

# **Auxilium (AUX) the Innovative Philanthropic Platform and Cryptocurrency**

*Auxilium is a product of philanthropic cryptocurrency company Auxilium Global.*

Auxilium Global Team

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**Abstract.** Cryptocurrencies have made strides in using blockchain technology to provide monetary alternatives to financial and government institutions that have lost public faith in recent years. However, there is still room to improve the technological and social advantages that cryptocurrencies give users over government issued currencies. Auxilium (ticker: AUX) offers many of these advantages by creating a superior user experience while using blockchain technology to support philanthropic causes around the world, thus building public faith in the social good of digital currency systems. Auxilium is the coin and platform of philanthropic cryptocurrency company Auxilium Global. Auxilium's POA is more secure, faster, fairer, and more cost-effective, environmentally friendly, and user-friendly than most POW and POS cryptocurrencies. With the AID platform, AUX holders can receive up to 8% interest (6.72% holder, 0.64% charity and 0.64% research and development) per annum without the need for mining or staking. Further, Auxilium is a platform that offers smart contracts, decentralised applications (dapp) and token creation. In addition to boasting many technological advantages to facilitate digital payments, a core tenant of Auxilium is to use blockchain technology to contribute to solving global problems, reducing inequality, supporting fair trade and other philanthropic causes. Users can create utility tokens to fund any social cause they choose, and Auxilium Global uses capital gains to fund philanthropic work globally—from planting trees to reduce greenhouse gases, to piloting food security programs in developing countries, to funding breast cancer research.

## 1. Introduction

The rise in cryptocurrencies is closely related to a growing distrust in countries around the world of government and banking institutions (Hind, 2011). Of course, these industries are not unique in being susceptible to losing public trust. Not-for-profits, charities and many NGOs rely on public trust to operate and do social good, and this trust is vulnerable to scandals, fund mismanagement, data breaches, and more, all of which can undermine public trust in the charitable sector and harm those causes that the sector represents.

In an effort to bolster trust in the charitable sector, the Charities Aid Foundation (CAF) developed the Future World Giving program whose recommendations, if implemented by governments, could future proof the growth of charitable giving and provide a healthy environment for civil society (CAF, 2017). The CAF's program identifies a need to ensure that not-for-profit organisations are regulated in a fair, consistent, and open way. In a perfect world it should be easy for people to give and to have incentives to give, which would better civil society as a whole. At the same time, the public needs to have confidence that the funds they give to charitable work are well-governed and transparent. It is our belief that cryptocurrencies should be part of solutions to strengthen philanthropy and civil society around the world.

Considering it is still early days in the cryptocurrency market, and the uptake in popularity is growing among companies, banks, governments, and the public, there is still much to be won technologically and socio-economically by creating a cryptocurrency with the ability to contribute to solving social problems. The philanthropic cryptocurrency company Auxilium Global launched the coin and platform Auxilium (ticker: AUX) in June 2018 with the intention of using blockchain technology in conjunction with existing means, to help as many people and animals as is possible. To provide a solution with many advantages over traditional Proof of Work (PoW) and Proof of Stake (PoS) cryptocurrencies, the team behind Auxilium has created a combined offer based on Proof of Authority (PoA) blockchain and Auxilium Interest Distribution (AID) Platform. This paper first sheds light on current challenges holding existing currencies back in the cryptocurrency market, then provides outcomes of philanthropy market analyses, and then provides an in-depth review of the technological engineering of Auxilium. Furthermore, we explain what makes the solutions to these challenges possible by referencing real-world cases. Finally, we discuss the social and economic potential offered by future improvements to the AUX cryptocurrency.

## 2. Existing challenges within cryptocurrency

### 2.1. *Security – 51% attack vulnerability*

While blockchains are usually considered safe from a perspective of data immutability, they are still complex, decentralized software and as such have vulnerabilities. They are susceptible to different types of attacks against these vulnerabilities, some theoretical and some real. The most worrisome at this point is the 51% attack. A 51% attack refers to an attack on a blockchain by a group of miners controlling more than 50% of the network's mining hashrate or computing power. Traditionally, blockchains with the Proof of Work consensus—which includes the majority of cryptocurrencies (565 PoW, 406 PoS and 1203 tokens, mostly PoW) (Cryptoslate, 2018)—are the most dependent on external hashing power and, thus, most vulnerable to a 51% attack. This is especially true when the coin or token has a lower market cap or relatively small user base. In May of 2018, Bitcoin Gold, at the time the 26th-largest cryptocurrency, suffered a 51% attack. The malicious actor(s) controlled a vast amount of Bitcoin Gold's hash power, such that even while Bitcoin Gold repeatedly attempted to raise the exchange thresholds, the attackers could double-spend for several days, eventually stealing more than 18 million USD worth of Bitcoin Gold. Investors lost their hard-earned money because decentralisation came before security.

