platform. The production of Ster will not depend on solving a cryptography problem (as is done in popular decentralised applications). Ster will be generated in return for actual work that contributes to the mission of this project.
- Ster will not be divisible further. For incorporating the expected change in valuation and the gradual appreciation, the smallest denomination will be variable. Initially the smallest denomination will be 1,000 tokens gradually reducing to 100 (depending on valuation) and then ultimately to 1 Ster token.
- Ster will not be fungible, i.e. each ster will be uniquely identifiable and trackable.
    - Help maintain clean history and avoid differentiation between clean and dirty Ster later on, as is happening with Bitcoin.
    - The Ster that have been used up or exchanged for fiat money using the platform will expire. This will not apply for Ster exchanged on external crypto currency exchanges, as those Ster tokens will simply change owners.

    - Allows future use cases of ownership transfer of goods on the marketplace.
    - Allows charity organisations to have their unique Ster tokens which may be used for providing additional functionality unique to them, should they want to build it.
- The economic incentive is built around providing shorter term benefit for activities that are in line with the longer term objective as well as wider positive impact. In a way, incentives are based on "Proof of Good Work"
    - Encourage and reward charitable behaviour
    - Encourage interaction
    - Encourage feedback and monitoring
    - Reward Charity/Sharing Rewards
    - Incentivise ongoing development over starting up (no airdrop or initial allocation for founders)
- Every donation wins a Ster
- Every donation qualifies for a prize (in Ster), randomly selected periodically, depending on volume. The prize will depend on the number of Ster tokens set aside for this purpose. Might be better to favour smaller, frequent prizes over bigger, rarer ones.
    - Portion of prize is shared with recipients chosen by the donor
    - User selected percentage of prize to founders of the platform
- Decentralised digital currency, the value of which increases over time with use, in a more stable manner. Should have some stabilising limits built in. Can only trade limited currency at one time to avoid speculative behaviour? Cannot put limits on changes in value due to the decentralised nature and multiple exchanges involved. Having a limit inside the system may result in multiple value denominations in different places.
- After the initial stages, when the governing body is up and running, the limits on Ster ownership will come in place. One person will not be allowed to own more than 30% of the total Ster tokens in circulation. One type of role will not be allowed to own more than 40% of the Ster tokens. (Todo: Verify if this is technically enforceable)

The incentive structure for all participants is summarised in the next figure. It lists the activities against which each role will be rewarded.



User Experience

- 'Usability' will be a priority of this system and the user experience will surface the transparency, reliability and decentralisation of the platform.
- The user experience should highlight the decentralised nature of the platform and the consideration of everyone as an equal participant of the bigger ecosystem.
- The donors should be able to see the utilisation and, if privacy settings allow, the recipients of the contribution, and vice versa.
- If historical data is available, the system will be able to predict future potential recipients, e.g. probability of a person dying of hunger in a particular geography.
- Abstract away all lingo that is specific to blockchains and crypto currencies. This includes not exposing the end users to concepts like wallets, tokens and gas fee.
- Wherever technical concerns will tend to reduce the usability, the principles of 'progressive security' will be applied. For example, the user onboarding would be as simple as downloading an app and signing up with an email address. As users start getting acquainted with the system, they shall be exposed to more options e.g. wallets.

Comparison

Traditional Platforms

The Internet had enabled connecting people together. As such, there are many peer-to-peer fundraising platforms available. Some of these platforms are more localised while some connect fundraisers and donors globally. They are differentiated according to their feature set and prices. They are increasingly offering better integration with social media and encouraging participation by gamifying the fundraising experience. Some good platforms are listed and reviewed by Double the Donation[17] and Qgiv[18].

While all such platforms are doing their bit in making the world a better place, they suffer from the main issues of constantly engaging the donors as well as fundraisers in a self sustainable way. They also need to charge a fee for running and maintaining the central platform. The concerns related to maintaining and controlling the data and resources centrally also apply to all such providers.

It is expected that a decentralised and shared ecosystem will be mutually beneficial for such platforms. The ecosystem would sustain itself while also incentivising participation of donors and fundraisers. The peer-to-peer platforms will further facilitate and verify transactions taking place on the ecosystem, contributing towards its growth and adoption.

