aCASA

Your Money, Your Family

Vision: To change the Migrant Worker Remittance landscape:
A revolutionary mechanism insuring the seamless transfer of migrant earners' wages to their family member using Blockchain and Smart Contracts.

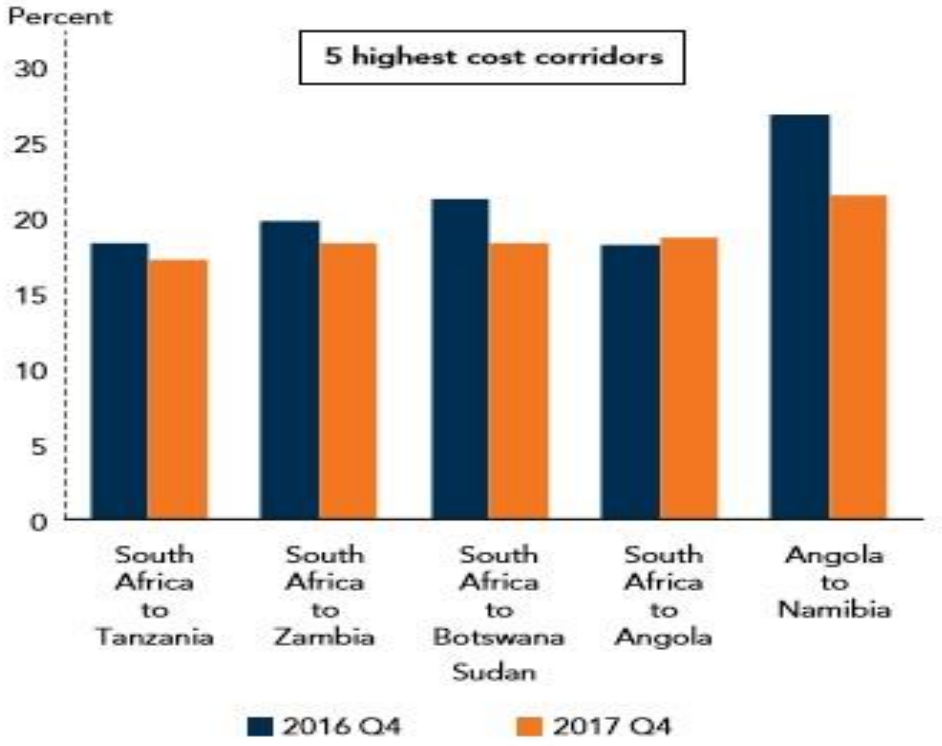
1. Executive Summary

aCASA (meaning "To Home" in Spanish) is a revolutionary efficient and economic Blockchain Technology--remittance platform--catering to Migrant Workers transacting primarily below USD 500; aCASA's technology platform is, however, robust and flexible enough to remit any sum of money. Moreover, the aCASA platform is a downloadable, multi-lingual, multi-currency mobile application. Migrant workers, employers, and their Unions, can directly remit "aCASA Coins" through an "aCASA Wallet". aCASA excludes the need for any Bank, MTO or CryptoExchange. The recipient can convert the aCASA Coin to a Fiat currency of choice, utilizing QR codes from a chosen retail chain, telecom store, or physical ATM. Alternatively, the aCASA platform user can use aCASA Coin to directly buy goods and pay for services, such as, provisions, groceries, utilities, school fees, and financial products, at either large or small enterprises.

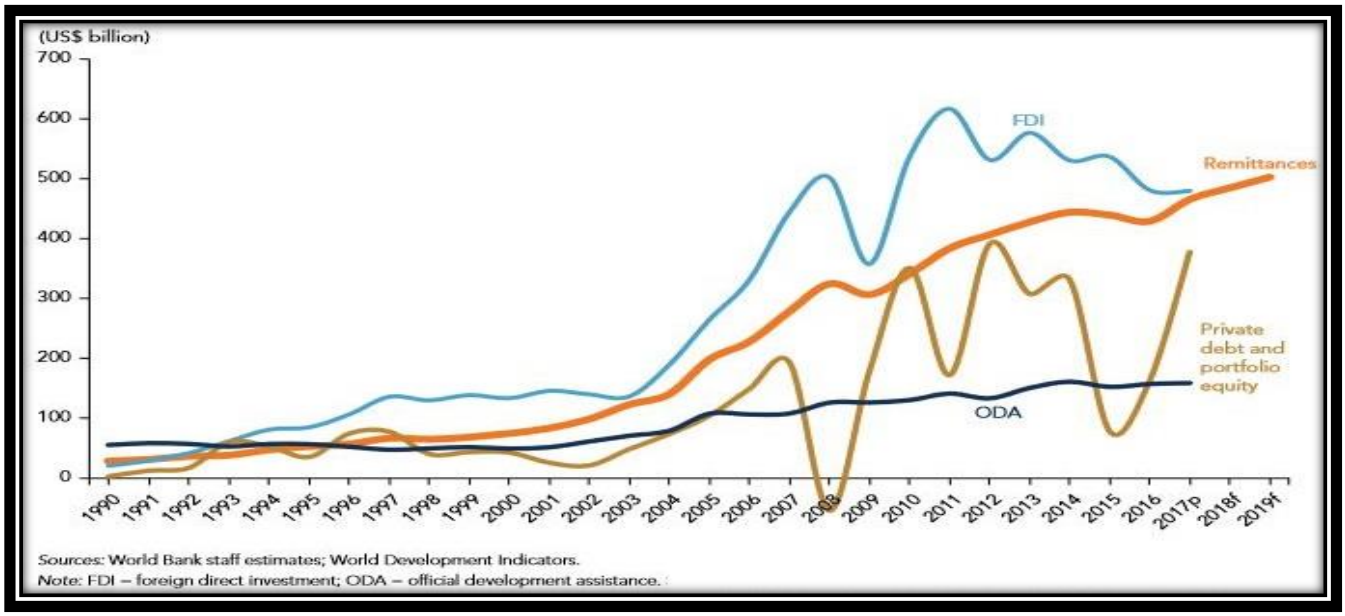
Overview

Unfair and burdensome remittance commissions are a harsh reality - imagine transferring a friend or a relative a small sum like USD 200, and paying a middleman a 10% commission, USD 20. Sadly, this is the harsh reality of life for more than 232 Million[1] global migrant workers. For Migrants in sub-Saharan Africa, for example, the fee can rise as high as 20% of the amount remitted.

[1] http://remittanceprices.worldbank.org/en/about-remittance-prices-worldwide



Cross-Border Remittance is a 600 Billion Dollar industry where 450 Billion Dollars go to developing nations[2]. World Bank reports the global average remittance fee is 7.13%[3] which is 238% of the sustainable Development Goal (SDG) of 3% set up by the United Nations. That



[2] http://www.worldbank.org/en/news/press-release/2017/10/03/remittances-to-recover-modestly-after-two-years-of-decline
[3] https://remittanceprices.worldbank.org/sites/default/files/rpw_report_march2018.pdf

means an astounding 40 Billion plus worth of remittances sent by Migrant Workers (mostly Blue-Collar Jobs) is consumed by the banks and money transfer operators. Adding insult to injury, the 7- 12% cost of remittance is less than instantaneous transfer of money. In fact, it can take up to 7-10 days to reach the recipient.

As demonstrated the current remittance paradigm is monopolized by the traditional banking conglomerates and the technologically archaic, out of touch, out of date, Money Transfer Industry. aCASA' s Blockchain based solution shall ease this dual pain of excessive cost and low transaction speed demonstrated as plaguing the Migrant Worker Remittance ecosystem.

The aCASA Solution

The disruptive and innovative solutions offered by aCASA on Blockchain considers the fact that money-to-money transfers are costly, and the recipient ultimately converts money to goods or services. With the global proliferation of mobile phones used to purchase goods and consume services, aCASA makes it possible to translate the wages earned by migrants directly into provisions and services, saving the Migrant Work and family member from:

- High Remittance Cost
- Exorbitant Foreign Exchange Conversion Rates
- Value Loss in the Wages>>Remittance>> Native Currency>>Goods/Services cycle.
- Delays in the receipt of funds sent from overseas