### 2.2. *Scalability, speed and transaction-costs*

While only a small amount of the world's population is involved in cryptocurrency, there are already issues with scalability, speed and transaction costs. In order to process and commit transactions, blockchain technology requires the creation of new blocks. There are different approaches to decide on block production. For example, PoW blockchains rely on users to create blocks by adding computing power to solve puzzles. If a puzzle is solved by the computer, a user creates a new block and receives a reward. But as demand and the difficulty of the puzzles increases over time, there are not enough blocks created to send out everyone's transactions immediately, which results in slower transactions. One can speed up the process by paying a higher transaction fee. This is what happens with transactions in the Bitcoin network. It can sometimes take days for a low-fee transaction to arrive, or cost more than a bank would charge for users who pay extra for a more speedy transaction.

### *2.3. Unfair cryptocurrency reward systems*

Traditionally, cryptocurrencies support the idea of a fairer financial system that gives back control to people over their own assets. However, nearly all cryptocurrencies rely on mining (Proof of Work) or staking (Proof of Stake) in order to create new blocks on the blockchain, and the barrier to entry for both is high. Mining and staking offer rewards for active users, such as increasing their holdings of a certain coin or token, but in order to participate in either, people need costly hardware, programming skills, capital to purchase enough currency to reap the rewards from staking, and the opportunity to run software 24/7. Even those who check all the requirements for mining and/or staking still must compete against larger players, making the odds of earning rewards much smaller for individuals.

### *2.4. Maximum supply and hyperinflation*

Similar to fiat currencies, the lack of a maximum supply still poses a problem for some cryptocurrencies. Some cryptocurrencies have learned to set a maximum supply to ensure the supply is not infinite and open to hyperinflation. Even so, there is a lack of transparency about the exact amounts of circulating, total, and maximum supply. Further, in theory once a currency reaches maximum supply, keeping up the blockchain and network would not be sustainable due to the absence of (block) rewards.

### *2.5. Environmental impact*

Mining blocks for Bitcoin alone uses as much energy as it takes to power Switzerland for a year. Consuming an estimated 45.5 TWh a year, Bitcoin mining costs 2.27 billion USD electricity a year (Digiconomist, 2018). However, the majority of cryptocurrencies that exist today are either community driven or driven by small teams of individuals with no company backing and no formal structure in place to allow for directed and unified efforts to minimise the currency's environmental impact. While it is true many of these cryptocurrencies do offer improvements when compared with existing institutions such as less centralized governance, lower costs, more efficiency, more transparency and smart contracts, the overwhelming majority of these currencies still rely on Proof of Work and Proof of Stake.

Some cryptocurrencies, like Ethereum, are planning to transition away from PoW to the more environmentally friendly PoS, but most cryptocurrencies do not show serious intentions to decrease their carbon footprint any time soon. Other cryptocurrencies claim to be environmentally friendly by using either the POS consensus or a POW/POS hybrid but forget

to mention that both consume the power of a user's pc to keep the blockchain running and rewarding users for keeping the network up. Millions of people leaving their pc's on 24/7 or setting up networks of computers with high energy usage consumes immense amounts of natural resources.

### *2.6. Real world value*

Most cryptocurrencies and cryptocurrency companies focus on delivering fast, low-fee and transparent financial transactions. Others focus on privacy which criminals have exploited to launder money (see for example Tom Wilson's article in our references). There is nothing wrong with either service, but these features are still far from solving real world problems and restoring faith in government institutions and the global monetary system. With the use of blockchain technology and the proper use of smart contracts, Dapp creation and tokenization, real world problems could be solved and the faith in the global monetary system restored by helping small operators and producers regain control of their businesses and ensure they are paid fairly.

## 3. Market analysis

According to a UBS report in partnership with the Harvard Kennedy School's Hauser Institute for Civil Society (see references) global philanthropy is flourishing with more than 260 thousand philanthropic foundations across 39 countries adding up to 1.5 trillion USD in assets. To put that in perspective, it is more than three times the growth domestic product of Sweden and five times the present total valuation of the world's cryptocurrency market at roughly 300 billion USD (based on data from Coinmarketcap.com on the 6<sup>th</sup> August 2019).

### *3.1. Philanthropic market is fragmented*

While many countries and cultures have long traditions of philanthropic giving nearly three quarters (72%) of identified foundations were established in the last 25 years. Informal collaboration is widespread, but there are only few examples of strong collaborations over an extended time horizon. The philanthropic market can be characterised as fragmented. The USB report suggests philanthropists are best placed to encourage more strategic approaches, facilitate collaboration, serve as role models for others, and, in sum, have a greater impact on the economic and social challenges being addressed.

