

CHIA NETWORK INC.



Business Whitepaper

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Introduction

Many view Bitcoin and its underlying blockchain as the leading edge of an irreversible, transformative evolution of money, commerce, finance, and the way people around the world interact with their assets and resources.

Bitcoin and its effect on finance is polarizing, hailed by some as the future of finance, while whimsically described by others as “magic internet money.” We believe the common public cryptocurrency discourse often trends myopic as many underestimate the transformative impact that programmable digital money will have. Blockchain is about more than just money. The next generation of cryptocurrencies and blockchains applied to money, and money-adjacent use cases, will transform finance, safety, security, and, ultimately, the entire concept of trust.

Democratized banking, and offering the opportunity for an individual to be their own brokerage, through well-architected digital money is faster, less expensive, and safer. We believe that Chia, a new digital money and blockchain with radically differentiated capabilities and inherently better security than other digital currencies, will deliver the real world impact of “magic internet money.”

As a starting principle, digital money should be easier to use than cash and harder to steal. Properly formulated, the security of your digital money, identity, and assets should not depend upon a team of experts to be secure. Losing keys should be easy to recover from. Everyone, from individuals on their home computers to financial institutions, should be able to participate in the validation of transactions. Anyone should be able to farm - our version of mining - instead of a few large, powerful entities.

Assets, titles, commodities, debt, or equity should be issuable by anyone in a way that is interoperable, compliant with applicable laws, and simple to ascertain who you may be trusting. These assets should be tradeable 24 hours a day, 365 days a year on a spectrum from fully decentralized trustless peer-to-peer exchange to centralized exchanges with multiple trust options in between.

We believe that the blockchain that will be the winner in financial infrastructure will be the one that is **sustainable**, **secure**, and **compliant** while being open sourced and easier to use.



A Brief History: From Bitcoin to Chia

Like many new technologies, the impact of digital currencies and blockchains is overestimated in the near term and underestimated over the long term. Bitcoin has, to date, led the way just as ARPANET, TCP/IP, and early Internet Service Providers (ISPs) paved the way to the internet, the Web, and ultimately the “there’s an app for that” world in which we currently live.

The closer one studies the genesis of Bitcoin, the more subtle, powerful, and fascinating it becomes. Nakamoto consensus proved that a globally shared database can be trusted without trusting anyone. However, the Proof of Work method that the Bitcoin protocol uses included an assumption that unused CPU cycles are a vast excess commodity in millions of computers worldwide. This premise did not prove to be correct, but it was prescient in its search for a global excess commodity. Instead, specialized single-use hardware and access to cheap electricity has become far better at Proof of Work calculations than general purpose CPUs. And, all the while, consuming more power.

This development has weakened another core Bitcoin principle - decentralization - as the specialized “mining” hardware is increasingly owned and operated by just a few large entities in purpose-built large data centers located near inexpensive baseload electricity. Thus, there has been unanticipated centralization of what was intended to be a decentralized consensus network. This centralization lowers trust and raises difficult issues regarding electricity consumption, e-waste, carbon generation, and geopolitics.

Thirteen years after [Satoshi Nakamoto's whitepaper](#) was released, the world has learned much from the Bitcoin experiment. Research progress in cryptography has also advanced. At Chia, we have set out to harness this experience and stand on the shoulders of giants like Merkle, Rivest, Hellman, Finney, Wuille, Boneh and others to apply new cryptography, some of which we helped invent and refine, to create the next chapter of the journey that Bitcoin started.

We are doubling down on Bitcoin. We are adopting and helping Bitcoin adopt new technologies like [bech32m](#), [graftroot](#), and [taproot](#). Chia transaction rates and block sizes are effectively more than double Bitcoin’s, based simply on more modern engineering. Our coins use a refined version of Bitcoin’s unspent transaction outputs ([UTXO](#)) model that we call the [Coin model](#). Chia is the first new Nakamoto consensus since Bitcoin and utilizes many of Satoshi’s previously unarticulated insights like the fact that [natural log](#) governs [key blockchain constants](#) related to work difficulty resets. Our new Nakamoto consensus, Proof of Space and Time, is [vastly more energy efficient](#) than Proof of Work. In addition, from a security perspective, we have already become the most decentralized blockchain by node count ever.

We are creatively tackling the important challenges to the broad adoption of digital money and public blockchains globally; including a unique plan to leverage the corporate, and later public



company form, to build public buy-in, and more importantly trust, in this new internet of markets through transparency, control, and regulatory compliance.

We are committed to have governments, multilateral organizations, enterprises, and other entities reap the efficiencies and benefits of using Chia through our technological advancements and scaling global open source software support business, following in the footsteps of pioneers RedHat and MySQL.

We are equally focused on the ethos that “Cypherpunks write code.” We are already investing in and supporting developers of all shapes and sizes as they build on top of our base layer blockchain to create the next generation of applications. We consider this our barbell go-to-market strategy. We all need programmable digital money, from the largest entities, to the smallest individual developers and individuals, like you. Someday we all might buy coffee in San Francisco with chia, but for now we think banks, governments, and DeFi collectives will use it to build new financial technologies, solve cross-border payments, and invent a new future that doesn’t require trusting the layers of middlemen.

We explicitly aim to disintermediate [SWIFT](#), [DTCC](#), and services like Western Union. However, it would not surprise us if entities like these instead adopt our technologies to improve their offerings - just as record companies did when they finally adopted iTunes and Spotify.

Chia is designed to improve on Proof of Work based blockchains with a new Nakamoto consensus algorithm we call Proof of Space and Time. Instead of consuming massive amounts of electricity and wasteful single-purpose [ASIC](#) hardware to validate transactions, Proof of Space leverages the over-provisioned exabytes (EB) of disk space that already exist in the world today. We are extending average hard drive lifetimes by giving them a second life after the datacenter. In partnership with the storage industry we are moving the entire storage market to a circular economy of drive recycling - cutting back global e-waste beyond just our footprint.

We have observed many projects and enterprise initiatives that require an on-chain programming environment turned to Ethereum only to discover the technological limitations of Solidity and the Ethereum Virtual Machine (EVM), Ethereum’s smart contract language and programming environment. Poor design and security have made it virtually impossible for projects to adopt Ethereum to move money or investments in production or at scale. Other blockchains that have adopted Solidity and the EVM are unfortunately “bug for bug compatible” and suffer the same limitations and security issues. The next most likely alternatives, such as Ripple and Stellar, also have significant issues that force governments and banks to use “intranet” versions of blockchain software on an experimental basis. Intranet blockchains are private, permissioned, and have few benefits over a good old-fashioned database. They lose all of the positive network effects of an open, decentralized, and secure blockchain.

Most of the G20 nations have relatively functional banking and financial infrastructure. While we believe there are many opportunities for blockchain and cryptocurrency to enhance these largest markets, we have seen that the sense of urgency and greater understanding of the



power that a sustainable, secure, and compliant blockchain can bring are better understood outside of those markets. Non-OECD countries, and even some smaller [OECD](#) countries, as well as their citizens, will be the bulk of early adopters. Already, nearly [1 in 3 Nigerians](#) own cryptocurrency even though that country specifically limits its banks' interactions with cryptocurrency. Even in the United States, those who have traditionally had difficulty accessing banking [own cryptocurrencies at a higher rate](#). Cryptocurrency and blockchains are going to be adopted by those who need them the most and can experience the strongest initial benefits.

We believe that Decentralized Exchanges ([DEX](#)), Decentralized Finance ([DeFi](#)), financial institution asset tokenization and payments, government anti-fraud initiatives, Central Bank Digital Currency (CBDC) initiatives, and even personal cross border payments will work best on the Chia blockchain.

Artificial barriers between cash, stocks, municipal debt, corporate debt, futures, and digital money should fall. Such instruments should all be connected to one global market - managed for you by your smartphone - that trades all day, every day. This internet of markets will tie together traditional exchanges for commodities and equities to newer digital money exchanges and semi-centralized and fully decentralized markets and ultimately settle on-chain.

Buying stock should be as easy as pressing a button, and using Tesla stock to buy a Tesla vehicle or a cup of coffee should be just as simple. Arcane settlement practices should not stand in the way of your desire to trade any specific stock, bond, or futures contract.

You have the right to privately, safely, and securely hold your wealth, and hold it in a manner where you can mathematically predict inflation.

You should be able to securely buy assets and use markets that don't require you to trust anyone, built upon a framework of technology you can trust.

Chia is creating the internet of markets and green money for a digital world.

Market Overview

The Checkered Legacy Financial System

Global banks, currencies, and markets are routinely susceptible to external shocks, governmental mismanagement, and financial crises. The global financial system is balkanized, non-transparent, and relies upon outdated technology. Newer financial technologies are typically designed to work only within the jurisdiction of one country. Alternatively, international fintech solutions are often expensive and require complex coordination. Furthermore, incumbent banks and financial institutions are slow to change, slow to adopt new technologies, and face arbitrary regulatory and political restrictions.

In response to the rise of cryptocurrencies, [SWIFT](#) and others are starting to [modernize](#) some international transfers. Ironically, it often remains cheaper, faster, more traceable, and more time efficient to hand deliver cash to international destinations. Physical delivery of cash, however, has regulatory and security risks like capital controls on imports, capital reporting, limits on export, and theft.

We currently take for granted many outdated practices in our financial markets. US equities take [two days to settle](#) and can tie up significant capital, as Robinhood and traders of GameStop became keenly aware in early 2021. The 9:30 AM to 4 PM US Eastern Standard Time North American equity, debt, and commodities market hours exist as a pre-information age holdover. trade fr. Many markets like foreign exchange are only thinly traded and often simply in [Bloomberg Terminal chat rooms](#) which may not be in the market participants' [best interests](#). Even very similar unregistered securities trade in [fragmented markets](#) leading to less efficient trading.