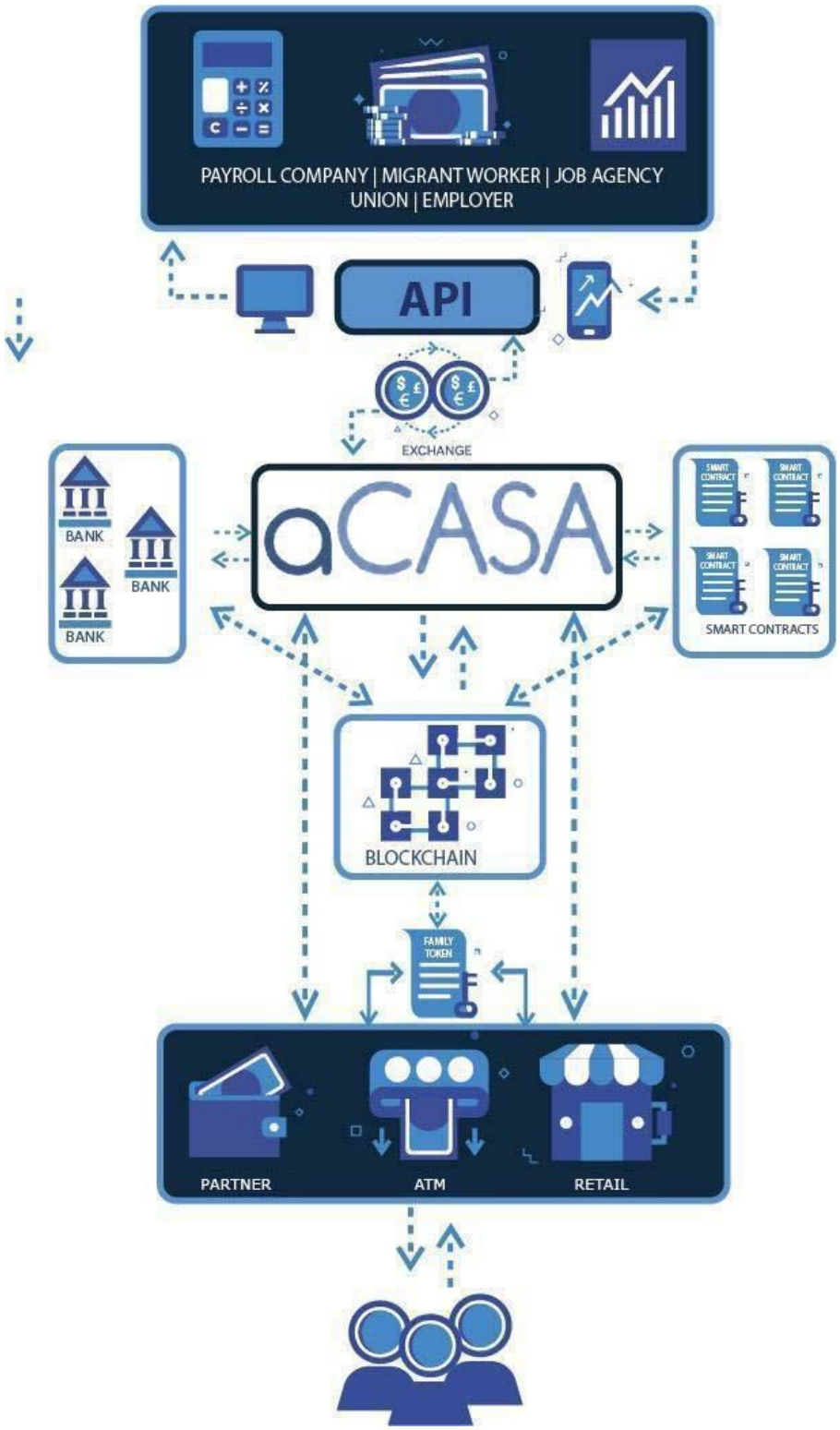
aCASA's unique platform solutions *score* over other weaker attempts at electronic or mobile remittance transfer. aCASA's strength is the existence of its corporate wallet at one end, and a posse of redemption points at the other end. This makes the remittance process as simple as the crediting of a Migrant's payday salary into his bank account with added benefits like lower transaction costs and exchange rates, direct remittance to unbanked family members; and, elimination of *dodgy* remittance modes like Hawala, *et al*. Just as big a win is enjoyed by the employer, who benefits from reduced payroll processing costs from check issuance

and courier charges. aCASA's platform is dynamic enough that the Migrant Worker can opt for a personal wallet to carry out his own transactions or simply permit his employer's corporate wallet to transfer to the family member's wallet, etiher enough to complete the two legs of remittance. Our surveys show that aCASA's solutions can result into more than 25% savings in payroll processing cost, while saving migrant workers 20% of the money remitted: Win-Win!

This go-to-market strategy, grounded in partnership building, shall expedite aCASA's market share grab and significantly reduce cost of acquisition.

Pillars of aCASA solution

aCASA Transaction Flow Diagram



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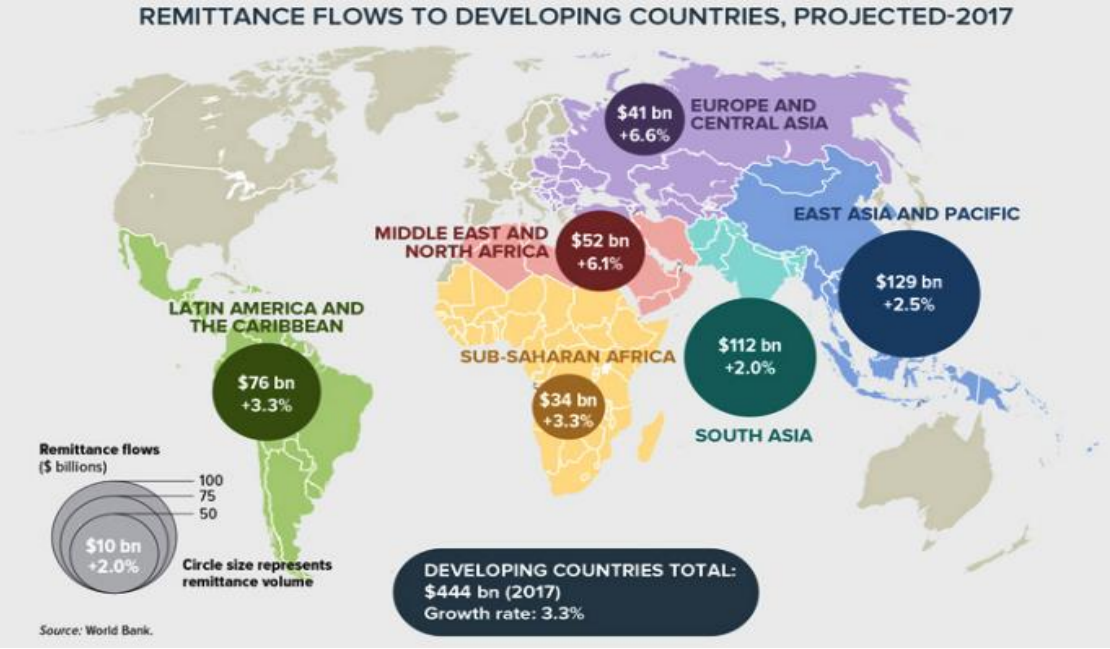
2. Problem Domain – Remittance Ecosystem

The Migrant Remittance Story – Impact on Developing Economies

Workers' Remittance is a crucial tool of Foreign Exchange Accrual for many developing countries and its impact on alleviation of poverty in many parts of the world is well documented. Large areas of Asia, Latin America and Sub-Saharan Africa incur Foreign Remittances several times the volume of official development assistance flows to the region.[4] In 2014, India's remittance inflow was three times of total FDI inflow.[5]



As reported by The Economist, in Tajikistan, migrant workers send home the equivalent of 47% of the country's GDP, as half of the Tajik men of working-age are now believed to be living abroad. Similarly, an estimated 40% of Somalia's population depends on remittances utilizing their hard-earned cash to buy family essentials like food and medicine.

[4] Remittances and Development - Lessons From Latin America – World Bank
[5] https://www.economist.com/blogs/freeexchange/2014/08/remittances-and-growth

In least developed countries like Nepal, Haiti, Liberia, and Gambia, remittances account for more than a quarter of GDP and are the sole means of livelihood for many families who would otherwise be forced to live under severely constrained conditions.

The effect of remittance on economies of LDCs and developing countries is also understood from the perspective that remittances are countercyclical to the economy in recipient countries. Migrant workers are more motivated to send money back home to their country of origin during times of economic recession. Thus, capital in the domestic economy of the Migrant's country of origin increases and helps keep consumption patterns normal.[6] According to the head of Knomad, Dilip Ratha. "Remittances are a form of insurance, helping families and communities weather external shocks,"

Using remittance data from 1978-2011, Najid Ahmad concluded that an 1% increase in foreign remittance has a positive impact of 0.25% increase in GDP of Pakistan[7]. As can be seen in the table below, Migrant Worker remittances have a positive impact on poverty alleviation as well as reduction in income inequality.

Income Gini Coefficient in Counterfactual Scenario of No Migration

Country	*Gini coefficient*	*Difference in Gini before/after remittances*	*Percent difference*	*Country*	*Gini coefficient*	*Difference in Gini before/after remittances*	*Percent difference*
Bolivia (2002)				El Salvador (2000)			
Nonremittances income	0.556			Nonremittances income	0.497		
95% confidence interval	(0.553; 0.561)			95% confidence interval	(0.494; 0.501)		
Total income	0.555	–0.001	–0.3	Total income	0.486	–0.011	–2.1
Dominican Republic (2004)				Guatemala (2000)			
Nonremittances income	0.519			Nonremittances income	0.603		
95% confidence interval	(0.514; 0.525)			95% confidence interval	(0.596; 0.615)		
Total income	0.520	0.001	0.3	Total income	0.586	–0.017	–2.9
Ecuador (2004)				Haiti (2001)			
Nonremittances income	0.501			Nonremittances income	0.725		
95% confidence interval	(0.500; 0.503)			95% confidence interval	(0.703; 0.756)		
Total income	0.499	–0.002	–0.5	Total income	0.669	–0.056	–7.7

The Economist reports, "Remittances act as a major counterbalance when capital flows weaken as happened in the wake of the US Fed announcing its intention to reign in its liquidity

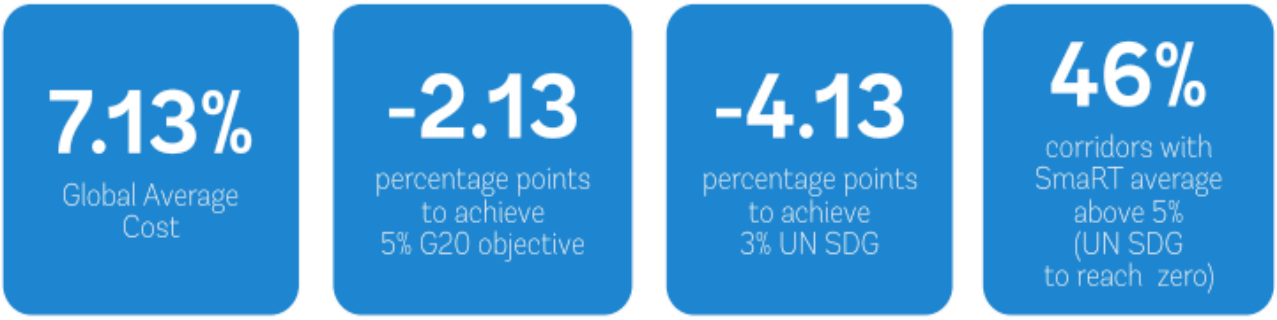
[6] https://www.investopedia.com/articles/investing/120815/three-things-know-about-remittance-economy.asp

[7] Foreign Remittances and Economic Growth in Pakistan: An empirical investigation published in Journal of Basic and Applied Scientific Research

injection program". Money sent from abroad also works as an automatic stabilizer when a receiving nation's Currency weakens, which makes it more expensive to import, but also cheaper for foreign workers.