### 3.2. Billion USD foundations

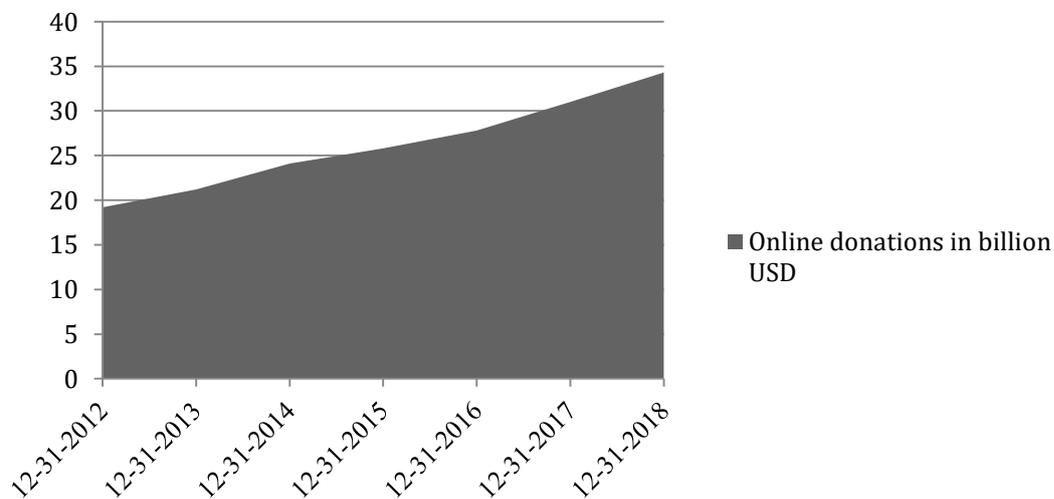
The Bill & Melinda Gates Foundation is known to be one of the world's largest non-blockchain funds worth around 40 billion USD. It is difficult to point out the largest player in the philanthropic blockchain sector. However a good example is the number one ranked cryptocurrency exchange, Binance. Binance started their blockchain charity foundation raising roughly 5.5 million USD worth of Bitcoin to date (according to their website <https://www.binance.charity/>). Another example is AIDcoin which is an ERC-20 token on the Ethereum blockchain with a small community and marketcap of approximately 550 thousand USD (according to Coinmarketcap on the 6<sup>th</sup> of August 2019). Small shares compared to the current cryptocurrency market of 300 billion USD and especially compared to the total philanthropy market of 1.5 trillion USD.

### 3.3. Steady growth of online donations

In the United States (US), the number one country when it comes to donation totals, online giving grew 12.1% in 2017 and 10.8% in 2018, and has been growing consistently since measured in 2012 (Nonprofitsource.com). See figure 1 for the growth in online giving from 2012 -2018 in the US. According the same source the majority (54%) of donors in the United States prefer to give online via a credit or debit card. Others prefer direct mail or cash (22%), bank/wire transfers (10%), Paypal (9%), a mobile app/wallet (4%) or text message (1%). Cryptocurrency payments are still less popular than text messages. See figure 2 for a representation of the distribution of giving by payment method.