Blockchain Platforms

AIDCoin

AIDCoin aims to become the preferred crypto currency to be used for donations on the Ethereum blockchain. It was developed by CharityStars, which is a relatively new but fast growing auction platform for charitable causes. With the AIDCoin, they hope to increase transparency of donations and solve the trust issues faced by the charity sector[19].

[17] https://doublethedonation.com/peer-to-peer-fundraising/
[18] https://www.qgiv.com/blog/top-peer-to-peer-fundraising-platforms/
[19] https://www.aidcoin.co

AIDCoin certainly provides some benefits. It obviously benefits from being developed by CharityStars, which is already engaged with charity organisations and donors. This crypto currency is also rightly expected to become a useful tool for addressing the trust issue.

This makes AIDCoin useful for many situations, but there are some key differences when compared with ChariD. First, any crypto currency (even ETH or BTC) can provide the transparency that AIDCoin aims to provide. ChariD aims to work with any currency (whether crypto or fiat) while natively using the Ster for the purposes of value transfer and incentivising participation. Second, although AIDCoin capitalises on the transparency and reliability that comes with blockchain applications, it is essentially still a centralised solution in which different players use the "AIDChain" services via different interfaces, client widgets and apps. Contrary to that, ChariD is a decentralised platform run, maintained and developed by the participants themselves. Lastly, the AIDCoin platform faces the scalability, efficiency and performance limitations that come with all Ethereum based systems.

Therefore, in our view AIDCoin and ChariD, both have their own uses. One possible future scenario could be the increased adoption of AIDCoin as a crypto currency for charitable auctions, which can also be used on ChariD for a wider effect and reach. AIDCoin may also participate as a facilitator, furthering its own objectives as well as contributing to ChariD's mission.

Donation Coin

Started with good intentions in 2017, the crypto currency aimed at providing a low cost and quick alternative to traditional ways of doing charity.

It suffers from some usability issues that have hindered the adoption of blockchain applications. For starters, it requires downloading the wallet app and then synchronising it, which can take from hours to days. As of writing this, their website[20] does not seem to provide too many details about the platform. The source code[21] also does not seem to be actively maintained/developed for the last couple of years.

Promise

Originally started as GiftCoin, this product also aims at providing transparency into the usage of donations. A charitable project is divided into milestones and funds for

[20] http://donationcoin.org
[21] https://github.com/donationcoin-project/donationcoin

subsequent milestones are only released once the earlier ones have been completed to the satisfaction of the donors. The team of founders and advisors behind this effort is experienced with technology and blockchain startups.

According to the whitepaper[22] the platform was planned to be built on the R3 Corda blockchain. It had proposed rounding-up of purchases on the platform to help users "collect" GiftCoins and generate revenue by using a 1% fee for exchanging fiat currency into GiftCoins and vice versa. Some of these things appear to have changed over time and they seem to have become more like AIDCoin mentioned above.

The obvious similarity between Promise and ChariD is in how they both bring more transparency and trust to the charity sector. But there are some fundamental differences. First one is that ChariD also aims to decentralise the charity sector and build a collaborative community. Second is the way ChariD incentivises participation by rewarding participation towards the achievement of its mission.

Karma

Their strong encouragement and favouring video content over still pictures makes sense if they want to drive user engagement, but does not fit well with the overall intention.

[Todo: Add more comparisons. Some listed on: https://cryptolinks.com/950/donationcoin]

[22] https://www.promisegiving.com/GiftCoin_Whitepaper.pdf

Operations

Money Matters

The operations will be governed by the true spirit of the concept. Any decisions will be guided by alignment with the mission of this project and the bigger vision.

Fiat currency will only be used in the initial phases to bootstrap the project. Gradually, fiat currency will be phased out in favour of using the Ster. To align the short term individual interests with those of the project in the long term, any compensation to anyone involved in this project is ultimately envisioned to be in Ster tokens.