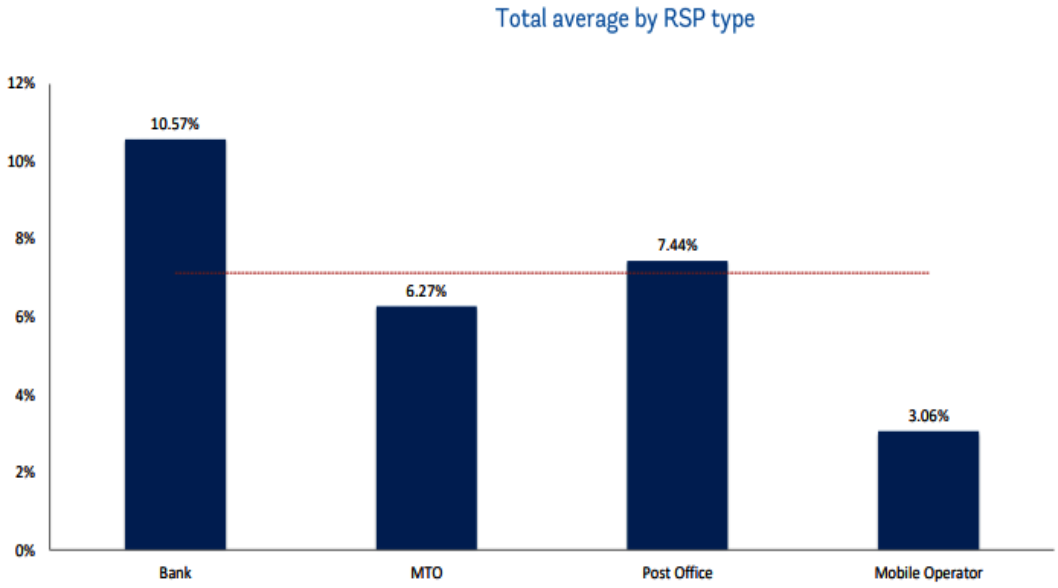
Pain Points in Migrant Worker Remittances

Despite the positive impact on the economy of recipient countries as demonstrated above, the existing Migrant Worker remittance system is somewhat of an economic nightmare for mostly the blue-collar migrant workforce. The existing system forces Migrant Workers to rely upon a nexus of Money Transfer Operators (MTO) like Western Union, Moneygram etc., banks and post-offices, which have created unchallenged monopolies driving the cost of money transfer to the moon.



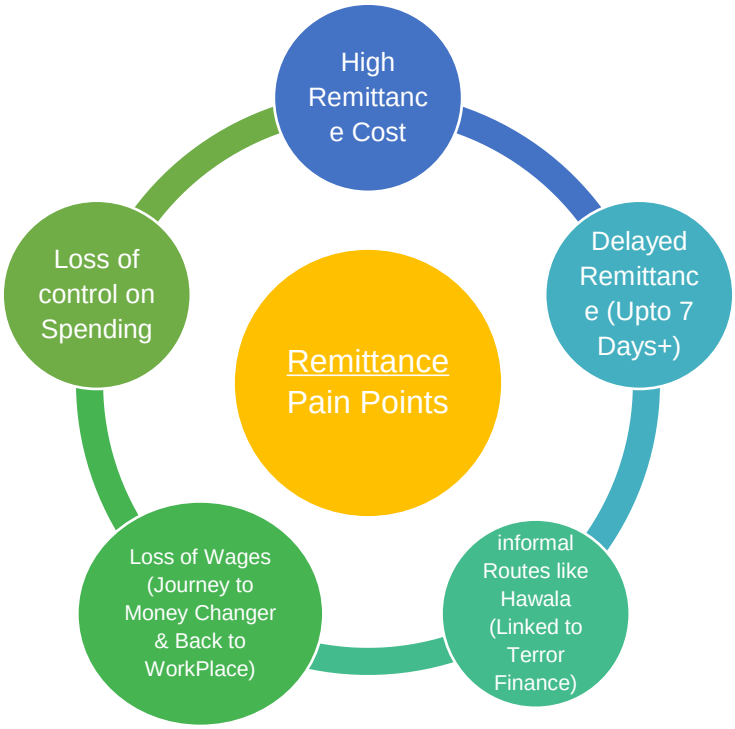
As can be seen from the numbers above, the average remittance cost is more than double of United Nations sustainable Development Goal of 3%.[8] This is unjust enrichment by the banks and MTOs at the cost of Migrant Workers, their poor recipient families and underdeveloped home Nation.

[8] https://remittanceprices.worldbank.org/sites/default/files/rpw_report_march2018.pdf



Hidden in the averages is the fact that approximately 20% of Corridors pay more than a 10% fee, while 44% of Corridors have a fee in excess of average of 7%. In addition, large MTOs like Western Union and Money Gram charge higher than average fees (8%). Thus, instead of using economies of scale to reduce the transfer fee, large MTOs exploit the Migrant Worker using their monopolistic presence to increase their profits.

Summarized Chart of Pain Points

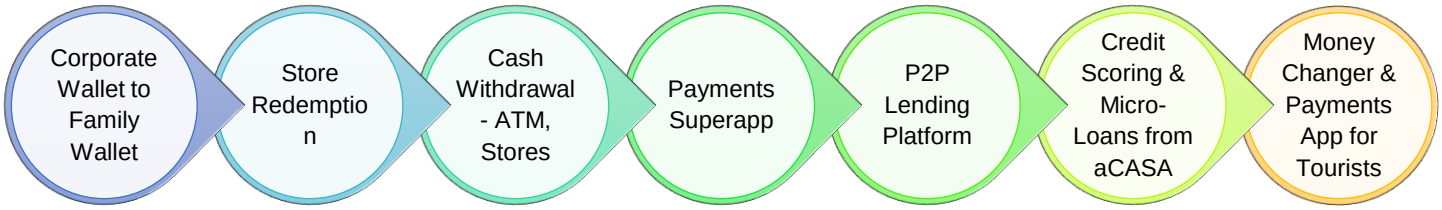


3. aCASA Smart Token Remittance Aggregator Model

The World Bank recognizes that the primary factor leading to high remittance cost is the devastating lack of transparency in the Migrant Workers Remittance Market. The remittance charges comprise of transmission fee, exchange rate differential and fee charged to remit. This lack of transparency in the market has had the impact of reducing competition, as Migrant Workers tend to continue to use traditional market players because they are not aware of and cannot compare services, fees, and speed of their existing remittance service against other products. Even though cost of mobile money transfer is 1/3rd of cost of transfer through banks, less than 10% of a Migrant Workers' remittance takes place through mobile phones despite the ubiquitous presence of mobile phones across the globe.

The aCASA solution resolves these pains faced by Migrant Workers via two unique features:

1. Blockchain and mobile based aCASA Token transfer to a recipient is, amongst other liquidity solutions, redeemable at provision stores, telecom airtime outlets, and banking correspondents; and,
2. Instead of only using the individual worker, aCASA's solution will partner direct with employers, workers' Unions, and payroll processing companies to save time and money.



Features of aCASA's solution:

a. Corporate Wallet to Family Wallet Transfer

The Blockchain & Smart Contract-based aCASA remittance system is designed to allow employers of Migrant Workers and employee representative organizations (workers' unions) to provide a simple system to enable multiple, bulk transfers of agreed sums to

workers' families around the World via use of a mobile phone app, allowing redemption of the token contract (or portion of it) by the recipient of the token. Though the system is primarily designed to provide a service for organizations wanting to send batches of funds to multiple recipients, individual users may utilize the platform if KYC and AML requirements are fulfilled.

The aCASA system strength rests in its intuitive ease of use as senders/recipients are not at risk to volatile cryptocurrency values, foreign exchange fluctuations, or tasked with finding a reliable MTO/Bank. The sender uses the mobile application to transfer the smart token (Sender has the option to permit employers to make the transfer for them). Sender's family members need only receive and spend the appropriate value of their token contract. The application is designed to be intuitive, recognizing that users may only be partially literate though familiar with using mobile phones.

b. Store Redemption of Token

In a direct reflection of the sending mechanism, recipients of a tokenized contract are able to redeem the contract value (either totally or partially) at authorized outlets (Telecom Airtime Retail Outlets, Retail Chains/Outlets, Schools, Online Retailers, ATMs etc.) in the recipient countries where aCASA will enter into liquidity/redemption agreements with authorized outlets and place an agreed deposit into an account with 100% of the funds necessary to cover potential withdrawals. Payments to these liquidity/redemption outlet accounts will be done by batch payments in much the same manner that batched funds are received by aCASA from employers.

c. Physical ATM for Foreign Exchange Withdrawal

aCASA has partnered with TripAlley to install Foreign Exchange ATMs in airports and other locations where tourists and other recipients of the aCASA coin will be able to exchange tokens for Fiat Currency. TripAlley has received approvals to field trial ATM applications throughout South East Asia. This partnership shall help aCASA to gain ATM

redemption points for the recipients. TripAlley and aCASA Tokens shall be interchangeable at par basis which will allow the recipients of aCASA Tokens to withdraw Fiat Currency without any hassles of exchange Rate Fluctuations.

d. Payments Superapp for Migrant Workers & Families

In addition, the aCASA Token will also be redeemable with partner service providers for services like utilities, bill payments, rentals, travel, savings products, and insurance products consumed by the Migrant Worker and Family Member. Thus, the aCASA mobile app will act as a Blockchain powered payment Superapp, similar to Alibaba's AliPay/PayTM or Tencent's WeChatPay (without the chat feature) with aCASA Token being the native payment token in the payment ecosystem of the Migrant Worker and Family Member.

