



ATHENEUM

WHITEPAPER

VERSION 1.0 | December 31st, 2018

TABLE OF CONTENTS

INTRODUCTION TO ATHENEUM	4
PRONUNCIATION	4
BRIEF HISTORY	4
OUR MISSION	4
MISSION STATEMENT	4
VALUES	5
AN EDUCATIONAL INDUSTRY REVIEW	5
MARKET IMPACT	8
THE ATHENEUM PLATFORM	11
PROJECT PHASES	14
PROPHASE	15
METAPHASE	15
TELOPHASE	17
PARTNERSHIPS	19
ATHENEUM FIRST-CLASS	20
THE ATHENEUM ROADMAP	21
Q4 2018	21
Q1 2019	22
Q2 2019	22
Q3 2019	23
Q4 2019	24
Q1 2020	24
Q2 2020	25
THE ATHENEUM BLOCKCHAIN	25
DESIGN	25
COIN SPECIFICATIONS	27
PROOF-OF-STAKE	27
GOVERNANCE	28
MASTERNODES	28
DECENTRALIZED AUTONOMOUS LEARNING ORGANIZATION (DALO)	29
OUR REACH	30
SOCIAL MEDIA AND OTHER PLATFORMS	30

THE TEAM	32
CORE MEMBERS	32
JOIN THE ATHENEUM TEAM	33

“Everybody’s a teacher if you listen.”

– Doris Roberts

INTRODUCTION TO ATHENEUM

PRONUNCIATION

It's pronounced: ath / ěn / ěum.

BRIEF HISTORY

There is something to be said about resilience. It's not often you encounter a community that has persevered through multiple hardships and remained hopeful about their future. Many projects in the crypto space have failed simply due to the loss of hope; scams, failed business plans, sell-offs. Because of blockchain's technological and investment infancy, the chances are most have invested in a project that turned sour. Our community, the former community of EmberCoin, was caught in the middle of a project turned sour but, from its ashes it was rescued by a core group deeply seated in education to eventually forge a platform for the new vision which is Atheneum.

OUR MISSION

MISSION STATEMENT

Fundamentally improve education by providing a free market ecosystem where incentives are maximized for both instructors and students alike.

VALUES

- Integrity • Honesty • Respect • Transparency •
- Commitment to Free Market Principles •
- Faithfulness to Blockchain Ideals •

Through adherence to these principles, the Atheneum project will combine education and an open market into to an innovative force that can spread the availability of affordable, high-quality education to every corner of the globe.

It is of the utmost importance that every team member, no matter their station or status within the project, holds true to these values. In addition, we believe that transparency, accountability, and open communication with our supportive community, and the crypto industry at large, will propel this project and platform to become a disruptive force in education.

AN EDUCATIONAL INDUSTRY REVIEW

Modern education in most parts of the industrialized world can follow its lineage to a western influence dating back about 150 years. Prior to that, systematic education for children was almost non-existent. Education was reserved for the privileged and specialists such as priests, lawyers, nobility and bureaucrats. The creation of systematic education, especially public education, was a revolutionary implementation that has

been a foundational component to the wealthiest and most successful countries of modern times. This disruptive move transformed society where even the poorest could receive education.

Since the emergence of this paradigm shift in systematic education to the masses, the subsequent 150 years has pioneered less innovation than has been made within other fields during the same time. Transportation has gone from horse and buggy to perpetually more sophisticated automobiles. Communication has gone from telegraph to telephone to satellite to internet. Almost every facet of human life has had some form of technological advancement during the last century and a half while education has sadly be untouched.

Additionally, education at different levels finds itself facing different problems. For example, in the United States, public education for K-12 gets 8.2% of its budget from the Federal Government (the majority coming from State and local governments). K-12 education has seen stagnant or falling TIMSS and PISA scores in literacy, math and science versus other countries. Higher education is seeing massive rises in tuition costs while the return on investment for the average Bachelor's Degree is falling year over year. The U.S. Federal Government allocates 21% of its budget to education which equates to \$798,000,000,000 annually. This massive expense by the government hasn't fixed the woes facing its country's education. Furthermore, increased spending in this area has shown no significant correlation that would suggest that it would fix these problems.