Bitcoin launched during the turmoil caused by the 2008 global financial crisis. Satoshi Nakamoto included the London Times headline “Chancellor on brink of second bailout for banks” in both the Bitcoin genesis block and the [source code](#). Since the launch of Bitcoin, ongoing financial shocks continue to plague the world. Recent global dislocations include the threat of [decimation at Cyprus banks](#), [hyperinflation](#) in Venezuela, [tightening of capital controls](#) in China, fear of [bank account seizure](#) in Hong Kong, Lebanese [banks closing](#) to prevent bank runs, the [2019 hyperinflation](#) in Argentina, and the March 2020 COVID-19 induced stock market crash.

Beyond these external shocks, ongoing changes in the banking environment in the post 9/11 world have compelled countries to seek inefficient workarounds in order to conduct [legitimate domestic business](#) and to survive with [fewer correspondent banks](#).

These financial shocks have been [significant drivers](#) of Bitcoin’s price and adoption.

Decentralized Finance via Nakamoto Consensus

Satoshi Nakamoto invented a process known as Nakamoto consensus, which allows Bitcoin node operators all over the world to safely and collectively function as the “bank” for settling transactions even though none of the node operators can individually control the transactions. They are then rewarded with coins for their contribution to validating the network. This process is referred to as mining, and it ensures that no single entity owns or operates the network.

Because this infrastructure is mostly decentralized and not built on top of a traditional financial infrastructure, it exists globally on any internet-connected device, and is usable by anyone. Bitcoin has recently become a relatively liquid global currency, worth over [\\$700 billion U.S. dollars, with about \\$25 billion in trading volume](#) on most days. These very metrics have almost invariably increased since we wrote the previous sentence. This global, liquid, permission-less network has launched a new financial technology industry, building on top of blockchains instead of the existing, outmoded financial infrastructure.

After Bitcoin came Ethereum, a similar network in terms of architecture and energy inefficiency, but with the experimental Solidity smart contracting language which runs on the [EVM](#) to make applications ranging from fundraising tokens to decentralized exchanges and finance (DEX/DeFi), to [NFTs](#).

These two blockchain platforms have experienced growing pains. Proof of Work in Bitcoin utilizes approximately [123 terawatt-hours per year](#) as of December 2021, a controversial level of energy consumption comparable to the nation of Sweden or Norway. Bitcoin’s brand has also suffered from major attacks on large exchanges, and adoption concerns from business and governments related to its association with money laundering and early use in online drug markets. Further, Bitcoin script is limited, slow to develop, and generally requires significant changes in the Bitcoin protocol that can take years to be deployed. These limitations have hampered building superior custody and controls as well as smart contracting capabilities.

Ethereum shares Bitcoin’s reliance on Proof of Work mining with additional challenges and complexity. [Significant compromises of Solidity smart contracts](#) occur at a nearly [weekly cadence](#). The Solidity scripting language makes it simple to write financial software, but provides little capability to secure it. Ethereum introduced the novel fundraising technique known as an “ICO” (Initial Coin Offering) - where the fundraiser creates new tokens on the Ethereum network to sell for bitcoin and ether - offering degraded or even no regulatory compliance at all. More recently, decentralized financial applications often pitch a revolutionary change in financial technology but struggle with the same vulnerabilities due to Solidity’s poor security standards and the account/global [state](#) model used by Ethereum and Solidity.



Competitive Analysis

We believe that there are four core questions that should be considered when assessing a public blockchain for use:

1. Is the consensus mechanism sustainable?
2. Is the consensus mechanism secure?
3. Is the on-chain programming environment secure?
4. Is the underlying coin not an illegal unregistered security in the United States?

We believe that alternative blockchains cannot answer “yes” to all four of those questions.

Chia’s blockchain does.

We believe our blockchain and smart coin platform offer advantages over existing competing platforms. Chia Network’s blockchain is subject to competition from both existing platforms, such as Ethereum, “intranet” blockchains like R3, and the traditional financial infrastructure. Financial institutions have largely passed on using Bitcoin and Ethereum beyond the increasingly clear investment use case for Bitcoin. Our blockchain is more open and accessible than existing financial institutions, much much more energy efficient than Proof of Work blockchains, better designed for secure smart financial transactions than Ethereum, and more decentralized than Proof of Work and Proof of Stake (POS) chains. Chia digital money (XCH) is more tradeable and compliant across all markets as XCH is a commodity and not an illegal unregistered security in the United States.

The Company believes that private or permissioned blockchains are unlikely to gain mass adoption, analogous to the attempts by corporations in the late 1990s to delay adopting the internet by launching intranets. Public blockchains allow parties that do not trust each other to transact together and alongside each other, a core value of the underlying technology.

As public blockchains are designed to be universally available and fault tolerant, permissioned blockchains are almost an oxymoron. Adding a permissioning system creates a single point of failure, removing the ability to make assertions of high availability - a basic property of a public blockchain. Following [Metcalf’s law](#), blockchains become more valuable and effective with every additional participant or node on the network. Definitionally, permissioning systems limit the ease of adding new users reducing the effect and value increase of such networks. Governments or enterprises do not obtain the same increases in efficiency from permissioned blockchains as they do from permissionless blockchains.

Permissioned blockchains also severely detract from the “trustless trust” that a non-permissioned decentralized blockchain creates. It would be difficult to imagine Ukraine joining a Russian permissioned blockchain or Pakistan asking permission to participate in a blockchain controlled by India. Jeff Bezos’ Blue Origin would be unlikely to join a space industry trading blockchain run by Elon Musk’s SpaceX. A permissionless decentralized blockchain removes any external barrier or friction to trust in a transaction.



A considerable amount of effort is being expended attempting to solve intractable problems with Proof of Stake as an alternate strategy to use less electricity securing public blockchains. To the extent that some projects have created “solutions” to these problems, we think the tradeoffs made in their assumptions are inferior as they tend to drive centralization and are not as robust as Nakamoto consensus under international geopolitical pressure. Our support of the development and commercialization of Verifiable Delay Functions (VDFs) is a source of potential solutions to some Proof of Stake problems highlighted by projects like Ethereum 2’s initial adoption of an RSA based VDF. The current iteration of the Diem project has adopted the Chia VDF as well. This demonstrates our commitment to the security, and stability of blockchain technology. VDFs create a source of randomness to mitigate attacks where a validator can influence their own election to validate.

Proof of Stake is centralized. No Proof of Stake chain to date features more than 6,000 full nodes. Some projects define their Stake full nodes by how much value is staked and not how many actual computers on the network are being used to guarantee decentralization. Most Proof of Stake chains like [Algorand](#), [Cardano](#) and [Solana](#) each have less than [3000 validators](#) (as of the end of 2021) who actually create and validate transaction blocks. This centralization creates significant geopolitical risk. A central team can censor transactions or otherwise be forced to limit the permissionless nature of their blockchain.

Proof of Stake has four additional attributes that we think make it a poor choice for a global programmable money. Stakeholders tend to centralize validation towards the richest validators, further centralizing control over time as they take the bulk of the staking rewards. We think this factor will perform especially poorly when governments become the stakers. Proof of Stake is also susceptible to long range attacks. One can borrow a very large amount of value and stake it for a short period, then unstake and sell the position to repay the loan. Using the chain that still includes the large stake, one can generate an alternative future and introduce it as the new, “better,” chain where the large amount of value was never sold. Third, PoS chains tend to centralize on digital money exchanges either as Delegated Proof of Stake or via Staking as a Service, meaning Proof of Stake governance often centralizes into the hands of two or three exchanges. The challenges and negative outcomes of Proof of Stake can be seen in practice when [Tron “took over” Steemit](#). Finally, once someone successfully achieves a 51% attack (but often only a 34% attack is needed as that is the security level of most PoS implementations) on a PoS chain, they have complete control of that blockchain in perpetuity unlike Nakamoto consensus chains which can recover from 51% attacks.

Chia Network’s permissionless and decentralized blockchain will enhance governments and financial institution infrastructure. Banks and payment networks will be able to create funds transfer mechanisms that are secure, fast, and not reliant on any third party – including Chia Network. Governments and banks can safely do business with correspondent banks and vendors around the globe regardless of the geopolitical ecosystem or other nations’ or banks’ attempts to restrict activities. An open global decentralized network will make the transfer of money and wealth trustworthy, reliable, and far more efficient without having to rely on



middlemen, other banks, or other nations. Chialisp, our smart transaction platform, will let them place the restrictions and controls they need on their own transactions or Chia Asset Tokens (CATs) issued assets while letting the underlying value be secured by, and transferable over, a decentralized global network of programmable digital money.

Company Vision

We formed Chia Network Inc. for the purpose of driving adoption of the Chia blockchain and digital money, and to provide controls, trust and transparency in how we use our resources for that purpose. These controls will be especially robust should you choose to become a shareholder once we register our equity on a public stock exchange.

We have seen the pain caused by the [scams, farces, and charlatans](#) in this space. Instead, we will seek to embrace, educate, and collaborate with our key constituencies, including regulators and elected officials. Investors deserve protection through public disclosure and requisite transparency..

Chia Network intends to sell software services and support for its open source blockchain and smart transaction software to governments, financial institutions, corporations, and large buyers and sellers of storage. We also foster the grass roots development of DeFi, DEX, cross border payments, and new end user wallet innovations to accelerate the development of applications only made possible through a secure, decentralized programmable money. Our tools allow developers to create user friendly applications and wallets.