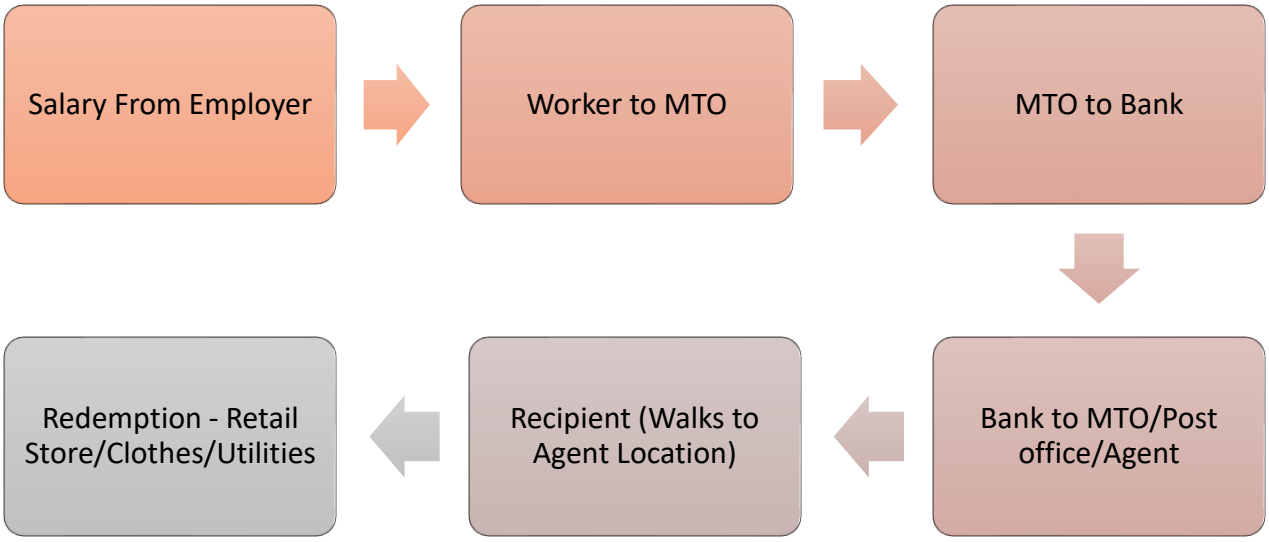
d. Foreign Exchange & Payments App for Tourists

Furthermore, though aCASA is initially designed as a migrant worker remittance service, the architecture could apply to any Smart Contract over several unrelated industries using the same essential components. Our services will be offered to international tourist, permitting a Smart Contract token spend with global retail and service providers. in addition, aCASA's platform permits the withdrawal of Fiat currency from designated ATMs.

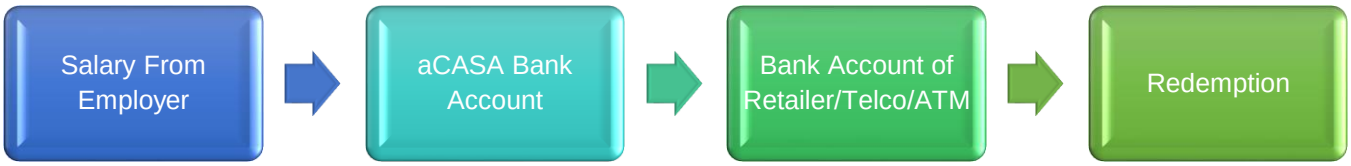
e. P2P loans & Loans against Future Wages

Finally, the aCASA Token will also provide a lending platform to the Migrant Worker. Migrant Workers will be able to lend money to each other through a global-first, P2P loan platform. aCASA, the entity, will also provide loans to migrant workers or their family members either directly or in partnership with banks based upon the employment and income data of Migrant Workers which will be used to generate a Credit Score.

Existing Remittance Process Flow



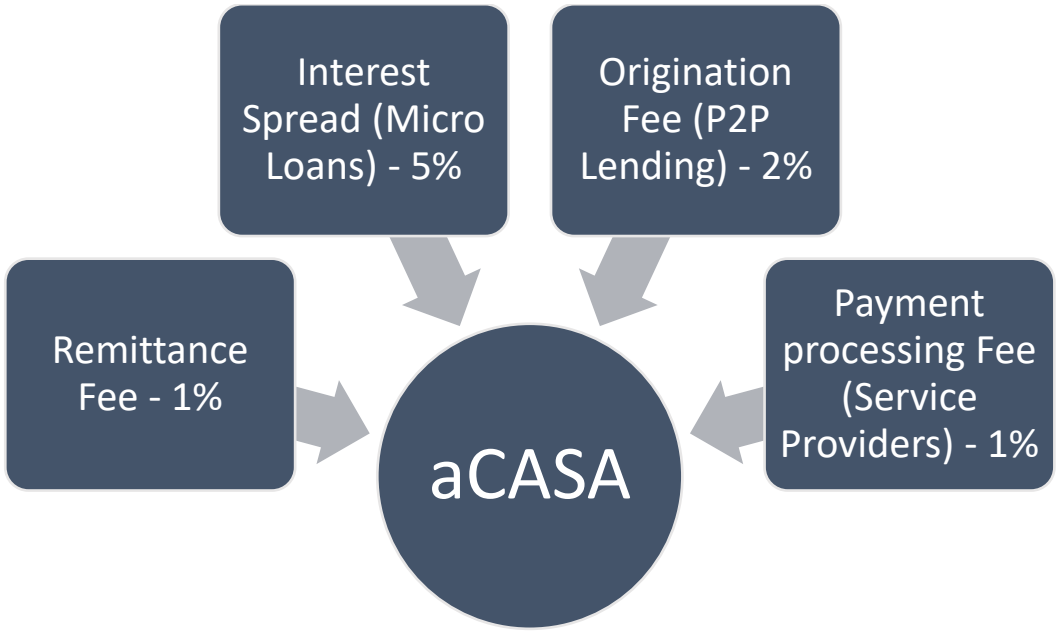
aCASA Remittance Process Flow



Benefits of aCASA Coin

Migrant Workers	Family Members	Redemption Channels	Service Providers	aCASA
•Lower Remitannce Fee (1% instead of 7-12%) •Zero Wages Loss •Ease of Use •Peer to Peer Loan •Loans for Emergency •Free Credit Score	•More Funds in Hand •Immediate Receipt •No problem of Cash Handling •Emergency Funding - P2P & Other Loans •Services at click of button	•Singnificant User Base •Loyal Customer •Cross-Selling Opportunity	•Payment Assurance •Bottom of Pyramid Customer Base •Low Acquisition Cost	•Low Acquisition Cost •No need of Physical Network like WU/MG •Low Cost of Operations •ATM redemption through partners

Revenue Model



4. Technology

5. Why Blockchain?

The benefits of using Blockchain technology for Cross-Border Remittances is well documented and Ripple has become the third largest cryptocurrency in the world (by market capitalization) offering one primary product which is designed to assist cross border payments, mainly for financial institutions such as international banks and remittance services such as Western Union. This is understandable as remittances using Blockchain and smart contract technology not only can significantly reduce the processing time (nearly instant instead of days) but also drastically cut down the cost of remittances to institutions which could, if inclined, pass on these savings to customers. Such usage is being currently done by means of a Permissioned Blockchain which, by its' very nature, is not truly decentralized and allows participants to adopt their own rules for participation without the true decentralized 'fail-safes' of an open Blockchain ledger.

However, this type of Blockchain usage, while appealing to large institutions in specific fields, is not suited to aCASA which is being produced as a smart contract token solution able to be used in many markets where decentralization is crucial to acceptance as a 'trust-less' medium. A truly decentralized use of the Blockchain allows aCASA to offer a very secure, immutable, distributed smart contract solution to all users of the application. Our aim is to show, by example, that only by the fully decentralized use of blockchain technology can a truly immutable smart contract be constructed and that the use of Permissioned Blockchains are unnecessary and, in the long term, defeating the whole original concepts behind the development of the Blockchain.

Choice of Platform

aCASA Tokens will be issued primarily as Smart Contracts and initially based upon Ethereum Protocol (ERC-20 Tokens). In the ecosystem, an aCASA Smart Contract shall define that the receiving party may receive goods, services or redeem Fiat up to and including the value of the Smart Contract, which is held, immutably, on the Blockchain and can be accessed by the receiving party's 'wallet' or by other secure methods via the alternative party to the Smart Contract.

It should be noted that the Smart Contract is not a coin which is only accessible by a 'wallet'. Many migrant families may not be in possession of a computer or smart phone capable of downloading an app and may have older feature phones or even no phone at all. Even if the beneficiary of the remittance is not in possession of a phone it would be possible to issue them a printed barcoded coupon (or QR code image) which then, in conjunction with a separately supplied PIN code, will allow the recipient to go to an authorised redemption centre, hand over or show the appropriate QR or barcode which the redemption centre can then use to interrogate the smart contract and, if the associated PIN number is correct, allow fulfilment of the Smart Contract as defined without the need for the recipient to have any internet connected medium to interface to the blockchain.

Because the contract is on the blockchain and we are not using coins in ‘wallets’, the system is not only completely flexible in the way in which it can be used, but extremely secure. No migrant worker has to worry about any exchange being hacked and their funds lost plus the likelihood of a remittance point being hacked and smart contracts being compromised is also lessened by the very decentralized nature of the aCASA approach.

Our approach, which is simplifying the original idea behind ‘hard wallets’ while allowing users the ability to also use the latest technology, is another case of aCASA wishing to go back to the fundamental aims behind Blockchain and lead by example ordinary methods by which this technology can be used by ordinary people.

Proof of Work vs Proof of Stake

aCASA is committed to decentralisation and is aware of the ecological consequences of excessive power use by mining rigs. We wish to use a structure of validators to overcome what are valid criticisms of the current blockchain validation mechanisms.

There are inherent problems with validating transactions on the Blockchain most obviously indicated by the well publicised delays in getting transactions validated and the high costs involved in processing even small transactions that were seen at the end of 2017. The primary reasons for this were the inbuilt difficulty adjustments which basically means that as more blocks get ‘mined’ the difficulty of the cryptographic puzzles to validate transactions increases exponentially. Basically, the more coins you mine out, the more difficult the process of mining becomes. Miners soon found out that they can’t really mine efficiently by themselves anymore, the process was getting more and more expensive. So, they decided to pool their resources together and form cliques and groups to mine coins more efficiently. These groups of miners are called “mining pools”.