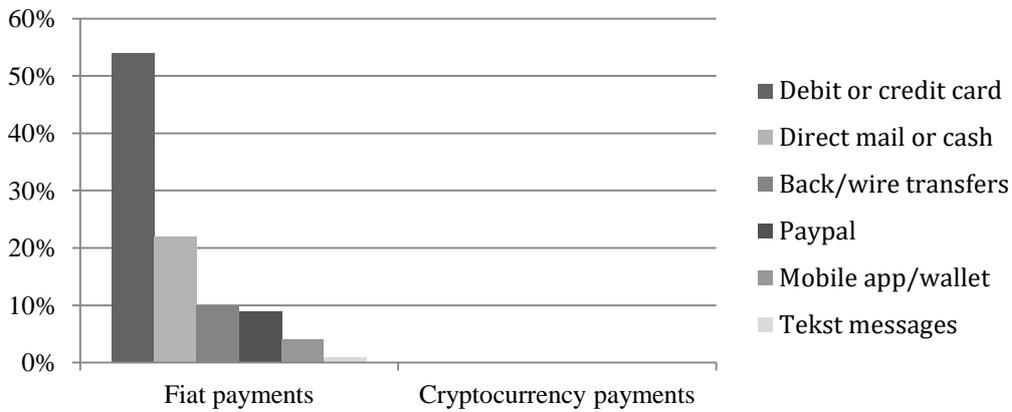
**Figure 1**

*Growth in online giving from 2012 -2018 in the United States*



**Figure 2**

*Distribution of giving by payment method.*

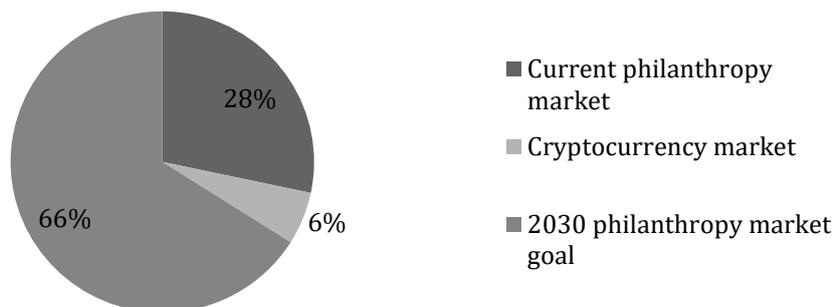


*3.4. 5 trillion USD needed to achieve UN Sustainable Development Goals*

While the figures and findings from the global philanthropy report by UBS are positive, the sector is still not large-scale enough to counter the world’s ills in 2019. With the United Nations (UN) estimating that \$5 trillion is needed to achieve its Sustainable Development Goals and solve the major problems of humanity by 2030, a \$3.5 trillion gap needs to be filled (see figure 3 for a representation of the philanthropy market shortage). The 17 Sustainable Development Goals (SDGs) is a plan – adopted by all UN Member States in 2015 - to build a better world for people and our planet by 2030. They recognize that ending poverty must go hand-in-hand with strategies that build economic growth and address a range of social needs including education, health, equality and job opportunities, while tackling climate change and working to preserve our ocean and forests.

**Figure 3**

*Current philanthropy market size and goal and cryptocurrency market size*



### *3.5. Potential of the cryptocurrency market*

The world's cryptocurrency market was roughly 800 billion USD at its all-time-high in January 2018 and has decreased since to the current total of roughly 300 billion USD (according to Coinmarketcap on the 6<sup>th</sup> of August 2019). Still the same market is up by 4185% over the past 3 years and 8 months. This highly volatile market trend is commonly compared to the early dot-com market. Also during the dot-com era new technologies were introduced resulting in high price volatility with price explosions in the first years. When the market matured the technology market got less volatile and easier to predict. Currently banks and governments are actively researching blockchain technology and developing their own blockchain based products. It is fair and arguably realistic to state blockchain technology in the future will play a role in our everyday lives. What is not certain, however, is how many of today's cryptocurrency companies will benefit from this shift from traditional structures to blockchain.

### *3.6. Opportunities for Auxilium Global*

Auxilium seeks not only to further connect sectors and organisations within the global philanthropy sphere with its unique solutions, functionality, blockchain and network but also to find and implement new and innovative ways to contribute to the overall cause, globally. It's fair to state there is an abundance of opportunities within the philanthropy market for a philanthropic cryptocurrency company like Auxilium Global, especially considering the technological and socio-economic solutions offered by AUX cryptocurrency for the challenges current philanthropic foundations and cryptocurrency companies are facing.

#### 4. Auxilium's Network and Blockchain

Auxilium has created its own blockchain network with full independence from any other cryptocurrency and offers a currency that addresses the problems identified above. This cryptocurrency uses the official client of Ethereum blockchain as a software foundation of its network and builds its solution on top of it.

Auxilium is one of only a handful philanthropic cryptocurrencies that also provides a more secure and environmentally friendly transaction-confirmation process, distributes interest to coin-holders, and includes smart contract functionality. The sections below contain information about the coin distribution and introduce concepts of decentralized consensus and Proof of Authority consensus to understand the underlying construction that sets Auxilium apart from other cryptocurrencies, then we go into the design of Auxilium in greater detail.

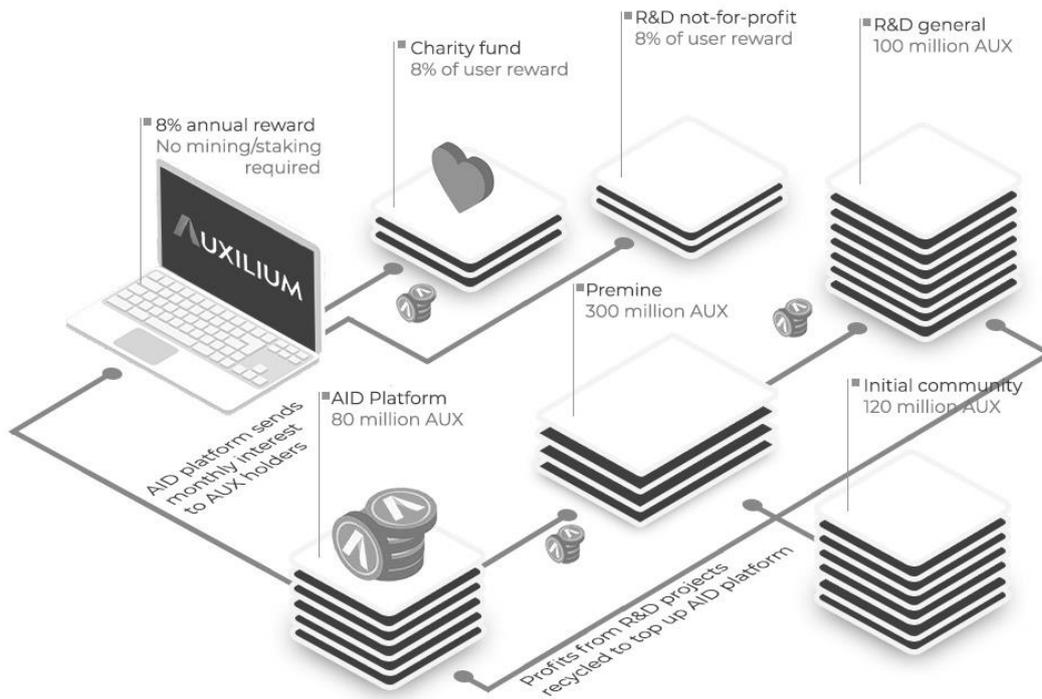
##### *4.1. Coin distribution*

Unlike many projects, Auxilium Global did not conduct an Initial Coin Offering (ICO) to generate initial funding and community. The community has been built mostly through airdrops, referrals and word of mouth. Participants of airdrops and referrals earned AUX by performing simple tasks like sharing content on social media, inviting friends and/or creating content.