The Company has a unique approach to funding, building, and supporting a blockchain via an eventually public, for-profit, open source development company that holds a pre-farm (equivalent to a pre-mine) of chia coins. Chia Network intends to list the equity of the Company on a major stock exchange to strengthen the credibility, governance, and regulatory certainty of its blockchain, coin, and open source enterprise software services and support business with governments, financial institutions, and enterprises.

The Company believes that its enterprise value will partially reflect the value of the chia coins held on its balance sheet. As our enterprise business grows, we believe our offerings will add to the enterprise value of the company as well as drive adoption of chia in commerce and globally. The Chia Network balance sheet will allow the company's publicly traded equity to function like an ETF for chia coins. The company expects its equity valuation in a public market to correlate to the price movements of chia coins on digital money exchanges.

Chia is the **sustainable, secure, and compliant** blockchain.



Company Operations

The Company was incorporated in the State of Delaware on August 1, 2017 and founded by Bram Cohen, the inventor of BitTorrent. Since its inception the Company has focused on developing Chia Network's blockchain and promoting its uses. Chia Network's blockchain is a global open-source decentralized network that operates a settlement system using its native cryptocurrency known as chia or XCH. Chia Network's blockchain is more efficient, secure, sustainable, and compliant across regulatory ecosystems while remaining simple to adopt and use.

The company is a Delaware corporation based in South San Francisco, California and currently has 58 full time employees and full time equivalent contractors, and 11 part time advisors. 39 employees are focused primarily on research and development activities and 19 employees/contractors focus on the administration of the Company and implementing its business plan.

Company Milestones

Pre Alpha Stage:

In January 2018, Chia Network published [Beyond Hellman's Time-Memory Trade-Offs with Applications to Proofs of Space](#) academic paper at BPASE '18 and raised a \$3.3 million seed round of financing that closed in March of 2018. That round included investments from A16Z, Greylock, True Ventures, [Naval](#), Galaxy Digital, Metastable, and others. In May 2018, we published [Simple Proofs of Sequential Work](#) which won best paper at Eurocrypt 2018.

In August 2018, the Company released its first open-source library, [bls-signatures](#), to the public via [GitHub](#). That library and the Company's more recent source code releases have received over seventy five pull requests from third-party developers and have attracted more than thirty-five third party contributing developers. Ethereum 2, Dash, and other projects are contributors to components of the Chia Network blockchain. They are also adopters of portions of Chia Network's new technologies along with Filecoin and Algorand.

The company released an open source Verifiable Delay Function ([VDF](#)), a Proof of Time [primitive](#) for cryptographic protocols, in January 2019. In order to optimize the implementation and attract developers, the Company announced a pair of implementation competitions for our VDF. In the two challenges, contestants competed to create faster implementations of the Company's VDF or submit proof of security breaks. After two rounds of VDF competition, the VDF algorithm was four times faster than the original reference implementation. Chia Network subsequently hired one of the contestants and contracts with one of the winners.

In July 2019, Chia Network released its Proof of Space software, released its [Green Paper](#), filed its first provisional patents, and announced a Proof of Space competition to optimize the algorithm.



Alpha Stage:

In December 2019, the Company released an alpha wallet simulator, scripting language documentation for Chialisp, and an alpha implementation of Chia Network's testnet blockchain.

Beta Stage:

In April 2019, the Company released the beta of the blockchain that included full wallet functionality, transactions, and smart coins on the testnet blockchain. Thousands of developers and community members installed Chia Network's blockchain software.

In July 2020, the Company completed its industry-wide collaboration to create the [IETF BLS Signature standard](#) and updated our implementation of that standard. With that, we were able to finalize our Proof of Space implementation. Since then our community has been creating plot files that work on our mainnet (the production blockchain) network.

During the second half of 2020, our un-incentivized testnet was consistently in the top 15 blockchains by public node count despite a quick pace of multiple hard forks (incompatible changes to the blockchain) between releases during that time. Peak network storage of about 30 petabytes was reached in early January 2021.

In November 2020, the Company released its [new consensus algorithm](#) based on an idea from the paper [Proof-of-Stake Longest Chain Protocols Revisited](#) which was presented at Stanford Blockchain 2020 in February 2020. The researchers behind this paper later independently confirmed the original Chia consensus' security guarantees in [Everything is a Race and Nakamoto Always Wins](#), which was published in May 2020.

The [new Chia consensus method](#) increases Chia's security to a 51% attack threshold if the attacker only has the same fastest Timelord. In a hypothetical world where an attacker has an unlimited number of the same fastest Timelords, they can attack with 43% of current netspace (16 EB as of 12/31/2021.) There are additional [attacks](#) if the attacker has faster Timelords than everyone else that are largely mitigated by our development of ASIC Timelords. We estimate that there is only about 15 EB of storage available each month in the global supply chain that has not already been pre-sold to hyperscale and enterprise OEM datacenter customers. Attempting to buy any material amount of this capacity would drive a [significant increase](#) in the price of storage. The new consensus has additional end user features where transaction blocks arrive approximately every 52 seconds, generating much more reliable expected block times. There is also faster accumulation of confirmations that more quickly add certainty that a transaction is final. Farming is enhanced by rewarding 64 chia split between 32 farmers every ten minutes during the first three years. There will be a total of four halvings of farming rewards after each three year period.



Mainnet:

The Company released the Chia mainnet on March 19, 2021 for farming rewards only. Transactions and Chialisp were enabled on May 3, 2021. The network grew explosively to nearly 500,000 full nodes, settling to about 200,000 to 300,000 nodes worldwide. This compares to a peak node count of Bitcoin of 210,000 and a [current Bitcoin node count](#) of about 60,000 nodes in [December 2021](#). Storage space securing the network quickly built to 42 EB (36 EiB) where it has remained relatively static in the 32-36EiB range as of December 2021. Again, to put 42 EB in perspective, there is only about 15 EB of storage space that has not been pre-sold to the hyperscale data centers in the global storage supply chain each month.

Due to this massive on-rush of storage, smaller farmers needed pooling, gathering into a group and sharing the rewards to smooth out their earnings. We implemented the [most decentralized pooling protocol](#) ever, launched in early July 2021. The pooling protocol was the first major decentralized application (Dapp) on the Chia blockchain and was implemented in Chialisp. It allows a farmer to choose any pool they wish and change pools or change back to self-pooling (solo farming) at any time. Farmers still make the blocks by running Chia's lightweight full node software, compared to Ethereum or Bitcoin where the large centralizing pools choose the transactions that get into blocks. Chia pools are protected from a farmer winning and trying to leave by a 30 minute time lock required to exit the pool upon the farmer's request. This has significantly lowered the trust needed to pool, both for farmers and pool operators. By December 2021, there were approximately [69 pools farming Chia](#).

In early August 2021, we launched an improved set of development teaching tools and documentation for Chialisp at [Chialisp.com](#). This coincided with a third party hackathon that attracted approximately 50 projects and 600 individual developers at its peak.

Adoption:

In November 2021, we launched the [Circular Drive Initiative](#) with [Bill McDonough](#), Seagate, and Western Digital as founding partners. Together we aim to increase the average useful hard drive life from four years to eight years as we create a market for used storage to be farmed by Chia farmers. Additionally, Seagate and Western Digital will accept used drives for recycling and renewal. This project is larger than just the Chia ecosystem as we believe it will allow hyperscale data centers to significantly decrease their e-waste footprint.

Subsequently in November, we announced that the World Bank Group had chosen the Chia blockchain technology as the foundation of the [Climate Warehouse](#) project. The Climate Warehouse is a cooperative undertaking of the World Bank and the [Paris Agreement](#) signatories to create a public immutable database of Mitigation Outcomes - more commonly known as carbon credits - on the Chia blockchain and tradeable under [Article 6](#). The Climate Warehouse will provide the global market infrastructure that can mobilize climate action to achieve the Paris



Agreement's objectives by enhancing transparency and environmental integrity of carbon credit transactions and international carbon markets. The use of the Chia blockchain allows for the complete Climate Warehouse application, including data nodes, APIs, and auxiliary applications to be easily implemented and governed as secure, open-source, and inclusive technology. Just as the Securities and Exchange Commission's [EDGAR](#) serves as a database of underlying issuance data for equities in the US, the Climate Warehouse is intended to be the public source of data for a global carbon credit market under Article 6.

Shortly after that, Costa Rica [announced](#) that it was partnering with Chia Network to extend Costa Rica's open source national carbon metrics, inventory and registry software to easily sync data with the Climate Warehouse. Together, Costa Rica and Chia Network will provide this open-source system to all 197 signatories of the Paris Agreement so they may integrate with the Climate Warehouse to create a transparent and publicly auditable repository of carbon offsets to underpin a global, permissionless, cross border, and cross market trading of carbon offsets.

That same month, "[The Information](#)" named Chia Network to its list of the [50 Most Promising Startups of 2021](#).

We released the [CAT1 standard](#) on November 15, 2021 codifying our Chia Asset Token (CAT) format. This effort drives interoperability between XCH and the various CATs issuers. Simultaneously, we released a Beta version of the new [light wallet](#) that makes it easy and quick to sync to the blockchain and manage XCH and CAT balances.

In December 2021, we released our new documentation portal at [docs.chia.net](#). This brought together both full documentation for how and why the blockchain and our new consensus algorithm works with documentation on how to farm as well as various links to chialisp.com where developers can learn Chialisp and acquire reference information.

In January 2022, we announced that our Cultivation Grant recipient, [Hashgreen](#), launched a DEX at the same time that an additional ecosystem developer launched the [Tsunami.network](#) DEX. Additional community developers released [offerbin.io](#) in concert with our announcement of the first US Dollar stablecoin on Chia from [Stably](#) (USDS) and our official release of Offer files. Offers allow two people who have never met to propose and complete a trade in a way that neither side can cheat and does not need escrow. This also empowers users to self-custody while making trades, meaning buyers and sellers retain control of their private keys and coins without counterparty risk, middleman custodians and trading fees. "Makers" and "Takers" - buyers and sellers - seamlessly create and accept trade offers all from the privacy of their Chia wallet. Trading in USDS, XCH and many additional CAT coins has begun and wrapped bitcoin and ether will be available shortly via Stably and [Prime Trust](#).