Traditionally, these miners and mining pools have validated transactions through a Proof of Work methodology, requiring more and more resources as the number of transactions increases to where we now have a threat to the decentralized model

given that an increasingly small number of extremely large mining conglomerates can have an overwhelming influence on how the network works. On Bitcoin mining only 4 mining pools manage over 50% of transactions whilst on Ethereum it is only 2 (ethpool/ethermine and f2pool)! Miners need to do this to reduce variance in rewards for their mining efforts, but it means that the very factors that originally were meant to support decentralisation are becoming, themselves, centralized!

Although a little technical, it is important to understand why this matter in the case of aCASA and why we are committed to undertaking a methodology that enhances the decentralisation of smart contracts.

To understand what variance means and how that affects miners, we will need to do some mathematics. Credit to L.M. Goodman and her Medium article for the explanation (https://medium.com/@lmgoodman).

First, let's understand what Bernoulli distribution is. The Bernoulli distribution basically states that for every discrete distribution which has two outcomes "success" and "failure" if the probability of success is p (where, $0<p<1$), then the probability of failure is 1-p.

Now, let's apply this in bitcoin. If a miner controls a fraction "p" of the overall mining power and as a result, has a probability p of mining a new block where $0<p<1$, then, on applying Bernoulli's distribution, he/she has the probability of (1-p) of NOT mining a new block.
In Bernoulli's distribution: variance = p*(1-p)

Now, let's see how many blocks are mined in a year.

Every 10 mins, 1 block is mined. Which means each hour 6 blocks, every day 24 * 6 blocks and every year 365*24*6 blocks are mined.

Basically, for a miner who has "p" probability of mining a block, is expected to mine 365*24*6*p blocks per year. That's their expected return.

Similarly, the overall standard variance that they are going to be facing the entire year is: 365*24*6*p*(1-p).

Now, we shall define “standard deviation”. Standard deviation is a term which defines by how much are the members of a particular distributed group varying from the mean of the group.
In the context of the blockchain and this example, the standard deviation is by how much is this miner’s reward going to have deviated from the expected reward.
Standard deviation = [sqrt]variance / expected return.
Now, as we know:
variance = 365*24*6*p*(1-p)
expected return = 365*24*6*p
So, on substituting these values we get:
Standard deviation = [sqrt] (365*24*6*p*(1-p)) / 365*24*6*p
Now let’s take an example.
Suppose a miner owns 0.01% of the hash rate in the network. (Meaning p=0.0001).
If you substitute the values accordingly to the standard deviation equation then you will get a standard deviation of 0.4364 OR 43.6%!!
A 43.6% deviation from the expected reward or a miner who owns 0.01% hash rate.
The only solution to decrease this deviation and variance is to pool in resources to together to increase the overall hash rate percentage, which is exactly what mining pools offer.
In order to overcome this problem of scalability and potential centralisation, aCASA has looked at the Casper Proof of Stake protocol being introduced by Ethereum.
Proof of Stake benefits over Proof of Work are:
Helps achieve decentralisation;
It is energy efficient;
Provides economic security;
Is highly scalable;
Ethereum has a path from POW to POS
Currently, the larger the mining pool the more impact they can have on the whole network under POW trending towards centralisation. With POS this becomes irrelevant as mining becomes completely virtual. Because there is less dependence

on mining pools, the system becomes immediately more energy efficient. The biggest advantage that POS, and especially Casper, has is its economic security. Think about this, suppose you are a validator and you have your own money stored up as a stake in the network. It is in your own interests to act in the best interest of the network. Due to its' virtual nature the system is highly scalable and Casper provides a defined path from POW to POS with timed incentives to ensure that miners are encouraged to move forward with POS.

This is how POS under Casper would work (with thanks to Blockgeeks.com for this explanation):
The validators stake a portion of their Ethers as stake.
After that, they will start validating the blocks. Meaning, when they discover a block which they think can be added to the chain, they will validate it by placing a bet on it. If the block gets appended, then the validators will get a reward proportionate to their bets.
However, if a validator acts in a malicious manner and tries to do a "nothing at stake", they will immediately be reprimanded and all of their stake is going to get slashed.
As you can see, Casper is designed to work in a trustless system and be more Byzantine Fault Tolerant.

Anyone who acts in a malicious/Byzantine manner will get immediately punished by having their stake slashed off. This is where it differs from most other POS protocols. Malicious elements have something to lose so it is impossible for there to be nothing at stake.

This is not the only place where Casper punishes the validators.
As Hudson James and Joris Bontje note in their answers in "StackExchange", Casper designs harsher incentives in order to guarantee network security, including punishing miners who go offline, unintentionally or not.
This means that validators will have to be careful about their node uptime. Carelessness or laziness will lead to them losing their stake. This property reduces censorship of transactions and overall availability.

Along with all that, the “slashing” property also lends Casper a distinct edge over normal proof of work protocols. We recommend reading https://blockgeeks.com/guides/ethereum-casper/ for more detailed information about Casper and POW vs POS.

aCASA intends to fully implement our smart contract tokens by encouraging use of the POS methodologies to encourage energy efficiency and promote further decentralisation.

Initial Development Platform and EOS

The Ethereum Tokens will be ported from Ethereum to the EOS platform once EOS protocol (currently under development) is widely tested and ready for deployment. During the first phase, software development will take place on the Ethereum platform using the standard ERC20 protocol. Parties to the Smart Contract will have access to features that allow:

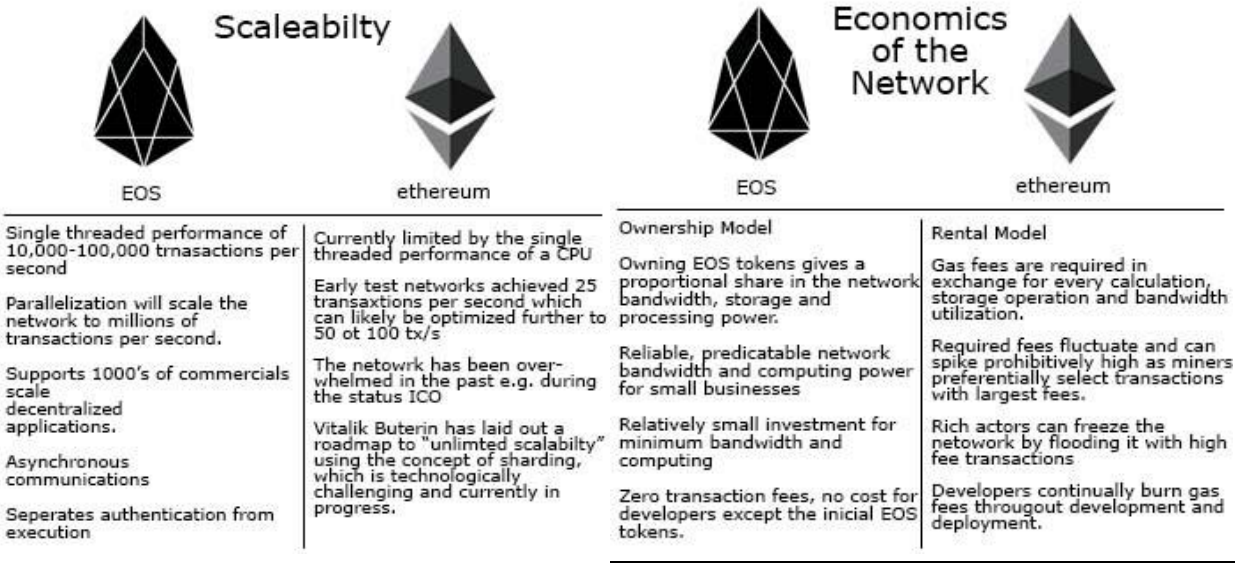
receipt of the total token supply, an account balance, transfer of token from one party to another, and approval of the token as a monetary asset. All these elements shall be an integral part of the aCASA solution.

The planned switch to EOS from ERC20 is based on current Ethereum platform limitations, regarding cost and scalability. An Ethereum DApp requires pay usage fees (“gas charges”). In addition, transactions are currently limited to around 30 per second, and while better than Bitcoin’s transaction rate, still pales in comparison to Visa, which processes 45,000 transactions per second. EOS is designed to not only allow Ethereum based DApps to be ported directly to EOS platform, but all tokens (including investor tokens).

The ERC20 tokens will be translated into EOS tokens at the appropriate exchange rate, if required, ensuring aCASA investors have no loss of value or token equivalence.

The advantages of EOS over Ethereum are many. Using Ethereum is the equivalent of 'renting' the platform whereas with EOS you 'purchase' the rights to use the platform. The most important benefits are that there are no gas fees and transactions are scaled to between 10,000 and 100,000 per second, very important when there are likely to be high transaction usage in future.

Difference between EOS & Ethereum[9]



Design Architecture

aCASA will be using a Service Oriented Architecture which has numerous advantages and benefits. Blockchain technology is very complex, but introducing a services layer provides a set interface that reduces that complexity for users and partners. Each service is self-contained, can be accessed independently and represents a single form of business activity.

It allows for the creation of numerous vendor client applications that can be developed independently based specifically on their individual needs. Furthermore, by implementing a services-based approach, it makes the system more extensible as other opportunities arise.

[9] https://steemit.com/eos/@trogdor/eos-vs-ethereum-for-dummies

In the event of Blockchain congestion and/or high fees, transactions can be temporarily withheld until congestion is reduced. It also reduces the difficulty of transitioning to other Blockchain platforms if the EOS platform becomes unsuitable for our future needs.

Accounts Service:

To use the application, corporate employers, Unions, Migrant Workers and Family Members will need to register their mobile applications with the aCASA Accounts Service in order to establish their identity with aCASA and create a corporate/ personal / family soft or hard wallet. The goal of the Accounts Service is to allow aCASA to authenticate that the wallet belongs to an individual, while keeping that individual's identity private. All personal identifiable data will be encrypted and stored on aCASA-managed data stores to protect user privacy and manage KYC/AML. Being based in Dublin in the EU, all personal information held by aCASA is protected under appropriate EU legislation. This data will be linked within the aCASA systems to a public wallet address on the Blockchain.
Registration will also allow users to authorize other individuals who have downloaded the application to spend their aCASA Token. This authorization will result in an authorization transaction on-chain, which allows anyone with a copy of the Blockchain to validate that one specific user can spend another's aCASA Tokens. Revocation of authorization will also be allowed and published on-chain.