Due to the fact that no new coins are created with a Proof of Authority consensus through mining or staking, all Auxilium coins were pre-mined. Premining is the creation of coins up front, instead of creating the coins through block rewards. Initially the total supply counted 500,000,000 (500 million) Auxilium. Later analyses suggested a total supply of 300,000,000 (300 million) coins would be a better fit which resulted in “burning” 200,000,000 (200 million) coins. The term burning refers to sending coins to a special address that cannot be used, thus, deducting these coins from the total supply. The 300 million remaining premined coins were split up into three addresses: 1) initial community and promotions, 2) AID platform, and 3) research and development. The general flow of how Auxilium cryptocurrency is setup, including interest distribution and recycling profits, can be seen in figure 4.

**Figure 4**

*Schema of AUX creation and “AUX-flow”.*



#### 4.2. Decentralized consensus

In general, the characteristics of a blockchain are heavily dependent on the specifics of implementation. One of the major subsystems of blockchain software that influences the way it operates is a consensus engine. As blockchain is a decentralized system first and foremost, consensus is a mechanism that ensures all participants of the system reach agreement about the state of the system (Wattenhofer, 2019). Often consensus is called a blockchain protocol, especially when it defines a specific distributed algorithm. Some protocols allow agreement at any given time; some guarantee only eventual consistency.

Consensus protocol is what allows blockchain to be a decentralized system and leads to one of the main benefits of blockchain technology: it's very hard to cheat. In practice consensus protocol means that everyone on the network has or may have a copy of the blockchain on their computer, and each time a new block is formed and a new transaction occurs, node-participants go through a process called consensus where they agree or disagree whether the transaction is accurate. If they agree, the transaction is considered valid. If they disagree, the transaction is considered invalid and is treated as if it never occurred.

There are different approaches to achieve consensus. Proof of Work (PoW) is used by Bitcoin and it is currently the most widely accepted and tested consensus in the field. The computers of each coin-holder are constantly “mining” or solving math equations to unlock new blocks, which is necessary to sustain the blockchain. In return, coin-holders receive rewards. Proof of Work is very hardware intensive. Since PoW consensus is vulnerable to 51% attacks, an individual with control over 51% of the computers mining for Bitcoin can cheat the system.

Proof of Stake (PoS) is the second most well-known form of consensus, though it has not yet been fully implemented in public blockchain network. PoS works by allowing coin-holders to stake their coins as collateral. The more collateral you stake, the more likely you are to uncover new blocks and earn rewards. Although it uses less computing power than Proof of Work, coin-holders still need to leave their computers on while staking their coins.

Currently, there are many efforts to create a delegated Proof of Stake (dPoS) consensus. Since dPoS has a more centralized model than 'classic' PoS, it simplifies issues encountered in PoS implementation to a certain extent through voting and delegation of the right to create blocks.

To complete this brief overview on consensus, it should also be mentioned that the recent rise of other types of decentralized systems that manage to achieve consensus without blocks cannot be classified as blockchains. Such systems fall into Directed Acyclic Graph (DAG) based systems. Some of the examples of such systems can be looked up in (IOTA-Next Generation Block Chain, 2018 and Snowflake to Avalanche: A Novel Metastable Consensus Protocol Family for Cryptocurrencies, 2018)

#### *4.3. Proof of Authority consensus*

Proof of Authority (PoA) consensus is used by Auxilium cryptocurrency. Theoretically, PoA is a more centralized approach because it allows only certain participants with authority to create blocks and include transactions into them. Depending on how “authority” is defined, different blockchain protocols can be implemented.

The PoA protocol used for Auxilium cryptocurrency is defined by the Ethereum developer community as a Clique protocol (Ethereum, 2017) and has been tested on Ethereum’s Rinkeby testnet. According to this protocol, only specially designated 'authority' nodes can create blocks. These authority nodes are also called signers in Clique protocol. At any point in time, any participant of the network can look up the identity (addresses) of

signers. The right to create blocks is given to each signer in turn. Although the addition of blocks can occur only when more than half of signers agree on a new block or, in other words, agree on a state of the system. If a number of signers do not agree on a block, that block is discarded and a new one must be created. Running the entire Auxilium network uses the same energy as running one stovetop hotplate.