The Chia Network

Sustainable Nakamoto Consensus using Proof of Space and Time

Chia Network's blockchain relies upon a new Nakamoto consensus algorithm called [Proof of Space and Time](#). These new methods do not consume the significant amounts of electricity and single purpose hardware that Proof of Work requires. Chia Network's blockchain (and chia coin) is a "green," eco-friendly alternative to Proof of Work. Unused storage space is a widely distributed, [ASIC-resistant](#), and over provisioned commodity. Electricity prices are largely irrelevant to running storage and will become even less relevant as consumer [SSD prices fall below hard drive prices](#). Chia farming has already become more decentralized than Proof of Work or Proof of Stake and significantly less energy and resource intensive. At peak there were approximately 700,000 full nodes and as of October 15, 2021 there were approximately 200,000 - 300,000 full nodes active on blockchain using about [one three hundredth of the electricity](#) that Bitcoin's Proof of Work currently consumes annually.

Satoshi Nakamoto chose Proof of Work to solve critical problems around trusting a crowd of anonymous individuals to agree upon a transaction ledger. Online it is relatively easy to fake multiple personas so that one individual might look like 1,000 different people on a social media platform. Proof of Work forces each individual or entity to exert some provable effort that makes it unlikely that they control more than one logical account or supposed persona.

Additionally, Proof of Work creates a way to choose the next person who will validate a block of transactions in a way that is mathematically proven to be random. This gives participants in the network assurance that the person who validates their transaction will not be the same person they just sold a boat to in order to avoid an outcome where the validator could make the payment to the boat seller disappear and thus never show up as a completed transaction. Randomly choosing the validator of the next transaction block prevents the boat purchaser from sailing away without making payment or [double-spending](#) it. Satoshi had hoped that the "unit of work" would be the unused CPU capacity on everyone's computers. However, the algorithms that have the needed properties on CPUs are susceptible to being accelerated in purpose-built ASIC chips driving the cost of proving work towards the cheapest sources of electricity. Those with significant capital and access to cheap power possess the ability to prove far more work per minute and dollar than someone using their laptop at home.

Proof of Space is a way to prove that you are keeping some storage unused on your hard drive. Users of Chia Network's blockchain plot unused space on their hard drive by installing software which generates and stores a collection of cryptographic numbers on disk into large data files called "plots". These users are called farmers, as opposed to Proof of Work's miners. When a new block is broadcast on the Chia Network's blockchain, farmers scan their plots to see if they have a number that is close to the new challenge number derived from a Proof of Time (more on Proof of Time below.) This operation of checking for a Proof of Space is fast and very efficient - farmers are known to farm a petabyte on one Raspberry Pi. A farmer's probability of winning a



block is the percentage of the total space that a farmer has, compared to the entire network for each challenge and there are 4608 chances to win a challenge per day.

Using storage as the commodity to secure the unique identity of the next verifier has the properties that Nakamoto hoped for with idle CPUs. Enterprises and end-users tend to buy more storage than they're going to need today in anticipation of their future storage needs. Importantly, there is no technological way to store random data more cheaply per terabyte than by leveraging unused hard drives and SSDs made by Kioxia, Micron, Samsung, Seagate, SK Hynix, Western Digital and others. Storage also has the property that when someone is done farming, they can repurpose it to other valuable uses like storing a database or adding more pictures of their kids. These Proofs of Space also give excellent assurance that the winning farmer who will validate the next transaction block will be chosen at random.

Since Proof of Space takes very little time to look up and in order to protect against attackers with a lot of space creating alternate competing transaction histories and futures, the Chia Network blockchain has a second component called Proof of Time. Proof of Time requires actual "wall clock" time to pass between blocks. Proof of Time is implemented by a Verifiable Delay Function that takes a certain amount of time to compute but is very fast to verify. The key idea of a VDF is that it requires sequential computation, so having many parallel machines or CPUs/GPUs/ASICs (as in Proof of Work mining) does not create a benefit which minimizes electrical waste. Very few people need to run a VDF server (we call them Timelords), but users who wish to add more redundancy and security to the network can do so as the fastest one will always finish first and it takes only one Timelord on the network to complete a block and move the chain forward. Proof of Time also adds additional assurance that the next block's validator will be chosen in a fully unpredictable way so that a user can have confidence that it is very unlikely that a party interested in their current transaction will be chosen as the next validator. Chia has [partnered with Supranational](#) to build a first generation, open source, and widely available Proof of Time/VDF ASIC to limit any advantage an attacker may have with a faster Timelord.

Like Bitcoin, work difficulty on Chia Network's blockchain is dynamically adjusted so that 32 blocks are completed with a target time of 10 minutes on average. Not every block is a transaction block and there are expected to be 11 to 12 transaction blocks every 10 minutes. Farming difficulty adjusts approximately every 24 hours based on both the amount of network space and the speed of the fastest Timelord to keep the target times regular. Regardless of which one changes, if blocks are being released too fast, difficulty is increased. If blocks are being completed too slowly, difficulty is decreased. As farming competition goes up by adding more space to the network, farmers can expect rewards from a particular amount of storage to go down.

Chialisp

Chialisp is Chia Network's smart coin language based on the functional language [Lisp](#). Everything on the chia blockchain is a [coin](#). Smart coins deliver smart contract and smart



transaction capabilities in one package. Chialisp has been designed for security and simplicity, while allowing for powerful and broad functionality. Applications running on Chia Network's blockchain are intended to have functionality appropriate for payments, and financial applications. The primary focus for our current Chialisp development is creating reference coins and wallets for financial controls, Distributed Identity (DID), DEXs, and NFTs. With the release of the CAT1 standard, we believe that the Chia blockchain is the preeminent blockchain for on-chain and real world assets.

Chia Network's blockchain enables users to customize custody and clearing arrangements which will make using Chia to transact much more user friendly. Chialisp allows chia controls to match and exceed internal accounting controls and to safeguard funds from accidental loss, theft, or hacking with various risk tolerance levels in an auditable manner. Chialisp is designed to easily have smart coins serve as controls for an [SSAE 18](#) SOC 1 or SOC 2 report and to be relied upon for a [GAAP](#) or [IFRS](#) financial audit.

This may sound boring to those who have not self-custodied cryptocurrency, but for those who have, it makes carrying around cryptocurrency feel less like walking through the bad part of town with cash falling out of grocery bags, and more like having your own feather-weight portable bank vault.

Chialisp operates within the simple and reliable approach used in Bitcoin of keeping track of currently spendable coins as the only shared [state](#) (the [UTXO](#) model). Chialisp features enhanced support for net settlement by allowing transactions which open and remove payment channels to be indistinguishable from normal transfers. Chialisp's rules are enforced on the blockchain for superior security of those controls.

CATs are Chia's implementation of so-called "[colored coins](#)." This is a term of art that loosely describes a class of methods for representing and managing real world assets on top of a blockchain. CATs are represented by a smart coin embedded into a few of the smallest denomination of chia (a mojo, which is one-trillionth of a chia) that allows an asset to be defined and issued by anyone on top of Chia Network's blockchain. The issued assets will also inherit all of the Chialisp smart coin functionality so that they can have all the custody and controls that native chia enjoy.

Adding DID wallet functionality will allow a CAT issuer to specify that no one can acquire an asset unless, for example, they have completed KYC/AML or been verified by a national registry - but in a way that is privacy protective and relies upon the [W3C Decentralized Identifiers standard](#).

Multi-sig and Atomic Swaps:

Multi-signature and atomic swaps are building blocks for more sophisticated smart transactions and core to many simpler controls and custody arrangements. For example, this allows a corporation to require two out of three signers to spend money out of a wallet or to complete a



trade between bitcoin and chia in a way that requires trusting no other party to propose and complete a swap. The [IETF BLS](#) signing protocol also makes multiple signature schemes easier and much safer for the participants as signatures can be merged and don't have to happen in order or at the same time or place.

Authorized Payee Wallets:

Authorized payee whitelisting allows, for example, a corporation to delegate spending authority from a controller to a payroll administrator where the administrator can only make payments to the chia addresses that the controller or CFO set. This mitigates the possible consequences of a successful email phishing attempt or hack on the payroll administrator. This also makes embezzlement difficult. We intend to use our distributed identity wallets to make this especially flexible but have first implemented our reference version of this in a parent wallet, child wallet format.

Transaction Clawback:

When one organization sends coins on a blockchain to another organization, there are two things that need to occur. A certain amount of block confirmations have to happen to prove to the recipient that the coins sent are valid and not a [double spend](#) where the coins received will not be considered valid by the network in the future. The second activity is simply the recognition that a payment transaction is actually in process as it may take some minutes to be considered final by the recipient. Payment clawback adds a time period in which the sender can claw back the funds after the initial transfer moves onto the blockchain. By adding a third key that can claw back or accelerate the transfer of a transaction's underlying coins, one can lower the risks of sending a transaction and implement escrow business models. With a short recovery escrow period - as an example one block less than the recipient's number of blocks they would otherwise consider final - a sender can now correct a typo in a recipient address by detecting the error after sending the transaction, clawing the bad transaction back, and resending a corrected transaction. For certain heavily controlled use cases, one can implement a longer clawback period which allows all transfers from a wallet to be audited and un-done if they are later found to be improper. In a mail order model the consumer could delegate the recovery escrow period to a shipping company that would release the funds to the retailer when the shipper receives the package or return the funds back to the buyer if the goods aren't sent to the shipper in an agreed time frame.