Payments Service:

Employers will use the Payments Service to credit their employees/family member wallets the appropriate amounts. The Payments Service will verify the transaction between employer and aCASA and maintain the exchange rate for employer's Country currency to aCASA smart contract token.

Upon processing of the financial transaction and validation of the employee's identity via the accounts service, the appropriate quantity of aCASA smart contract

will be credited to the employees/families account via an aCASA token. The account credit will be published on-chain.

Retail Service:

The Retail Service will be used by authorized outlets (Telecom Airtime Retail Outlets, Retail Chains/Outlets, Schools, Online Retailers, ATMs etc.) in the recipient countries where aCASA has entered into Liquidity Agreements. Upon purchase of goods, a user will verify its identify at the authorized outlet by showing a QR or bar code. The authorized outlet will scan the QR or bar code and query the Retail Service to verify possession of funds. Upon verification, the Retail Services will credit the authorized outlet for the purchase and remove those funds from the user's account. After processing, this transaction will be written to the chain and available for anyone to verify.

The Retail Service will maintain a pruned record of the Blockchain only containing aCASA relevant transactions. This will allow for faster lookup speeds than storing the entire Blockchain record. The authorized outlet will have a client application which interfaces to the Retail Service via an API. The Retail Service will be connected to the accounts service to identify a customer and verify their account balance.

Forex ATM Service:

The ATM Service will behave very similarly to the Retail Service, however, in addition, it will maintain regularly updated foreign exchange rates. Instead of a user receiving goods at the finalization of the transaction, they will receive an equitable amount of a foreign currency in exchange for redemption of all or part of their smart contract token, as and when the users decide to withdraw fiat currency. The Forex ATM service will be connected to the accounts service to identify a customer and verify their account balance.

Technical Summary:

aCASA is committed to becoming a leader in the promotion and provision of smart contract technology while allowing even the most technically deprived to benefit from this decentralised revolution. Designed to be rolled out initially to the unbanked as a remittance smart contract system, aCASA is also defining a format, a validation method and decentralized ecologically sound system designed to make the utilisation of smart contract tokens simple to use for everyone. aCASA, taking the cryptic bit out of Crypto for everyone.

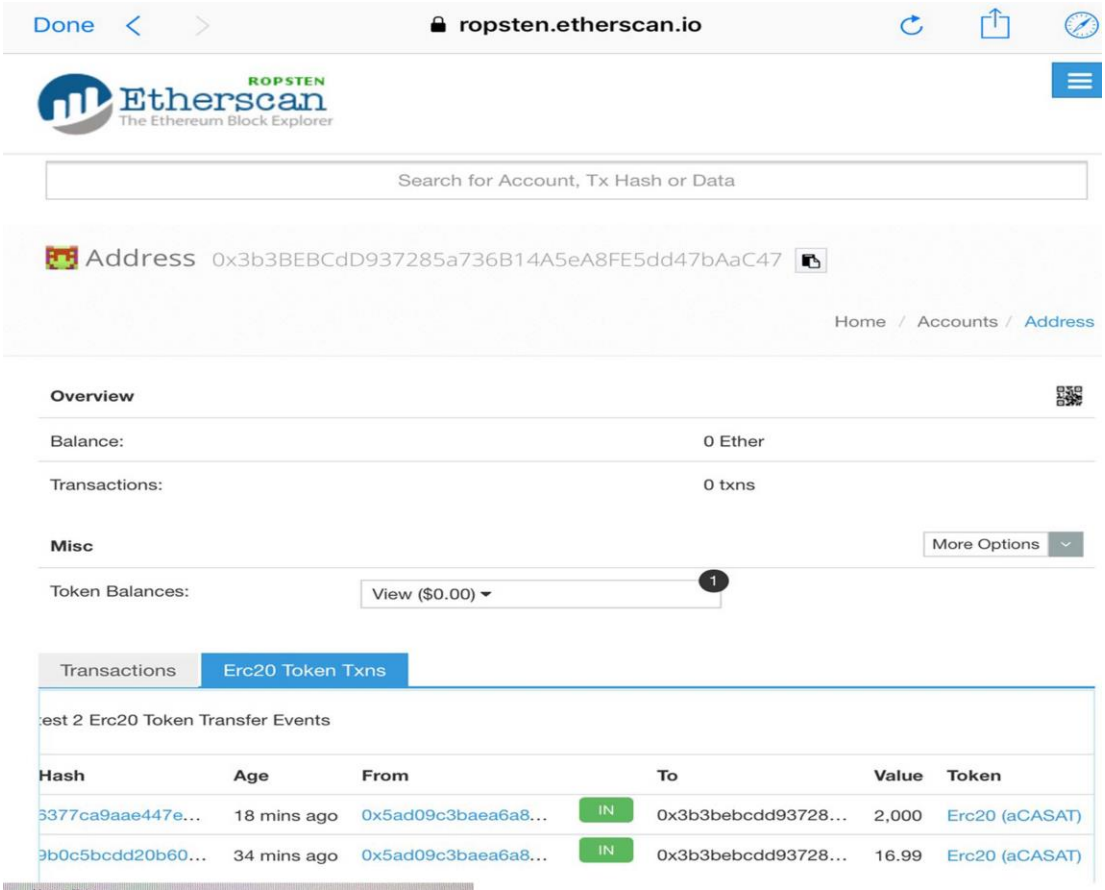
Steps to Pilot Project via Proof of Concept technical work

The aCASA technical team have already commenced the important steps needed for the software prior to launching a Pilot Project within the timescales listed. The steps already successfully undertaken include:

a) Registering with the Ethereum Ropsten Testnet;
b) Mining of ERC-20 test smart contract tokens in order to create an aCASA style smart contract token;
c) Creating test wallets for the procedures – both sending and receiving (although it is possible to use an existing Ethereum wallet, it is unwise to do so as a mistake in the test process could be detrimental to any real Ethereum contents);
d) Creation of a faux-aCASA smart contract token;
e) Transmission of 10 faux-aCASA smart contract tokens to recipient wallets held by authorised third parties;
f) Faux-redemption of contract elements by those third parties;

All the above tests vital to completing the Proof of Concept phase of development have been carried out to the team's satisfaction.

We are now progressing on development of front and back end interfaces for the handling of tokens (as opposed to using the test environment interfaces) and planning the necessary apps required, which are already under development. A sample screenshot of completed transactions is below:



On top etherscan proof of transaction using the aCASA code

To the left a sent transaction on the aCASA super app (in production)

6. Token Story

aCASA Token Characteristics

i. During the token sale, the aCASA Token ("CAS" or "CAS" token) shall be implemented as an ERC-20 compatible token over the public Ethereum Blockchain which will be converted to a coin on the EOS network towards the launch.
ii. The token shall be listed and will be tradeable on Cryptocurrency Exchanges.
iii. The tokens shall be redeemable for Fiat currency at Partner Stores, Teclo Retailers, Banking Correspondents, ATMs, and other redemption points.
iv. The maximum supply of aCASA Token will be 666.67 Million Coins (each valued at USD 0.10) all of which shall be generated during/just after (within 30 days) of Token Generation Event.
v. The softcap is USD 5 Million while hardcap is USD 40 Million. Tokens remaining unsold shall be frozen and will be released in two equal installments after 2 and 4 years.
vi. After a period of 12 months, 15% of the quarterly net profit shall be used by aCASA to buy back tokens.

Usage of aCASA Token

aCASA Token is a utility token which functions as both access token for the senders and payment token for the recipient.

a. Access Token

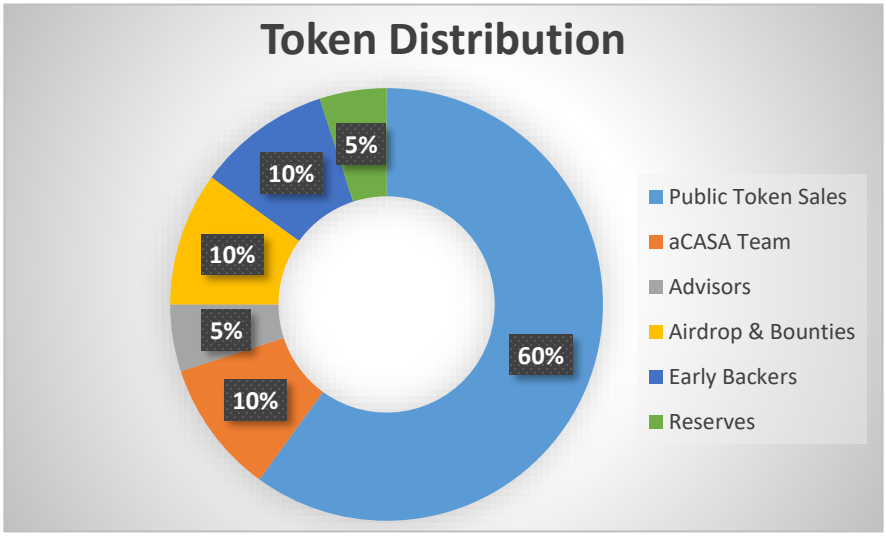
Only those having aCASA Token will have access to the money remittance platform of aCASA. The buyer of aCASA Token acquires the contractual rights to use the aCASA platform.