Because there is no special algorithmic procedure or competition involved in block creation, the time period between blocks is rigidly set and is defined as one of the main characteristics of the system at its launch. The Auxilium blockchain creates new blocks every 10 seconds and because there are only a small number of sealing nodes responsible for creating new blocks, network latency is not an issue with Auxilium, unlike cryptocurrencies using PoW and PoS to create new blocks.

Each 30 thousand blocks (or, epoch) the state of blockchain is preserved as a stateless checkpoint that cannot be rolled back. This agreement implies the possibility of synchronizing with the blockchain only from the last epoch transition without storing the whole history of the blockchain and still remaining valid. Obviously, this instrument must be used with care to avoid loss of information and funds.

The protocol also defines a voting procedure that allows signers of the network to change identity of signer nodes. At any moment, signers of the network can vote for changes in the signers list. Once the proposed change has 50% + 1 votes of signers, it takes effect immediately. The voting process is reset with each epoch. Currently, Auxilium cryptocurrency is not utilizing the voting process, but that may change in the future.

Ethereum's Clique protocol does not define rewards for blocks or for transactions, but Auxilium Global decided to remain true to the Proof of Stake philosophy and introduced its own rewards system into Auxilium cryptocurrency.

#### *4.4. Auxilium Interest Distribution (AID) platform*

An incentive for helping to maintain and secure traditional cryptocurrency networks through mining or staking comes in the form of a reward. Proof of Authority does not pay rewards however, so Auxilium Global, the team behind Auxilium, built the Auxilium Interest Distribution (AID) platform. The AID platform distributes up to 8% interest per annum to holders holding coins in one or more personal addresses as an incentive to use and help grow our network and community.

From that 8%, coin-holders give back 0.64% to the Auxilium charity fund to support existing philanthropic projects by others and 0.64% to Auxilium research and development to

create and build new initiatives owned by Auxilium Global. There is no need to leave a computer on in order to receive this fixed interest, simply holding coins in a personal wallet address (i.e. wallet in your control like a desktop wallet, not an exchange) is enough to earn the reward.

Interest distribution (AID) comes from a pre-mine account of 80 million AUX coins which have been included in the total supply cap (the cap makes hyperinflation impossible) of 300 million coins. Interest distribution begins on the 1<sup>st</sup> of each month and the calculation is based on the amount of AUX coins held in a user's personal wallet across the month (see example table 1.) Auxilium's goal is to continue distributing interest as long as possible through recycling profits. Since Auxilium cryptocurrency was defined with both rewardless PoA and AID platform, it has certain benefits in relation to popular cryptocurrencies (table 2) and a direct competitor (table 3).

**Table 1**

*Monthly interest calculated before distributed first of the next month.*

Date	Holdings total
1-10th June	0 AUX
11-25th June	10000 AUX
26-30th June	5000 AUX
Average June	5833.33 AUX
1 <sup>st</sup> July distributed interest (0.56%)	32.66 AUX
Charity (0.053%)	3.09 AUX
Research and development (0.053%)	3.09 AUX

**Table 2**

*Advantages Auxilium PoA over traditional PoS and PoW cryptocurrencies.*

	Auxilium PoA	PoS	PoW
Risk of 51% attack / network takeover on low-hash-rate currency	Low	Medium	High
Creative implementation	Unique	Common	Common
Environmental Impact	Low	Medium	High
User processing power required for	No	Yes	Yes

earning reward			
Skill required to use and earn	Little	Moderate	Advanced
Equality / evenly weighted interest distribution	Yes	No	No
User PC can be off and still earn interest	Yes	No/Hosted	No/Hosted

**Table 3**

*Technological advantages Auxilium over AIDcoin and similar philanthropic ERC-20 tokens*

	Auxilium	AIDcoin
Risk of 51% attack / network takeover on low-hash-rate currency	Low	Medium
Creative implementation	Unique	Common
Environmental Impact	Low	Medium
User processing power required for earning reward	No	Yes
Skill required to use and earn	Little	Moderate
Equality / evenly weighted interest distribution	Yes	No
User PC can be off and still earn interest	Yes	No/Hosted
Ability to create and maintain own token economy	Yes	No

#### 4.5. Smart contract, Dapp and token creation

One of the reasons we based our blockchain on Ethereum's code base was to avoid limitations of being able to store only cryptocurrency transaction information. Our blockchain can also store smart contracts, which are tailored agreements that help ensure fair interactions between parties without a middleman. Smart contracts can help small operators and producers take control of their business and ensure they are paid fairly. The contract is programmed with

specific parameters, and money is only sent once the counterparty has fulfilled their part of the deal.

Smart contracts can also be used in fair trade applications. A coffee grower in Ethiopia could create a smart contract with a roaster in Australia to send their beans directly overseas, cutting out distributors who might take advantage of the grower. Similarly, a collective of garment makers in Bangladesh could “smart contract” with an English designer to directly provide textiles and clothing for a new collection.

Since smart token implementation is defined by Ethereum client used as a basis, its exact characteristics and properties are the same as those of Ethereum blockchain (<https://www.ethereum.org/developers/#smart-contract-languages>) and can be used in a similar way on Auxilium network.