Rate Limited Wallets:

Withdrawal rate limiting allows the creation of wallets that can only spend a certain amount of coins over a specified amount of time. You can put a year's worth of living expenses in a wallet but restrict it to only allow spending 1/52nd of the funds in the wallet each week. If the wallet were stolen, or compromised by a third party, you can use the primary wallet to pull back the balance of the funds that were not yet stolen once it was recognized that control had been lost. Chia shipped a reference rate limited wallet to testnet in August 2020.

Slow Paper Wallets:

Current cryptocurrency best practices are to keep a paper wallet backup of your active or hot wallet. This is prudent for many reasons including that hardware can fail and it's easy to have your hardware lost or stolen. However, this leaves you vulnerable to someone stealing your paper wallet and having complete control over, and ability to steal, all of your funds. Slow paper wallets allow you to store a smart transaction that's capable of starting a time-delayed process to recover your funds in your hot wallet but it is not a duplicate of your private key. If someone were to steal your slow paper wallet and start that process, your active wallet can recognize the situation and instead redirect the funds transfer to a new wallet you control. Starting the backup recovery can optionally require a security deposit to further hinder attempts to steal funds via the slow paper wallet.

DID Wallets:

Chialisp enables digital identity wallets that have in-depth recovery options and allow individuals and organizations to add identity and permissioning on top of a permissionless blockchain. Users can pseudonymously delegate control of their identity to family or legal counsel in a way that can be recovered by both the delegates and in a way that allows the delegates' own identity to be recovered and used as well. This enables certain types of trust/trustee relationships and is a path to digital inheritance. This also allows the provider of an asset on Chia Network's blockchain a method to have end users complete processes like KYC/AML and present that attestation from their digital identity wallet to be able to receive equity, a subscription to a hedge fund, or a government-backed stablecoin. The asset issuer or verification service can also easily revoke those credentials if they determine that someone's status has changed.

CATs:

Chia Asset Tokens ("CATs") allow individuals, financial institutions, corporations, and governments to issue on-chain assets that inherit the smart transaction capabilities of Chia Network's blockchain and rely upon the globally decentralized secure validation that Proof of Space and Time provides. ERC-20 tokens are currently the most recognized form of colored coins, but they are very limited. The Solidity smart contracts they depend on are plagued with security risks. Additionally, they do not feel like a native part of the Ethereum blockchain to end users and require each asset to be individually enabled by wallets and digital money exchanges. Recent [security research](#) has shown that they are vulnerable to being counterfeited on exchanges too. CATs coins inherit all of the capabilities of Chialisp which makes them far more suitable to high compliance asset issuance and allow them to be more native to chia wallets.

Unlike Solidity smart contracts, CATs can be used to create ephemeral value and thus applications on the Chia blockchain don't generally require [flash loans](#). This has been one of the primary flaws of DeFi on Ethereum. Ephemeral CATs combined with Chia's native exchange



capability via offer files of partially completed transactions of arbitrary complexity are superior building blocks for the kind of arbitrage applications and transactions that DeFi projects are attempting to build. Additionally, the Coin/UTXO model has significantly reduced exposure to [MEV](#) (Maximum Extractable Value) that Solidity-based chains suffer from.

Applications of Chialisp:

Chialisp is a generalized development language and environment, wherein all of these primitive and example functionalities can be mixed and matched as appropriate for a use case. Developers can create new and currently unimagined capabilities with the toolset that Chialisp provides without needing changes to Chia Network's protocol or environment while Chialisp will deliver security and auditability of those controls and applications. We believe that Chialisp is the best tool for the emerging DeFi movement.

On the enterprise side, a US-based hedge fund could leverage CATs to manage subscription ownership and have investors present a digital identity that would prove their citizenship, investor qualifications, and KYC/AML status - all natively to Chia Network's blockchain. A government could issue their domestic currency-backed stablecoin to anyone who had completed a required KYC digital identity certificate. CATs on Chia Network's blockchain can be used for stored or open loop company gift cards, debt issuance, equity issuance, and any related kind of asset issuance, tracking and management.

As Chialisp and the Coin model enable DEX and AMM functionality, each asset issued on-chain inherits these DEXes, AMMs, and centralized exchanges that exist in the Chia ecosystem. Peer-to-peer trading, automated options chains, and easy access to centralized exchange listings will all soon be available to any asset issued via the CAT standard on the Chia blockchain.

Chialisp and the choice of BLS Signatures make the implementation of payment channels simpler and more direct than they currently are for Bitcoin or Ethereum. Development in the payment channel space is moving quickly and thus the Company expects to adopt the best technologies from the layer 2 community. We expect to support both a version of [Lightning](#) adapted specifically for Chia and enable third party [Zero Knowledge Rollup](#) solutions.



The Strategic Reserve

The Company created 21 million chia at mainnet launch (Chia Network's Strategic Reserve or pre-farm) and consider them part of our pro-forma balance sheet. The Company established 21 million as an homage to the work that has come before. It is challenging to predict the resources needed to drive adoption of the Chia blockchain, especially those denominated in chia. We hope we are conservatively erring on the side of having an excess Strategic Reserve of chia owned by the Company and ultimately the shareholders. As discussed below, we believe that the public company structure, in conjunction with sound corporate governance, provides a framework to manage the Strategic Reserve and allow us to distribute excess chia, if any, in a fair way to shareholders using traditional corporate tools.

Post-launch chia Emission Schedule

Farming rewards create new chia. Our farming rewards schedule was directly patterned after the Bitcoin rewards schedule. We present these rewards in an ideal case but reality is usually not ideal. Due to the fluctuations of space joining the network and Timelord speeds increasing or decreasing, the actual issuance schedule will vary slightly just as Bitcoin's issuance schedule has historically. The idealized schedule is as follows:

- 64 chia will be created every ten minutes for the first three years after launch.
- 32 chia will be created every ten minutes in years four through six after launch.
- 16 chia will be created every ten minutes in years seven through nine after launch.
- 8 chia will be created every ten minutes in years ten through twelve.
- 4 chia will be created every ten minutes for every year after year twelve.

There is no cap, or limit, on the total number of chia that may be created by farming rewards on Chia Network's blockchain. At the end of the sixth year after launch all farming rewards generated to that date will represent 42% of all chia coins in existence at that time. It will take approximately 21 years from mainnet launch for farming rewards to equal the size of Chia Network's Strategic Reserve as trailing emissions begin to slow down in year 13 where 48% of all coins come from farming.

Chia Network's blockchain's emissions schedule is known as trailing emissions, which adds significant security benefits over capped supply. Capped supply blockchain rewards will eventually completely come only from transaction fees, which might result in miners being [incentivized to overwrite recent history](#) instead of mining new blocks in periods where transaction fees are low, particularly if fees are significant during the day and approach zero every night (generally from Midnight Pacific Time to 4AM Pacific), which is the pattern happening today. Because the emission rate is fixed at four chia every ten minutes after year 12, the inflation rate as a percentage of supply is declining forever. Inflation falls through 0.50% in year 25 after launch. The goal is to strike a balance where reasonable transaction fees will be high enough to strongly incentivize farmers to include them without being so high relative to the fixed rewards that there's a strong incentive to overwrite history. We also believe that a fixed



supply isn't necessarily what is most important in understanding inflation but that being able to directly calculate a shared expectation of the total supply at any given time gives much the same financial benefit and peace of mind.

XCH Issuance Schedule:

(EOY 1 is End of Year 1)

	EOY 1	EOY 2	EOY 3
Farming rewards	3,363,840	3,363,840	3,363,840
Cumulative farming rewards	3,363,840	6,727,680	10,091,520
Farming % of all XCH	13.81%	24.26%	32.46%
Running total XCH	24,363,840	27,727,680	31,091,520
Halving:	EOY 4	EOY 5	EOY 6
Farming rewards	1,681,920	1,681,920	1,681,920
Cumulative farming rewards	11,773,440	13,455,360	15,137,280
Farming % of all XCH	35.92%	39.05%	41.89%
Running total XCH	32,773,440	34,455,360	36,137,280
Halving:	EOY 7	EOY 8	EOY 9
Farming rewards	840,960	840,960	840,960
Cumulative farming rewards	15,978,240	16,819,200	17,660,160
Farming % of all XCH	43.21%	44.47%	45.68%
Running total XCH	36,978,240	37,819,200	38,660,160
Halving:	EOY 10	EOY 11	EOY 12
Farming rewards	420,480	420,480	420,480
Cumulative farming rewards	18,080,640	18,501,120	18,921,600
Farming % of all XCH	46.26%	46.84%	47.40%
Running total XCH	39,080,640	39,501,120	39,921,600



After a final halving, XCH continues trailing emissions:

Halving:		EOY 13	EOY 14	EOY 15	EOY 16	EOY 17
Farming rewards		210,240	210,240	210,240	210,240	210,240
Cumulative farming rewards		19,131,840	19,342,080	19,552,320	19,762,560	19,972,800
Farming % of all XCH		47.67%	47.95%	48.22%	48.48%	48.75%
Running total XCH		40,131,840	40,342,080	40,552,320	40,762,560	40,972,800
Trailing emissions:		EOY 18	EOY 19	EOY 20	EOY 21	EOY 22
Farming rewards		210,240	210,240	210,240	210,240	210,240
Cumulative farming rewards		20,183,040	20,393,280	20,603,520	20,813,760	21,024,000
Farming % of all XCH		49.01%	49.27%	49.52%	49.78%	50.03%
Running total XCH		41,183,040	41,393,280	41,603,520	41,813,760	42,024,000
50 Year Total XCH		47,910,720				

This issuance schedule is directly influenced by Bitcoin's emissions schedule with adjustments for some of the different math underlying the Chia blockchain such as 4,608 reward chances per day on average and a quicker pace of halvings.