b. Payment Token

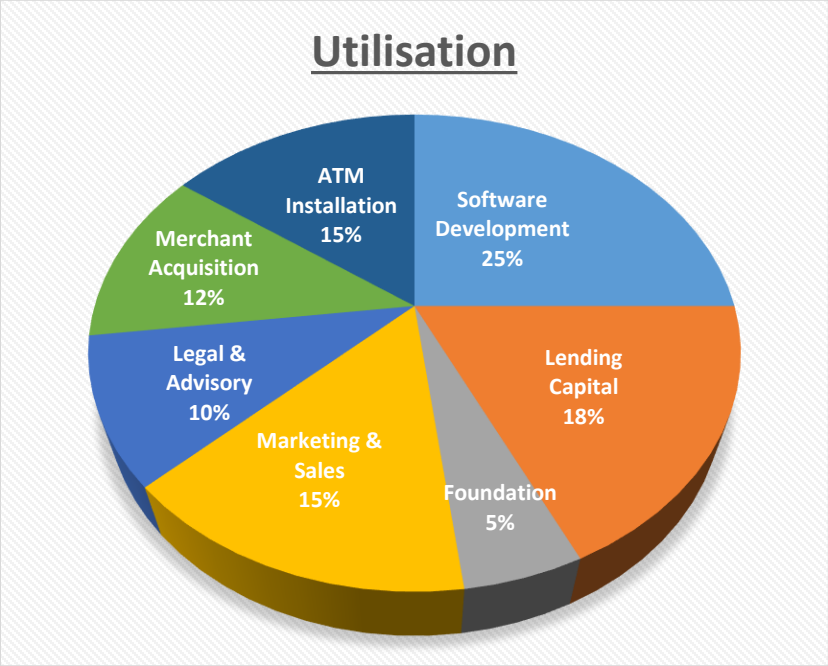
i. The recipients of aCASA Tokens (Family Members of migrant workers) shall be able to use the token towards purchase of goods/provisions from Departmental/Retail stores at discounted prices and pay their Utility Bills, School Fee of children, etc.
ii. The aCASA Token shall also be usable as a Payment Token by Migrant Workers, Family Members and Tourists. The aCASA Payment Superapp allows for additional payments towards the purchase of other products and services like Travel Tickets, Rentals, Online Shopping, Charitable Donations, Savings/Insurance/Loan Products and at Restaurants.

Distribution of Tokens

Public Token Sales	**60%**
aCASA Team	10% (Vesting over 12 Months)
Advisors	5%
Airdrop & Bounties	10%
Bonus to Early Backers	10%
Reserves (To be held by the company for future use)	5%



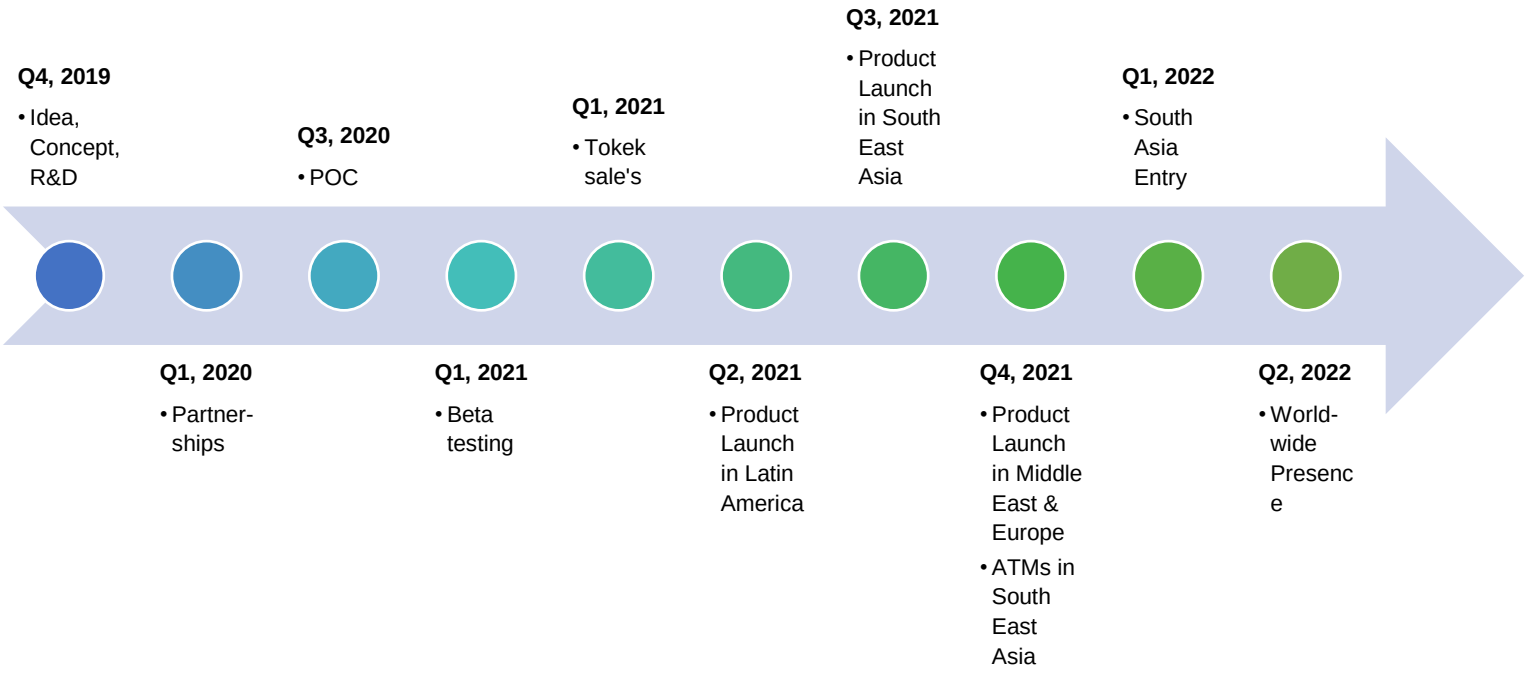
Public Token Sales Proceeds Utilization



Out of the total Token Sales Proceeds of 40 Million USD, aCASA will use 7 Million USD as lending capital for providing loans to Migrant Workers & their families. 2 Million USD will be donated to create corpus for a Foundation which will work towards uplift of Working & Economic conditions of Migrant Workers.

Rest of the Token Sales Proceeds shall be used for Platform Development, Merchant Acquisition, Marketing & other organizational expenses.

TimeLine


Q4, 2019
• Idea, Concept, R&D
Q1, 2020
• Partner-ships
Q3, 2020
• POC
Q1, 2021
• Beta testing
Q1, 2021
• Tokek sale's
Q2, 2021
• Product Launch in Latin America
Q3, 2021
• Product Launch in South East Asia
Q4, 2021
• Product Launch in Middle East & Europe
• ATMs in South East Asia
Q1, 2022
• South Asia Entry
Q2, 2022
• World-wide Presenc e

Team

Unlike most of the ICO projects that assemble team members at the last moment, the team members of aCASA have worked together since 1990s. CEO R. Barry Lloyd along with CTO Roman Smirnov designed and developed highly regarded “MakeMeTop” app which was used by companies like Xerox & Yahoo! Before being acquired by IBM/Unica in 2009. Post-acquisition restrictions on software development remained in place in 2018, though the company carried on business of Technology Consulting during intervening period. In 2018, after the restriction time was over, the team started working on Blockchain projects which are focused on public good and finally zeroed down on aCASA. Having successfully built, managed and exited several companies, in addition to working with companies like Google, Microsoft, Yahoo!, Baidu, British Airways etc. the founding team has unique skill-set to develop complex applications for an international, multi-lingual, multi-currency market.

Founders

Barry Lloyd CEO

A true Entrepreneur, Ex- Google, Yahoo!, Baidu, Designed & developed highly regarded ‘MakeMeTop’ software used by companies such as Xerox and Yahoo’s Kelkoo before being bought outright by Unica/IBM.

Peter Banks CMO

Has 25 years of international sales/ marketing experience at senior & consultancy level with British Airways, Clarke’s Shoes, Monster Cable & DSGi before becoming a leading entrepreneur in Far East.

The aCASA Team (Technical)

Mr. Roman Smirnov CTO

Roman has decades of technology engineering and management experience in the Financial Services sector and Blockchain Technology, Mr. Smirnov graduated from the prestigious Lomonosov Moscow State University. He is currently an owner and co-founder of MMTR where he commands a team of over 110 programmers. Mr. Smirnov distinguished career includes the design and engineering of software and services for Unica/IBM, Coremetrics, Bank BTPN, TB Bank, the Russian Federation Government's Procurement Portal, Diasoft, Flextera, Dot Alfa Ltd., eBay and Microchannel Technologies Ltd. He manages a team are world class experts of QA engineers and developers, specializing in the design and support of complex portals, websites with high levels of quality assurance, and mobile applications on all platforms and APIs.

David Brown (Lead Program Developer)

David Brown comes to aCASA as Lead Program Developer with 25 years of programming experience, having had a major impact in ICT architecture. A recognized industry leader with high level command of blockchain technology, Mr. Brown has held senior IT positions in British Telecom, Northern Ireland Government, Danske Bank, and Northern Bank. As a developer of Android and iPhone app's his client list includes Experian, The Sports Hut, RKSV Leonidas, the Irish Football Association (IFA) and British Telecom.

Core Team

Michael Bonfils (SVP – Global BD)

Head of Int'l Media Management Corp and SEM International,Michael brings with him over two decades of SEO/SEM experience, with offices in every major country in the world and an extensive & unsurpassed global reach.

Marcella Da Vivo (Director – Americas)

Serial Entrepreneur, and Founder of Gryffin, An industry veteran with nearly 20 years of central and south America marketing experience. A Specialist in data-driven marketing strategies, omni channel workflow optimization.

Administration

Andrew Ratcliff CFO

Distinguished graduate with honors in mathematics from Durham University and a fully charted accountant in the United Kingdom. 20 plus year as an Accountant Professional and Consultant is highlighted by his distinguished positions at KPMG as Head of Global Accounts for the British Broadcasting Corporation in Manchester and London Offices, where he was responsible for an annual budget in excess of $500 Million. Mr. Ratcliff's career has focused on the management of high frequency global remittance and cross border payments, touching nearly every world nation.

John Steimburg Head of Cross Border Remittance

Mr. Steimbur comes to aCASA as its Head of Cross Border Transactions. He has 25 plus years of banking, trade, finance and remittance experience. Mr. Steimburg;s clients includes a Tier 1 global institutional network. He has structured and advised on cross border transactions sizes ranging in value from $1m to $1bn's. Mr. Steiburg holds a post graduate law degree and has advised in a Directorship capacity companies such as Nat West markets, Kyte Group, Martin Brokers and Market Securities.