Therefore, it is possible to create Dapps (decentralized applications) and tokens (new cryptocurrencies utilising the Auxilium platform) on Auxilium network. As we grow, Auxilium will create a (more) developer-friendly environment to stimulate implementation of smart contracts to help establish fair terms between parties all over the world.

#### *4.6. Auxilium wallets*

Auxilium, as a coin with an independent blockchain and network (not an ERC-20 token), has its own desktop wallets for the Windows, MacOS and Linux operating systems which can be downloaded via <https://auxilium.global/wallets/>. This wallet allows users to safely store their AUX, view and send AUX with multiple additional options, create and interact with smart contracts and tokens on the Auxilium blockchain, check the transaction (tx) status with blockchain explorer integration, broadcast transactions and sign and verify messages. A beginner’s guide is available on the website’s wallet download page. Addresses created within these wallets are eligible for the AID distribution, thus the 8% annual reward. Additionally this wallet offers the option to create a paper wallet, allowing offline storage of AUX adding a layer of security.

To enable greater accessibility and flexibility to all cryptocurrency holders and to cover mobile and hardware wallets, Auxilium Global has also put effort into integrations and listings with third-party wallets. The most recent info about current integrations and listings can be found at website (<https://auxilium.global/wallets/>).

## 5. Auxilium and real-world use cases

Besides the advantages of AUX cryptocurrency as digital payment with unique AID platform, more complex real-world use cases also evolve around smart contracts, decentralized applications and tokenization. The roadmap available on the website of Auxilium Global (<https://auxilium.global/roadmap/>) shows the future goals of the cryptocurrency company. The use cases page shows more information on specific use cases (<https://auxilium.global/use-cases/>).

### 5.1. Estimating annual donation funds

The amount in US Dollar that can be donated and/or invested in philanthropic work will depend on the fluctuating market price of AUX. Realistically – comparing AUX to other cryptocurrencies based on fundamentals, supply and project maturity – AUX should be able to reach at least 1 US dollar<sup>1</sup> per AUX within the next couple of years based on Coinmarketcap.com data from the 2017 and 2018 markets. Based on this estimated valuation and a circulating supply of 100 million AUX, which could become a maximum of 300 million AUX, multiplying the available annual funds by three, 640 thousand US dollars could be available annually for charitable donations alone.

### 5.1. Development funds and expansion

The same amount would be directed to not-for-profit research and development. Over the long term, the not-for-profit research and development fund will be utilised to focus on supporting and developing not-for-profit projects. For example, partnering with the UN to work on the Sustainable Development Goals. The main research and development fund of 100 million AUX will drive mostly for-profit development with the goal to continuously create revenue that can also be re-directed towards not-for-profit and/or charitable causes. Launching a crowdfunding platform, education platform and review platform are the first of many use cases that will result in applying AUX cryptocurrency to more complex real-world use cases. Detailed platform functionality information will be available once the platforms are

<sup>1</sup> This valuation estimation is based on business and technological fundamentals. This should not be considered as financial advice and/or a motivation to buy AUX. The valuation of AUX depends on many factors, including dependent variables like listing on a major cryptocurrency exchange (i.e. potential trading volume and user base), which is not weighted into the equation. Always keep in mind there is no such thing as guaranteed profits when trading cryptocurrency. Trading cryptocurrency is high risk and you should always keep in mind you could lose the money you invest. Never invest (in cryptocurrency) with money you can't afford to lose.

publicly launched. We'll zoom in on the crowdfunding platform to give an idea how Auxilium's unique blockchain technology can be integrated.

### *5.1. Crowdfunding platform*

While Go Fund Me and other crowdfunding platforms support many people in need, these platforms are for-profit ventures. Auxilium wants to give people a true not-for-profit alternative. Auxilium's crowd-funding site will be not-for-profit, meaning the fees earned from users starting campaigns and supporters making pledges will go towards the Auxilium charity fund to support further philanthropic work. Philanthropic cryptocurrency company Auxilium will vet all crowdfunding initiatives to ensure all payments are 1) safe (i.e. the Auxilium PoA consensus makes AUX cryptocurrency the least vulnerable to 51% attacks), 2) transparent (i.e. donations are traceable at all times), and 3) fair (i.e. contracts will only be executed when both parties follow set agreements). Finally, smart contracts tackle redundancy and help to make donating a more cost-efficient and socially impactful process, maximizing benefits (i.e. lowering listing fees and increasing margins) for the crowdfunding party. The platform will allow individuals to create an account, pay with AUX, receive invoices and receipts (for instance for tax deduction), interact with the founders of the philanthropic projects, and more.

## 6. Conclusion

Auxilium's technology addresses many of the challenges in this new currency market and its technologies. AUX is less vulnerable to 51% attacks; the Auxilium blockchain and network is more scalable, environmentally friendly, offers fast and low-fee transactions, promotes equality with the fixed interest percentage of the AID Platform, and is easier to use than many traditional cryptocurrencies. In addition to these technological improvements, Auxilium strives to have a positive socio-economic impact by deploying use cases which the current cryptocurrency market has so far not seriously explored.