The following table compares Bitcoin total coins mined during each four year halving period to chia coins farmed during each three year halving period:

	BTC	XCH
First Halving Period	10,500,000	10,091,520
Second Halving Period	5,250,000	5,045,760
Third Halving Period	2,625,000	2,522,880
Fourth Halving Period	1,312,500	1,261,440
End of Year 11*	18,593,393	18,501,120

* Comparison of actual year 11 outcomes for both, BTC estimated.



Governance of Chia Network's Strategic Reserve

The Company believes that the best way to “govern” Chia Network’s Strategic Reserve and support the development of a superior financial infrastructure is to adopt the well tested 400 year old technology of a joint stock corporation and adopt current corporate governance best practices. At an appropriate time, the Company intends to list the equity of the Company on a national stock exchange. The Company’s management and use of Chia Network’s Strategic Reserve could be material to the adoption of chia. We believe that the corporate form with transparent disclosures align incentives better than other current attempts at supporting or governing public blockchains. Of course, due to the network’s decentralized nature, Chia Network’s blockchain and chia coins that are not held by the Company will work and trade with or without the existence of the Company. The Company has no direct control of the chia blockchain, as the rules of the chia blockchain can only be updated by having a majority of running nodes independently upgrade to a new version. It is important to note, as we outline below, that the Company does not intend to ever further farm this blockchain. Additionally, unlike Proof of Stake blockchains, ownership of coins has no influence on the governance of, or validation of, the Chia blockchain.

Chia Network established a subsidiary in Switzerland to manage business in Europe. We anticipate establishing a subsidiary in Singapore to manage business in Asia. Chia Network’s Strategic Reserve is divided evenly between the US parent company and the Swiss subsidiary. The Company will use smart coins to limit the total availability of the pre-farmed chia once it is able to put its more sophisticated custody system in place. Additionally, the Company has internal controls so that its commitments to investors and coin users will require board approval of our independent directors and not be subject to any single shareholder’s ability to control Chia Network’s Strategic Reserve. The Company also plans to adopt certain assurances that it will not make changes to, as an example, its commitment to not sell chia coins from Chia Network’s Strategic Reserve without 90-days’ notice to the public. Further the Company does not intend to sell, invest chia coins or dividend coins to shareholders, or use coins to repurchase equity until after we are a reporting company under the [1933 Act](#). We outline these controls in the Corporate Governance and Controls on the Strategic Reserve sections below.

Our public company strategy enhances regulatory clarity as the Company intends to become a reporting public company whose equity trades under the regulatory framework of the SEC. The Company believes this will help differentiate the commodity treatment of chia coins from the publicly listed Chia Network Inc. equity.

Public companies create transparency and instill trust in customers like large corporations and governments. That transparency and regulatory infrastructure allows the Company to implement credible controls on how and when Chia Network’s Strategic Reserve is used and will allow Chia Network the ability to give the equity markets and the coin markets notice of any changes in policy before those changes can impact either market.



We also want our users, farmers, and developers to have the ability to own a portion of the Strategic Reserve as a shareholder with the investor protections of the US public equity markets. We think allowing exposure to the Chia Strategic reserve to everyone who can invest in equity is a superior way to align everyone's interests in the long term success of chia and the broad deployment of programmable internet money.

The expected correlation between the price of chia on digital money exchanges and the equity valuation of the Company should allow enterprise customers and third parties to hedge between Company equity and chia coins. This will allow organizations that want to use chia in commerce a method to limit their exposure to chia coin volatility. A corporation that borrows chia to finance its international trade can buy straddles and calls on Chia Network's equity to limit their exposure to price volatility in chia coins. This will also tend to move long-term investment in the increasing value of Chia Network's blockchain to the equity markets - which currently have broader deployment and ease of access around the globe. We ultimately plan to change that but want to do everything we can to drive adoption today.

Controls on the Strategic Reserve

Our board of directors has adopted the following restrictions on the Company's use of the pre-farm. These may not be changed without a majority vote of the board, which necessarily includes at least one independent director.

We have a five person board composed of three outside directors. Our board is made up of; Bram Cohen, Gene Hoffman, David Frazee, Jill Gunter, and Chuck Stoops. Mr. Cohen and Mr. Hoffman are not independent as that concept is defined by stock exchange rules while Mr. Frazee, Mrs. Gunter, and Mr. Stoops qualify as independent directors. Additionally, Mr. Stoops is [audit committee chair qualified](#).

Should any of these controls be changed, they will not be implemented without at least 90 days of public notice of that change which shall be posted on the Company's website, in its Keybase channels and/or other similar highly visible methods.

It is important to know that if the Company were to find itself insolvent, the fiduciary duty of the directors shifts to creditors and therefore it may not be able to adhere to these restrictions in that unlikely case. Additionally a court order could compel the Company to bypass these restrictions.

These restrictions are as follows:

1. The Company will not sell chia from the strategic reserve. The Company will also not enter into any future contract that would allow or require the Company to later transfer XCH to a third party or to lose control of borrowed XCH absent the insolvency of the borrower.
2. Some existing investors in SAFE agreements ([Simple Agreement for Future Equity](#)) had the right to require redemption of a portion of the Strategic Reserve based on various



metrics around becoming a public company and the trading dynamics afterwards. As expected, the Company converted these SAFEs to preferred equity and changed these penalty provisions to not include XCH. Chia Network can not be required to transfer any chia to any investor.

3. The Company will not and has not compensated employees, employee-equivalent independent contractors, officers, or directors of the Company with chia and has agreed to that restriction in its preferred equity terms and related agreements with investors.
4. The Company will not intentionally farm chia on the mainnet. The Company will have farming capacity to support our various testnets but it is realistic that configuration error could cause unintentional farming to occur. The Company plans to put in place controls and monitoring to prevent or detect any accidental farming by Company-owned equipment. The Company, however, does not restrict our employees or contractors from farming with their personally owned hardware on their personal time.

The company intends to use the Strategic Reserve for purposes like but not limited to the following:

1. Lending chia to governments, financial institutions, market makers, and enterprises for use in their Chia related projects like asset issuances, paying international invoices, and providing liquidity on various digital money exchanges. These loans will be made to creditworthy entities, will generally require interest denominated in chia and full repayment in chia. From time to time, for marketing purposes the Company may offer negative interest rates to promote adoption. An example would be allowing a storage provider to offer to pay their foreign suppliers 105% of their invoices in chia instead of fiat currency where Chia would only expect 95% of the loan returned.
2. Using chia in shareholder activities like share repurchase or dividends to shareholders after we have publicly registered our equity.
3. Using chia to invest in promising projects that expand the functionality of and reach of chia in the markets for money and financial technology but not until we have publicly registered our equity.
4. We may use chia to add additional farming rewards or otherwise incent farmers or developers to validate or develop the network or software. We have a history of running both software enhancement contests and farming contests and plan to use chia as prizes for these sorts of contests.

Again, we do not plan to use chia to fund shareholder activities like repurchases or dividends, or invest in companies or projects using chia until after a registration statement or its equivalent is effective for Chia Network Inc. equity. We believe that the chia blockchain is sufficiently decentralized such that it would meet the so-called "[Hinman Test](#)" though the relevance of this test has been recently called into some doubt. US Securities regulations generally focus only on the sale of securities so we do not plan on selling any of the pre-farm until we have addressed any information asymmetry by becoming a reporting company and we have comfort from our regulators that they do not deem any future Company sales of chia to be a security. However,



should they take the position that certain reporting or registration is necessary, we will be in a much better position to meet those requirements as an already public entity.

We believe that these controls are effective. No single shareholder voting alone can modify these controls. Additionally the independent nature of our board of directors ensures that the Strategic Reserve is used to thoughtfully increase adoption of chia globally. Upon listing on a national equity market, these controls will have the additional benefit of securities regulation for their enforcement and binding nature.

The Strategic Reserve is designed to create a long term, sustainable method to fund the ongoing development and deployment of the Chia Network blockchain and build the Chia ecosystem. Over the long term, our public company structure will give us tools to orderly transfer value to the shareholders and obtain capital to fund the development and deployment of our technology. Should it become appropriate, we may divest the enterprise software or lending business to the shareholders. Ultimately we have the option to create an ongoing development trust fund and fully distribute the remaining assets of Chia Network Inc. to the shareholders leaving a development fund, lending business, and enterprise software business - with the latter two businesses shareholder owned and the balance of the Strategic Reserve in the shareholder's hands.

It is very hard to predict ten years into the future, much less thirty years. We think it is important to consider both the long term sustainability of the Chia blockchain and plan to make sure an ecosystem develops with no reliance on any single party. Should the Chia blockchain be as widely deployed and useful as we hope it will be, it will become the rails that people, banks, and governments use to interact globally. That ultimately means that we have to plan to minimize our exposure to geopolitical risks over time but balance that with retaining the resources to actually get to that level of adoption.

Revenue and Go to Market

The Company expects to achieve revenues and build shareholder value primarily through:

- Providing installation, development, and ongoing service and support for the use of chia, Chialisp, and chia smart coins in commerce and issuances of assets using CATs;
- Earning interest on loans of chia to market makers, governments, financial institutions, corporations and developers for their use in day to day operations;
- Appreciation of the chia on the Company's balance sheet, due to demand and use of chia by Chia Network's blockchain participants.