ICO Advisors

Joe Cawley Chairman – BAC LLC

25+ years of experience in Advisory & VC Background and also partner of a crypto focused hedge fund focused upon contrarian bets.

Ashish Anand CEO – BAC LLC

Over fifteen years' experience in Advisory & fundraising through Debt, Equity, IPO. Founder of Blockchain Fintech Startup. Advisor to ICO projects with cumulative raise worth 100+ Million.

Brad Nickel CMO – BAC LLC

Built world's first web-based SaaS company for small businesses, one of the first tabbed web browsers, printer network communication standard.

Paul Scott Head (EMEA) – BAC LLC

Deep-level Decentralization, PropTech, FinTech, CleanTech and Big Data ecosystem specialist with more than two decades of experience spent in Banking & Advisory. CBDO of recently concluded 28 million ICO, Faceter.

Ross Newman Blockchain Advisor – BAC LLC

Ross is a full stack/ Blockchain developer and consultant who till recently worked with AT &T.

7. Terms & Conditions

These Terms and Conditions (the "T&C") apply to the buyer of the aCASA Token ('CAS' or 'CAS Token') and future user of the aCASA platform.

PLEASE READ THESE TERMS CAREFULLY BEFORE PARTICIPATING IN THE TOKEN SALE. THE T&C AFFECT YOUR OBLIGATIONS AND LEGAL RIGHTS, INCLUDING, BUT NOT LIMITED TO, WAIVERS OF RIGHTS AND LIMITATION OF LIABILITY. IF YOU DO NOT AGREE TO THESE TERMS OF SALE, DO NOT ACQUIRE TOKENS.

By acquiring CAS during the token sale period (the 'Token Sale') you will be bound by these T&C, and all terms incorporated by reference. Your acquisition of CAS Tokens is therefore subject to these T&C.

This whitepaper may not be reproduced or distributed, in part or in whole, absent the entirety of this T&C section. This whitepaper may not be reproduced and distributed to any country or jurisdiction where distribution of documents of this sort may be restricted or prohibited. The aCASA team expressly disclaims any and all responsibility for any direct or consequential loss or damage of any kind whatsoever arising directly or indirectly from: (i) reliance on any information contained in this whitepaper, (ii) any error, omission or inaccuracy in any such information, or (iii) any action resulting therefrom.

Applicability

The following T&C constitute the agreement (the "Agreement") between ..... ('aCASA'), a Singapore ....., ... and the token buyer (also referred to as the "User") with respect to the acquisition of the CAS and/or the future use of the services offered through the aCASA platform. By opting to use aCASA's services, the token buyer agrees to be bound by the latest version of T&C. The token buyer agrees that aCASA may change these T&C any time at its sole discretion. The token buyer's continued use of the aCASA platform or continued possession of the CAS Tokens, shall convey that token buyer's acceptance of any new or modified terms.

Important Disclaimer

The T&C, the whitepaper, or any related information available on the aCASA platform shall not and cannot be considered as an invitation to enter into an investment. They do not constitute or relate in any way nor should they be considered as an offering of securities in any jurisdiction. This document does not constitute an offer or an invitation to sell shares, securities (debt or equity), or any other sort of decision-making rights belonging to aCASA, or any related or associated entity. CAS Token will be used as a private mean of payment once the services will be accessible and is not intended to be used as an investment.

aCASA Tokens ('CAS') are not securities, nor are they intended to resemble a security (debt or equity) in any form or in any jurisdiction. As such, CAS holders will not have any ownership rights in aCASA, or in any group of affiliated companies (including the yet to be set up foundation).

This follows that CAS holders will have no voting rights, right to dividends, or a right to share in the revenue. Instead, CAS are intended to function as a backbone for the smart contracts used on the aCASA platform.

CAS are not intended for speculative use, and any speculative buyers do so at their own risk of possible financial loss. The information and analyses presented in this whitepaper should not be relied upon to form the basis of any investment decision. Potential buyers of CAS should seek appropriate legal, tax, financial, and other professional advice as to the implications of buying CAS.

Voluntary Know-your customer (KYC)

There will be a KYC procedure that users acquiring CAS for an amount equivalent to or above USD 2,000/- will have to undergo in order to contribute to the Token Sale. KYC procedure will be done on a voluntary basis.

The user understands that her/his request to acquire CAS Token will be accepted and she/he will receive CAS only after having successfully passed through aCASA or an authorized third party KYC process. If the User fails to pass the KYC screening, the offer to acquire CAS will be rejected and she/he will not receive her/his CAS.

Participation in this process is voluntary and not mandatory, however users agree that aCASA can refuse accepting the offer to acquire CAS which is not compliant with its internal due diligence process.

Risk Disclosure

Acquiring and storing CAS Token involves various risks, in particular that aCASA may not be able to launch its operations and develop its platform or that regulatory action may prevent launch of operations. Therefore, and prior to acquiring CAS Token, any User should carefully consider the risks, costs, and benefits of acquiring CAS through the Token Sale, and, if necessary, obtain independent advice in this regard. Any interested person who is not in the position to accept nor understand the risks associated with the activity (incl. the risks related to the non-development of aCASA platform and operations) or any other risks as indicated in the T&C, should not acquire CAS Token, at token sales stage or any later point of time.

Regulatory concerns

This whitepaper has not been examined or approved by any regulatory agency of any jurisdiction.

Caution regarding 'forward-looking statements'

This whitepaper discusses the vision, plans, and forecasts of aCASA regarding the development of the aCASA platform on Blockchain technology. It must be emphasized that these forward-looking statements do not, necessarily, reflect historical facts but instead discuss aCASA's future plans.

These forward-looking statements involve known and unknown risks, uncertainties, and other factors which may cause the actual future results, performance or achievements of aCASA to materially differ from those discussed or anticipated in the whitepaper. These risk factors include, *inter alia,* the risk that aCASA may be unable to realize the plans for product development discussed in this whitepaper due to:

- Poor investment decisions;
- Changes in customer preferences or market conditions;
- Unavailability of talented and qualified workforce;

- Insufficient capital to fully develop necessary products;
- Changes in legal, social, and economic conditions in the countries where Acasa plans to operate which could negatively impact aCASA's development.
- Changes in the regulation of crypto-currencies and Blockchain networks which could limit aCASA's ability to legally operate as planned in certain countries or jurisdictions. The functioning CAS tokens could be impacted by one or more regulatory inquiries or actions, including the licensing of or restrictions on the use, sale, or possession of digital tokens, which could impede, limit, or end the development of the aCASA platform.
- Catastrophic or long-term technical or security failures in the Ethereum/EOS Blockchain network.
- Dramatic changes in exchange rates between CAS and other crypto or fiat currencies.
- Force Majeure circumstances such as wars, acts of terrorism, or natural disasters.

The abovementioned risk factors and other unforeseen risk factors can have a negative impact on aCASA's ability to fulfill its development. This could lead to a significant deterioration value of CAS Tokens.

Limitation of Liability

aCASA, as well as its officers, directors, agents, joint ventures, employees, suppliers and advisors and anyone on its behalf, assumes no liability or responsibility for any loss raised from the Token Sale or acquisition of CAS Token, arising out of or related to the use of the aCASA platform or any technical, interruption or malfunction of the aCASA platform. The limitation of liability set out above shall not be applicable in the event that aCASA, or a aCASA employee, has caused the damage by intentional misconduct or by gross negligence. Severability if any of the provisions of the T&C or of the Agreement are deemed to be invalid, void or unenforceable, the remaining provisions shall continue in full force and effect.

Representation and Warranties

By participating in the Token Sale and placing the offer to acquire CAS, the user agrees to the T&C and in particular, she/he represents and warrants that she/he:

- ✓ is authorized and has full power to acquire CAS Token according to the laws that apply in her/his jurisdiction of domicile;
- ✓ is not a citizen, resident or entity registered in of United States of America or People's Republic of China, ("Restricted Person") nor is acquiring CAS Token or signing on behalf of a Restricted Person;
- ✓ is familiar with all related regulations in the specific jurisdiction in which she/he is based and that acquiring cryptographic tokens in that jurisdiction is not prohibited, restricted or subject to additional conditions of any kind;
- ✓ is not buying CAS token with speculative investment;
- ✓ lives in a jurisdiction which allows aCASA to sell the CAS Token through a crowd sale without requiring any local authorization;
- ✓ does not acquire CAS Token in a jurisdiction which is qualifying token issued through a crowd sale as securities;
- ✓ will not use the Token Sale for any illegal activity, including but not limited to money laundering and the financing of terrorism;
- ✓ is solely responsible for determining whether the acquisition of CAS Token is appropriate for her/him;
- ✓ is acquiring CAS Token exclusively for use of the aCASA platform;
- ✓ understands the risks associated with the Token Sale (incl. the risks related to the non-development of aCASA platform and operations);
- ✓ understands the use of cryptocurrencies and its associated risks;
- ✓ And acknowledges and accepts that the CAS Token crowdsale is taking place within a legal environment that is still under development.

Intellectual Property Rights

To the extent that copyright trademark or any other intellectual property rights exist in the aCASA platform, such as software, know-how, analysis, or programs, those existing and future copyrights and other intellectual and industrial rights (hereinafter 'IP Rights') belong solely to aCASA and its affiliated companies and you as an owner of CAS or user of aCASA platform do not and will not have any related rights in such IP Rights.

Applicable Law and Jurisdiction

The T&C, use of the platform and acquisition of CAS Token through Token Sale or otherwise are subject to and governed by Singapore Law.

The user and aCASA agree to seek an amicable settlement prior to bringing any legal action. All disputes arising from or under these T&C shall be resolved by arbitration in accordance with the Singapore's Rules of International Arbitration in force on the date when the Notice of Arbitration is submitted in accordance with these Rules.

The arbitration panel shall consist of one arbitrator only. The seat of the arbitration shall be Singapore. The arbitration proceedings shall be conducted in English.