Any fiat money or Ster realised as profit or donations will be publicly declared and invested towards achievement of the mission. These may include running, maintaining, developing, researching and marketing expenses.

Governance

ChariD is a private company registered in New Zealand. Work on the principles of a for-profit cooperative, managed by the board of governors. Only difference from a regular cooperative is that any profits will be declared publicly and used to only further the mission, instead of being distributed to shareholders.

Any wealth, realised in fiat or crypto currencies will legally belong to the cooperative to be used for supporting the development of the platform and community.

Initially any governance decisions will have to be made by the Initiator of the project. This is to avoid the problem of a few stakeholders yielding a significant influence in the early days of the platform. Once the governing body is fully constituted and the groundwork is ready, full governance will be transferred to the governing body.

Operations/Execution

Due to the evolving nature of technologies utilised and the wide scope of the project, agile and lean business methodologies shall be adopted for all operations. Small and frequent changes which are tested/verified and used for further development will be favoured over

bigger steps, not just for the software but all business, managerial and administrative purposes.

It is important to clarify that while this work like a lean start up, the agility applies to the decisions and steps needed to achieve the goal, not to figure out the goal itself.

This shall also be inherent in how this whitepaper has been and will continue to develop. This document will therefore evolve incrementally as well - initially, as the project scope and requirements are refined, and later, as new information becomes available and lessons are learnt.

Technical

Choice of Blockchain Platforms

- Permissioned blockchain (Hyperledger Iroha or EOS)
- DAG (Directed Acyclic Graph)/Hashgraph
- Identity management (Hyperledger Indy)
- Azure? Or Amazon's Managed Blockchain + QLDB?

Architecture

The architecture of the platform is based on multiple components. The components will be interacting on a total of two mainnets, running in parallel. The first one will be an implementation of a permissioned blockchain while the second one will be a permissioned DAG.

The following 6 components are proposed.

Processor

- Blockchain based mainnet
- Will be an optional component of apps for 'facilitators' and 'contributors'
- Running processor is rewarded by Ster
- Comes with DB. Detailed record keeping offloaded into DB outside the chain

Centralised Backend Services

The centralised services will wrap common functionality external to the platform, including:

- Interfacing with third-party services, like identity verification providers (e.g. NetVerify) and government agencies (e.g. NZTA).
- Interacting with apps outside of the ChariD platform and accessing information from the outside world (from trusted sources?)

- Synchronising different working parts (processors with client apps and multiple instances of backend services) (verify if needed - try to remove this)
- Running one instance of processor (to provide redundancy)
- Duplicating backend services (for increased availability?)
- Note: Avoiding central DB (even for country-level or organisational-level customisations? To be confirmed)

Recipient App and Donor Client App

- Web/Mobile/Desktop versions?
- Customisable (by organisation, by geography)
- Basic functionality - potentially extensible by ‘facilitators’
- Use the DAG based mainnet
- Provide wallet and other blockchain related functionalities built in (abstracting them away from the end user)

Facilitator App

- Desktop/Mobile versions
- Use the DAG based mainnet
- Optional processor component (blockchain based mainnet)

Effort Contribution Store

- Only used by contributors building and growing the platform
- All contributions peer reviewed and rewarded
- Peer review also rewarded

Tentative Monthly Timeline

The main deliverables in the immediate future are being listed, roughly grouped by months:

1. Ideation
    - Mission definition (in alignment with the broader vision)
    - Propose architecture, economic model and roles
    - Whitepaper version 0
    - Start sharing with select people and incorporate initial feedback
2. Expressions of Interest
    - Start sharing with broader audience
    - Refinements based on feedback
    - Call EoIs for joining the effort
    - Start including all types of stakeholders
3. Expressions of Interest
    - Start sharing with broader audience
    - Refinements based on feedback
    - Call EoIs for joining the effort
    - Start including all types of stakeholders
4. Concept Feedback and Spikes
    - Platform options and comparisons
    - Simplified crypto currency spike
    - DAG and blockchain spike
5. Testnets
    - EoI from collaborators
    - PoC of testnet
    - Launch testnet?
    - Open source repositories
    - Start engaging potential partner organisations
6. Team and Crowdfunding

- Low-fidelity prototypes
- Anecdotal feedback and research
- Start crowdfunding?