There is a glaring fundamental flaw in the education system. Until that flaw is fixed, no amount of government spending or restructuring of curricula will make education better. What is that flaw? It's the inherent nature of bureaucratic involvement that inserts itself in education in the form of institutional administration. This point is highlighted by a Forbes article from February of 2017 entitled, "U.S. Colleges: Where Does The Money Go?". In this article a study was conducted on the 40-year history of the California State University system along with an additional study focused on Colgate University comparing operational and institutional expenses against expenses directly related to education/teachers. Here is a small excerpt from that study:

"A study found that the California State University system had 11,614 full-time faculty in 1973, and 12,019 in 2008. During that same time period, administrators grew from 3,800 to 12,183, ending up with more administrators than faculty... It has only gotten worse since 2008. An anonymous college professor -- he calls himself "Professor Doom" -- has been chronicling his own experience working in this environment of bureaucratic horror. As he describes it, all academic standards have tumbled downhill as a consequence. Not just academics, either: with the bemused air of one watching Rome burn, he noted recently that one university formally recognized a Satanist student organization, while another banned a Young Americans for Freedom group for its "inflammatory" anti-communist stance." The problems wrought by legacy institutions have grown past just skyrocketing student debt, sub-value education, and limited benefits to educators. Legacy institutions have become a bureaucratic quagmire where political influence and values that are anything but universal are perpetuated to an

entire generation of students. Educational institutions have become more than just centers for learning, unfortunately the “more” that they have become is baggage that in no way improves the value for students or teachers.

The Forbes article continued by highlighting budget inefficiencies of institutions, *"Colgate University spent \$162 million in 2013, net of grants (scholarships) to students. It works out to \$56,000 per student. There's a lot of strange fluff in the expense column, including \$11.8 million paid to outside consultants, \$8.0 million in travel expenses, \$4.2 million to top officials, and \$25 million in undisclosed "other expenses." Total personnel expenses, outside of the top officials, were \$86 million."*

The institution, while necessary in the past, has proven to overwhelmingly perpetuate problems and is responsible for increased. Systematic education is unable to fundamentally change without a competent mechanism by which it could be reformed. That missing instrument now exists with the advent of blockchain - that fundamental problem now has an answer with the creation of Atheneum.

MARKET IMPACT

Education is broad both as a definition as well as an industry. Atheneum seeks to disrupt the current education paradigm at all levels and modalities. The most clearly defined vision for this disruption is within preschool, K-12, tutoring, trade and college education. The future progress of Atheneum is not limited to these areas, but these will

be the initial focus of the project. This market impact section will define the scope and market capitalizations of the above defined areas.

Preschool -

In the United States, there are 19,461 preschools and early childhood learning centers. These businesses generate a revenue of over \$12,000,000,000 annually.

K-12 -

According to Politifact, in the United States, public K-12 education costs \$620,000,000,000 annually. That's an average of \$12,296 per student. And that's just what the Federal Government spent on education, which doesn't even pay the entire cost. State and local governments spend an additional \$594,000,000,000 on K-12 education nationwide bringing the total cost of each student up to roughly \$25,199. Extrapolate that cost over the thirteen-year academic career of each of those students and you'll get a total cost of over \$327,000 to educate each child in the United States. An additional \$78,443,000,000 is spent on private K-12 education or \$13,640 per student. This is a substantial cost, but you can already see the cost savings per student (46%) when government bureaucracy is removed and schools operate as private industry.

In summation, K-12 education in the United States alone is a \$1.29 trillion industry. World Census Data suggests that roughly 17% of the world's population is in K-12 education (1.29B students). The Organization for Economic Cooperation and

Development (OECD) states that nations spend an average of \$9,313 per K-12 student bringing the worldwide K-12 industry to approximately \$12,000,000,000,000 (\$12T).