Auxilium's unique PoA consensus already has the most environmentally friendly network and blockchain. Aiming for a minimal carbon footprint, Auxilium has contributed to environmental sustainability by planting trees in India, Indonesia, Vietnam, Tanzania, Ghana, and elsewhere. The AID platform distributes a fixed amount to a charity blockchain address and a blockchain address for research and development to donate and invest in philanthropic work. Auxilium will invest these dollars in philanthropic projects and collaborate with existing not-for-profit organizations. Also, AUX's unique AID platform lowers the barrier to entry for the average user in developed and developing nations, offering a more equitably cryptocurrency platform.

Finally, launching a crowdfunding platform, education platform, and review platform are the first use cases that will result in utility of AUX cryptocurrency in real-world use cases. These cases will apply to both profit and not-for-profit projects, and the continued flow of (recycled) interest and charity donations will make Auxilium a sustainable eco-system that uses blockchain technology to contribute to solving global problems, reducing inequality, supporting fair trade and other philanthropic causes. In line with the recommendations of the Charities Aid Foundation, and goals of the United Nations, Auxilium will contribute to strengthening philanthropic giving globally.

## 7. References

- Bitcoin. (2008). *Bitcoin: A Peer-to-Peer Electronic Cash System*. Retrieved November 18, 2018 from <https://bitcoin.org/bitcoin.pdf>
- Charities Aid Foundation (2017). CAF World Giving Index 2017. Retrieved November 18, 2018 from [https://www.cafonline.org/docs/default-source/about-us-publications/cafworldgivingindex2017\\_2167a\\_web\\_210917.pdf](https://www.cafonline.org/docs/default-source/about-us-publications/cafworldgivingindex2017_2167a_web_210917.pdf)
- Central Intelligence Agency (2017). *The World Factbook*. Retrieved November 18, 2018 from <https://www.cia.gov>
- CNBC. (2018). *Why Just 8 Percent of Americans are Invested in Cryptocurrencies*. Retrieved November 18, 2018 from <https://www.cnbc.com/2018/03/16/why-just-8-percent-of-americans-are-invested-in-cryptocurrencies-.html>
- Divja, M. & Nagaveni, B. (2018). *IOTA-Next Generation Block Chain*. Retrieved December 31, 2018 from <https://ijecs.in/index.php/ijecs/article/view/4007>
- Ethereum. (2014). *A Next-Generation Smart Contract and Decentralized Application Platform*. Retrieved November 18, 2018 from <https://github.com/ethereum/wiki/wiki/White-Paper>
- Ethereum (2017). *Clique PoA protocol & Rinkeby PoA testnet*. Retrieved December 31, 2018 from <https://github.com/ethereum/EIPs/issues/225>
- Government of the United Kingdom. (2018). *Public Trust in Charities has Fallen Reports Charity Commission*. Retrieved November 18, 2018 from <https://www.gov.uk/government/news/public-trust-in-charities-has-fallen-reports-charity-commission>
- Hanke, S. & Krus, N. (2012). *The Handbook of Major Events in Economic History*. London, Routledge Publishing.
- Hind, A. (2011). New Development: Increasing Public Trust and Confidence in Charities: On the Side of the Angels. *Public Money & Management*. (31) 201-205. doi: <https://doi.org/10.1080/09540962.2011.573232>

- Johnson, P. (2018). *Global Philanthropy Report: Perspectives on the global foundation sector*. Hauser Institute for Civil Society at Harvard University.
- Kiayias, A., Russel, A., David, B. & Oliynykov, R. (2017). *Ouroboros: A Provably Secure Proof-of-Stake Blockchain Protocol*. Retrieved December 31, 2018 from <https://eprint.iacr.org/2016/889.pdf>
- Philanthropy. (2018). *1 in 3 Americans Lack Faith*. Retrieved November 18, 2018 from <https://www.philanthropy.com/article/1-in-3-Americans-Lacks-Faith/233613>
- Team Rocket. (2018). *Snowflake to Avalanche: A Novel Metastable Consensus Protocol Family for Cryptocurrencies*. Retrieved December 31, 2018 from <https://ipfs.io/ipfs/QmUy4jh5mGNZvLkjies1RWM4YuvJh5o2FYopNPVYwrRVGV>
- The Bureau of the Fiscal Service (2018). *Monthly Statement of the Public Debt of the United Stated*. Retrieved October 30, 2018 from <https://www.treasurydirect.gov>
- Wattenhofer, R. (2016). *The Science of the Blockchain*. Create Space Independent Publishing Platform.
- Wilson, Tom. “Explainer: ‘Privacy coin’ Monero offers near total anonymity.” Reuters. Retrieved August 1, 2019. <https://www.reuters.com/article/us-crypto-currencies-altcoins-explainer/explainer-privacy-coin-monero-offers-near-total-anonymity-idUSKCN1SL0F0>

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