Services and Partnerships



The Company provides services to corporations, financial institutions, governments, and developers that make use of Chia Network's blockchain, Chialisp, and chia. We take a barbell approach to our market. We believe that governments, banks, and enterprises as well as developers, innovative startups, and distributed open source projects have immediate needs for our technology. These services include, but are not limited to:

- Service and Support Agreements for Software;
- Integration Services into existing corporate Enterprise Resource Planning software or financial institution infrastructure;
- Custom feature / smart coin development / CAT development;
- Integration services into large storage deployments and co-purchase agreements to support large storage deployment acquisition; and
- Building developer tools, supporting and investing in developers, and supporting developer events and hackathons.

The Company pursues these opportunities to build a global software solutions team to facilitate adoption and use of programmable digital money both directly and in partnership with other software vendors, systems integrators, and financial service companies. The Company believes that just as it took the emergence of Redhat to make Linux safe for corporations and governments to adopt, building a global service and support business that also partners with independent software vendors and software integrators is crucial to the actual adoption of chia for use by corporations, financial institutions and governments in global commerce.

Chia Cultivation Grants

The Company provides fiat grants, support and joint marketing for other companies and developers launching functionality that uses Chia's blockchain and Chialisp - especially those targeting end users. These partnerships will drive adoption and demand for chia and could also provide the Company with revenue and strategic opportunities.

Digital Money Exchanges

The Company communicates often with platforms that exchange digital assets including digital money. In September 2019 [Coinbase announced](#) that chia was one of the seventeen assets they were currently considering for inclusion after those assets launched. In September 2020 [Bitstamp announced](#) that chia was one of the digital assets they were exploring to support. The Company provides technical support to such platforms and does engage in joint marketing. Chia is listed and tradeable on many global exchanges including Crypto.com, Uphold, KuCoin, Okx, Huobi, and Gate.io among others. The Company expects additional exchanges to add chia, especially as significant assets adopt CATs for their issuance.

DeFi

We believe that CATs and Chialisp are a superior development environment for De-Fi. Inherent properties of Chialisp and our Coin model eliminate the need for flash loans external to a smart transaction to accomplish the same sorts of transactions, exchange, and arbitrage opportunities. Chia's native exchange functionality, via [Offer files](#), is an excellent building block for trustless issuance, exchange, and price discovery with limited to no counterparty risks depending on the application. In [partnership with Stably](#), CATs and Offer files create decentralized ways to acquire and trade between USD, BTC, ETH, and XCH based on a high compliance and regulated custodian. We believe that well designed exchange offers and markets will be a superior way to approach things like price discovery as the [price oracle problem](#) remains challenging for blockchains and smart contracts today.

We believe that Offer files are a revolutionary core capability native to the Chia blockchain. By making it so that any number of parties can propose a trade of any group of digital assets to anyone on the planet in a way where no party can cheat is novel in the human experience. This element will be a fundamental building block of creating a spectrum from trusted centralized exchanges to fully untrusted AMMs that trade any pairs of assets available on the Chia blockchain at any time between parties anywhere on the planet.

Making these sorts of tools available to the unbanked and underbanked, especially in non G-20 countries where the economic infrastructure is far less stable, is very important. Having alternatives for loans, prediction markets, and futures contracts can have a direct impact on crop yields or small business capital formation that is especially important to the least well-off. We believe that many smaller and non-OECD countries may be able to skip the step of developing institutions like the [Chicago Board of Trade](#) just as they were able to skip wireline telephone service for wireless. A smartphone and internet connection will give them access to just as, and potentially more, sophisticated crop insurance and other life changing financial infrastructure while requiring far less trust and middlemen. This is occurring just as global constellations of internet access satellites begin their roll-outs.

Carbon Credit Market

Prior to the Paris Agreement, the Carbon Credit market suffered from a lack of trust and transparency. The World Bank and Costa Rica are building a public federated database of the diligence materials necessary to foster trust that the various national and voluntary registries are creating carbon credits that are of known quality and not double counted. Estimates of demand for carbon credits by buyers like Facebook, Royal Dutch Shell, and Exxon-Mobile exceed \$20 billion annually. We will be partnering with others to inject capital into the market for carbon credits that will be issued on, secondarily traded on, and retired on the Chia blockchain. Once a credit is retired on chain, the equivalent tracking credit will be retired one for one in the Climate Warehouse. This allows permissionless market access to centralized and decentralized exchanges of all types - globally - to trade these carbon CATs and settle and retire them

on-chain. Consumers of these carbon credits will now have an auditable way to assert that they acquired them, retired them, and the underlying national registries were updated to retire them via the Climate Warehouse. The intent is to set the benchmark price for carbon cross border and cross market. In partnership with the World Bank, Costa Rica, and others, we believe that we can bring the benefits of the cryptocurrency markets like deep liquidity, a wide array of markets around the world, and DeFi tools to establish a first of its kind worldwide decentralized market for carbon. We plan to use this market as a showcase for the power of direct on chain asset trading to show regulators and financial institutions how powerful and safe crypto asset trading can be. In doing so, we help create a market to finance further development of carbon credit generation through both natural and technological means.

The Storage Ecosystem

Chia farming rewards increased the value of storage in the storage market. Sellers of storage are able to sell more storage per order as buyers of the storage will know that they can make money from over-allotments of storage. This lowers the risk that the buyer's estimate of how soon and how much storage they need are too conservative.

Large storage purchasers, like cloud providers, install storage in their data centers twenty-four hours a day year-round. Due to cloud storage being a low margin business, any incremental decrease in costs per terabyte quickly increases margins. Chia Network expects the largest storage purchasers to purchase more storage per order than they otherwise would have and recoup that cost from chia farming that occurs until a higher value use of the storage arises from one of the storage purchaser's customers requesting storage space.

Medium storage purchasers typically don't have full time IT staff solely focused on storage. Much of this market is outsourced to cloud providers who are large storage purchasers. Those that don't tend to purchase storage in 3 to 5 year estimated need increments. Their IT team can focus over a few weeks on installing a new storage area network (SAN) or network attached storage (NAS) and then do nothing but routine maintenance on that storage until months or years later when they add additional capacity. The option to farm chia on the unused parts of that storage will allow buyers and their IT teams to buy and install more capacity up front, which lowers the risk that they underestimate their storage needs and lowers the amount of time the IT team has to spend focusing on adding storage to a SAN or NAS.

End users have traditionally purchased storage on their devices that **leaves about 50% of their storage unused on each device**. With the transition from hard disk to SSD, the increased price of SSD has led to smaller over-allocations of storage space. However, the market for end user storage is about to pivot to a majority of SSD and with that will come a majority of R&D spending by storage manufacturers on SSD. This is likely to bring storage costs down as fast as they historically have for spinning drives. [Industry analysts currently predict](#) that consumer SSD will become cheaper than the equivalent size of hard drive in 4 to 7 years as we discuss below. This will likely return end consumers to buying twice as much storage as they need. We intend to



make it easy, via partnerships with storage and device manufacturers, for end users to allocate their unused storage to Chia Network's blockchain and earn rewards directly, or from pools.

The market for used storage is currently somewhat limited. Enterprises tend to retire data center storage after three years. These drives often have significant remaining useful life but can't be trusted for critical data storage as they reach their age of mean time to failure. These data center cast offs are excellent for farming and we believe we have created a market for them that keeps them out of landfills for significantly longer and greener lives. The Circular Drive Initiative's goal is to formalize this market and support the ultimate recycling of drives after this increased valuable life.

Two trends in [NAND](#)/SSD storage are also promising for chia farming. Certainly by 2031 and probably much sooner than that, consumer SSD will be cheaper than the same size hard drive. This will lead to a significant decrease in the amount of energy needed to farm chia plots. Additionally there is a class of NAND storage that is generally considered waste today that could easily be turned into commercially viable farming space.

Finally, should it turn out that we have underestimated the availability of excess storage and the adoption of chia starts to put pressure on the global storage business, the impact will be to drive down the per TB cost and energy usage of storage for everyone. We consider that a social good even while we intend that the impact of Chia will only be to better utilize existing under-utilized storage space.

International Payments

The Company believes that one of the primary use cases for chia is in international payments - especially in regions whose governments or financial systems are volatile. In the near term, Chia Network intends to support and potentially invest in companies and developers that enable the exchange of chia into local currencies like Localbitcoins and Paxful currently do for Bitcoin. Chia Network plans to enable and drive adoption of chia for settling international invoices where storage manufacturers and cloud providers source hardware and components. Chia Network's plan to have publicly traded equity will allow novel ways for enterprises to use equity options to reduce their exposure to any underlying coin price volatility. Chia Network expects significant revenue to be derived from service and support contracts with exchanges and international business and with the associated chia lending interest revenue.

We are equally committed to helping developers use our technology and tools to create superior digital wallets for applications like cross border payments. We plan to foster both marketplaces for fiat to crypto like Paxful and the general use case of being able to use your phone to send money home to your family in the country you emigrated from. Options for these services like Western Union are not instantaneous or something you can do from the comfort of home. That is before high fees are factored in. We believe that the economically disadvantaged acutely suffer these higher fees when they could instead have a low fee, easier to use application that saves them both time and money.



Selected Officers and Directors

Bram Cohen – Director, Chairman, Chief Executive Officer and Founder, August 2017 to Present

Mr. Cohen is the inventor of BitTorrent, which is the most used protocol for peer-to-peer file sharing over the internet. In 2009, BitTorrent accounted for [43% to 70% of all internet traffic](#) and has recently [seen a resurgence](#) in use accounting for nearly 21% of global upstream internet bandwidth in 2018. Mr. Cohen is often [accused of being Satoshi Nakamoto](#) – a claim he denies. Bram founded and was the initial CEO of BitTorrent, Inc in 2004. During his time at BitTorrent he worked in various roles as an Engineering Manager, Product Manager, and member of the board of directors at BitTorrent. While there he managed BitTorrent Labs, a research and development department of BitTorrent where he presided over a successful re-architecture of a new BitTorrent client: uTorrent Web. He left BitTorrent in August 2017 to found Chia Network. He has served as Chairman and CTO of Chia Network since its founding and, since June 2019, as CEO. He is currently an Advisor at Flibe Energy, an engineering company working to design and develop the liquid-fluoride thorium reactor (LFTR). Bram is one of the [top selling puzzle designers](#) in the world.