7. Start PoC
    - PoC of central services
    - PoC of client apps
    - Update architecture
    - Launch testnet
    - Whitepaper refinement
    - Finalise partnerships, team, terms of ICO

8. MVP Definition
    - Tokens launched on existing platforms? (Ethereum and NEO)
    - Status report (incorporating all feedback, findings and lessons)
    - Finalise test user base and at least one partner charity organisation
    - Improve client apps and central services
    - MVP definition

9. Increase awareness
    - Design refinements and higher fidelity prototypes
    - Create demo material (articles, videos, reviews, conferences?)
    - Engage the broader blockchain community
    - Engage researchers and academics
    - Revise roadmap of individual components

10. ICO
    - Finalise identity on-chain solution and identity verification providers
    - Beta release of central services
    - More functionality in client apps
    - PoC of mainnet
    - First on-chain coin offering

11. MVP Launch
    - Launch mainnet
    - Beta release of all components
    - Start testing with real use cases (within one country, one charity)
    - Second round of crowdsourcing?

12. Start scaling
    - Add second charity (within same country)
    - More functionality, based on user feedback
    - Allow pluggable identity verification providers
    - Start developing governing body

13. Second coin offering
    - Marketing
    - Develop organisational procedures
    - Second on-chain coin offering

14. Expand geographically
    - Add third charity (in a second country with different requirements)
    - Switch governance to governing body

The Road Ahead

This is a summary of the future plans for ChariD.

In the immediate future, ChariD already has lofty goals of developing and launching the decentralised platform. Starting from working in one country, the platform will gradually expand into multiple countries, onboarding multiple charity organisations, recipients and donors, while building a robust community of contributors who help in achieving its mission.

After having built the basic platform, ChariD aims to gradually add more economic activity, i.e. exchange of products and services on the platform. This exchange will be motivated by ethical considerations that add value to the whole platform, benefiting everyone in the longer term, rather than individual profiteering. As a consequence, it should promote exchange of ethical commerce and fair-trade (which is already a growing movement in some industries, e.g. clothing, handicrafts and food). Connecting people from all parts of the world together in ethical economic exchange is expected to also directly contribute towards a better world.

In the medium term (perhaps 20 years from now) ChariD aims to achieve all the benefits that are expected from having a Universal Basic Income, while avoiding the drawbacks associated with it. ChariD should be able to take care of all the basic needs of everyone, globally, in a transparent and efficient way while rewarding the behaviour that contributes to the shared success. The platform will allow the satisfying of all basic needs globally in an efficient, effective and transparent way.

Ultimately, this could lead to the grand vision of transitioning towards a reputation-based economy, where money as we know and use today will cease to exist - i.e. a moneyless society where reputation is the currency. Individuals would then strive for better reputation which will be transparently rewarded by all participants of society, while the basic needs of everyone will be efficiently met. It is a far-fetched idea and might take a long time to realise, but worth striving for. More details of this vision would be provided in a separate document.

Disclaimer

The project is being started with a bold goal in good faith. While best effort will be put in and the community of collaborators and supporters will be relied upon to help in realising the objectives, there is no guarantee explicit or implied about its success.

The whitepaper should primarily be taken as an invitation to collaborate and help in the project, rather than an offer of entering into an investment, buying securities or owning any shares. Further, due to the dynamic nature of technology as well as the business model, there is no guarantee that the platform will actually be developed as described here.

Any information in this white paper, website or other official publication is given for general information purposes only and neither ChariD Ltd nor any other person related thereto shall be construed as providing any representation or warranty as to the accuracy and completeness of such information.

This version of whitepaper is not a public release. It is only intended to share the concept with a limited audience, solicit their feedback and expressions of interest for possible collaboration. It might contain errors and mistakes.

“

Vision without action is merely a dream.

Action without vision just passes the time.

Vision with action can change the world.

- Joel A. Barker

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I'm hungry


Homeless Vet
Needs Help God
Bless You