Gene Hoffman – Director, Chief Operating Officer and President, December 2019 to Present, SVP Business Development, August 2019 to December 2019, Advisor to the Board, August 2017 to August 2019

Mr. Hoffman is a serial entrepreneur and former public company CEO. He has built and sold three companies to PGP, Inc., [Vivendi-Universal](#), and [Amdocs](#). From 2003 to 2016 he was co-founder, Chairman and CEO of Vindicia, a consumer subscription infrastructure company sold to Amdocs in 2016. From 2017 to 2019 he was an advisor to the board of Chia Network until he joined the Company full time in August of 2019. He has been a board member at eight different technology and energy companies and serves on two non-profit boards, one of which he co-founded. He has 21 years of working in high compliance security environments with 12 years of managing PCI and SSAE-18 compliance for the storage of 220,000,000 credit cards. Hoffman has built and scaled companies in enterprise software and SaaS, consumer subscriptions, cryptography, and software development. He has raised over \$216,000,000 in public and private markets, acquired four companies and sold three. In 1997, he helped end US export controls on cryptography while at PGP, Inc. by personally exporting the PGP Source Code book. Hoffman is co-inventor on several patents and is currently an Advisor at Directly, and Iris.tv.

Misha Graboi - Chief Financial Officer, May 2021 to Present.

Prior to Chia, Misha Graboi was CEO of Delta-V Global Management, a consultancy focused on asset management firms. Prior to Delta-V, Mr. Graboi spent a decade at PAAMCO Prisma where he held several roles, most recently as CEO of PAAMCO Asia and as the sector specialist for convertible arbitrage strategies at PAAMCO. Earlier in his career, Misha was an

Executive Director at Goldman Sachs, where he headed European Internet Equity Research. Misha began his career at CIBC Oppenheimer where he was a technology investment banker and Internet equity research analyst.

David Frazee - Director, May 2021 to Present.

David Frazee is a Managing Partner at Richmond Global Ventures and one of the world's leading experts on international entrepreneurship. As a founding Board member of Endeavor Catalyst and through his extensive work as an Endeavor Global Mentor, Mr. Frazee has advised companies and funds across 17 countries, as well as worked with the governments of China, Taiwan, Jordan, Poland, Uruguay, Brazil, and Chile on innovation policy and emerging growth strategies. As a Silicon Valley-based high technology strategist, entrepreneur, and attorney, Mr. Frazee has spent his career helping companies and funds develop successful international corporate, business, and intellectual property strategies. As an executive of three technology startups—one of which he led through a US\$128 million investment by GE and subsequent IPO before it was acquired by Hughes/DirecTV—Mr. Frazee has developed an intimate operational understanding of the unique challenges faced by emerging growth companies. He sits on the Board of Advisors for Ecosense, Paradata, and Qraved. David Frazee received his undergraduate degree from Stanford University, with honors and distinction, where he worked as a teaching assistant in the Computer Science Department and studied at the Free University Berlin. Mr. Frazee went on to earn a J.D. from the University of Michigan, cum laude. He often appears in publications discussing innovation and business strategy, including Fortune, The Financial Times, The Red Herring, and The Wall Street Transcript. He is a frequent speaker, including at the Fortune Global Forum in Beijing and the Financial Times Innovation Summit in London.

Jill Gunter - Director, May 2021 to Present.

Jill Gunter is a Venture Partner at Slow Ventures, a San Francisco-based early stage venture capital fund. She invests in financial technology startups and cryptocurrency projects and protocols building and underpinning decentralized finance. She has held bitcoin since 2013. Mrs. Gunter is a co-founder of the Open Money Initiative, a non-profit organization that researches and publishes data on how those without access to a free and open financial system manage their money. Mrs. Gunter has also conducted academic research on the use of cryptocurrencies in emerging markets as part of her masters degree at Oxford University. Jill started her career on the emerging markets fixed income desk at Goldman Sachs in New York.

Chuck Stoops - Director, December 2020 to Present.

Mr. Stoops is a 20-year finance and technology industry veteran who specializes in helping high-growth companies transform into global powerhouses. Emerging from a “Big 4” accounting background, Mr. Stoops joined PayPal in 2004 as the second-ranking member of its finance leadership team. While at PayPal, he helped guide the payment company's rapid expansion into international markets, including planning and negotiating its international headquarters

investment in Singapore and establishing a fully chartered PayPal Europe Bank in Luxembourg. Leaving PayPal at the end of 2009, Mr. Stoops briefly joined Skype's Finance team to help prepare the company for a prospective S-1 filing and ultimately a successful sale to Microsoft in early 2011. In 2012, Mr. Stoops became Netflix's first international hire as its Head of Finance for Europe until the company relocated its European operations from Luxembourg to Amsterdam. By then well-settled in Luxembourg, Mr. Stoops chose to return to PayPal in 2013, this time serving as EU Counsel and Chief Data Protection/Privacy Officer. In late 2014, Mr. Stoops joined Japanese multinational Rakuten as its General Legal Counsel and Data Protection Officer for Europe where he, once more, obtained a full European banking charter while managing regulatory affairs and advising the group's European domiciled holdings; including Viber, Kobo and several national e-commerce marketplaces. Along the way, Mr. Stoops has served as a Board Director for the group companies of eBay, BlackBerry (RIM), Skype and others and is well versed in group financial reporting and controls. At present, Mr. Stoops is a principal in an early-stage banking technology start-up, which plans to receive an EU regulatory license in Luxembourg. Chuck is an active advisor and investor with "exchange space" companies, especially those in the areas of blockchain, payments, identity and loyalty. Mr. Stoops is an advocate for any useful financial inclusion project that aids the underserved and underbanked segments of society. Stoops holds a BA from Washington and Jefferson College and two law degrees; a JD from Pepperdine and an LLM from Georgetown Law School. He resides in Luxembourg.

Intellectual Property

The Company licenses its software under the Open Source [Apache 2.0 License](#). The Company was granted its first patent in November of 2021 - "[11165582](#) - Consensus layer architecture for maintaining security with reduced processing power dependency in untrusted decentralized computing platforms." There are additional provisional patents pending that cover our work difficulty resets, our multiple chain methods to stop grinding attacks, and our new consensus algorithm which are all outlined in our [Green Paper](#) and our [consensus](#) documents. The Company has trademarked "Chia" and "Chialisp" around the world and plans to liberally license the trademark for software and applications that are compatible with the Chia Network blockchain. The Company has not licensed and does not rely upon the intellectual property of other companies or individuals for use in the Company's software or has obtained specific copyright licenses under open source licenses for inclusion of certain dependencies of the Chia blockchain software. The Company joined the [Cryptocurrency Open Patent Alliance](#) in October, 2021.



Capitalization

Since inception the Company has raised approximately \$77M in funding in four rounds of financing. The last round of \$61M was raised shortly before transaction launch in May of 2021. Additionally, a strategic partner has invested \$10M more on an uncapped convertible note that will convert in the next round of financing or public offering. No investor has been promised chia in return for their investment. As part of the last round of financing, all SAFEs were converted to [NVCA style](#) preferred equity and the last round was considered the Series D Preferred round. In connection with this financing and conversion, all investor rights to any chia were terminated in favor of cash redemption rights.

Our investors include Richmond Global Ventures, a16z Crypto, Slow Ventures, Naval Ravikant, Breyer Capital, Collaborative Fund, IDEO Colab, True Ventures, Galaxy Digital, Cygni Capital, Greylock Partners, DCM, Metastable, StillMark Capital, and Kamal Ravikant.

Now that all of our SAFEs have converted to equity, we can discuss our cap table more simply. The following percentages do not contemplate the dilution that a future round would cause nor do they account for the conversion of the outstanding \$10M uncapped convertible note. We include in the calculation all issued and outstanding restricted stock awards, options, or warrants to acquire Chia Network stock as if fully vested but not shares reserved for further stock awards that have not yet been issued.

No single shareholder holds more than 35.0% of the Company. Investors as a group hold approximately 49% of the outstanding shares of the Company. No single investor or fund will hold more than 7.5% of the outstanding shares of the Company on an as converted and combined basis.



Public Market Readiness

The Company has always considered an eventual public offering or listing of its equity to be a component of our product and business strategy. To that end we recruited Mr. Hoffman, originally to serve as an independent director but now as President and COO. Mr. Stoops was recruited to serve as an independent director who is audit committee chair qualified as Mr. Hoffman no longer meets the independence requirements to serve as audit committee chair. After the departure of Mitch Edwards for personal reasons, we recruited Misha Graboi to serve as CFO.

Since inception, our financial statements have been independently audited annually by [Armanino LLP](#), a [PCAOB](#) registered accounting firm. The Company's fiscal year ends March 31, and the Company has completed financial audits from inception through fiscal year 2022 which ended March 31, 2021.

Conclusion

The financial future begins now.

Chia is creating the internet of markets and green money for a digital world.

###

- Significant changes from version 1.1 to version 2.0 - [Version 1.1 for reference](#).
- EOY 22 not 21 in XCH distribution schedule
- Multi-sig typo, late ("VDF") removed, "Big 4"
- We inadvertently included our old logo
- SSAE 16 has been updated to SSAE 18
- Smart coins instead of smart transactions
- 1934 not 1394