Tutoring -

Tutoring as a business has become a \$7,000,000,000 industry within the United States alone and swells to \$102,000,000,000 worldwide. The growth of this industry has boomed over the past decade due to more students finding online tutoring a viable option. The private tutoring industry is projected to reach \$260,000,000,000 worldwide by 2022.

Trade Schools -

Trade schools in the U.S. gross an annual revenue of over \$14,000,000,000 but this number grows considerably when worldwide data is considered. Globally, the workplace training revenues exceed \$362,000,000,000.

College/University -

The U.S. college and university industry exceeds \$500,000,000,000 while the worldwide higher education industry is \$1,900,000,000,000.

Atheneum could not, nor is it the goal of the project to replace all existing education modalities. However, Atheneum's technology does allow for a major shift across the entire educational industry. In the same way that online tutoring has seen its

greatest growth due greater accessibility because of the internet, Atheneum has the potential to present a more efficient and cost-effective option to those that already have educational options, while making access to education available to new markets that did not previously exist.

THE ATHENEUM PLATFORM

Blockchain fundamentally changes the dynamic in any field that currently requires a three party system. The Atheneum Blockchain replaces a highly-invested third-party with a decentralized, trustless and open-source instrument that pairs instructors and students, creating a level of sophistication and efficiency in education that has never been seen or even possible before, representing a quantum leap forward in education.

The Atheneum Platform, designed as a free-market, is the perfect medium by which instructors can be paired directly with students. The free-market concept not only adheres to the foundational blockchain principles of decentralization, but facilitates a platform where incentives are maximized to everyone involved. This is more plainly understood by seeing how the five core principles of a free-market economy lend themselves to the Atheneum platform.

Private Property: Instructors own 100% of the content that they create. Unlike most current education systems where courses, prepared by instructors, are the intellectual property (IP) of the institution, Atheneum owns no portion of the IP.

Instructors have virtually free reign of the Atheneum Platform to maximize the monetary benefit and reach of their content.

Freedom of Choice: The Atheneum Platform will host a broad spectrum of educational content by which students can choose the content they want to learn from whom they wish to learn it. Via a feedback and review system, content may be reviewed by students after course completion, and with this, prospective students are informed of the course's quality. The market socially curates the content. In a competitive free-market system, students can expect to have access to the highest quality content at the lowest possible price, set by the principles of supply and demand.

Motivation of Self-Interest: Atheneum aligns the self-interest of all users. Students seek the best content at a reasonable price. Instructors seek to maximize revenues through increased reach and exposure. Instructors have the freedom to select pricing for their content in a manner that either puts it at a low price to reach more people or to charge a premium, increasing their earning potential per student. Due to the scalability for instructors to reach a worldwide audience, there are increased incentives for them to provide even premium content at a low cost.

Competition: Instructors will be encouraged to consider the quality of their content and how it relates to student costs in order to successfully compete against other instructors.

Limited Governance: Atheneum Blockchain governance is performed by the DALO Masternode model. The platform would not be owned or controlled by a single-entity or organization, but rather a worldwide, diverse group of individuals who

have invested into Atheneum and desire to see it through to success. Masternode voting can contribute monetarily to the improvement of the platform, but must follow strict protocols in order to abstain from infringing upon the free market nature of Atheneum.

Decentralized

Neither the Atheneum Platform nor the Atheneum Blockchain are controlled by a central party. The Atheneum Platform is guided strictly by the buyers and sellers in the market while the Atheneum Blockchain is powered by the world's first Decentralized Autonomous Learning Organization (DALO). Simply put, a Masternode model has been adopted by the Atheneum Blockchain, giving democratic access and contributorship to anyone willing to hold 10,000 \$AEM tokens or more. This model finds a balance between granting meritorious access to everyone and allowing for those that are significantly invested in the project to oversee and contribute to its success.

Trustless

Until the advent of blockchain there was always a need in any transaction for trust. If two friends transacted to sell a car, they both may feel confident that one wouldn't take advantage of the other because they trust one another. One of those individuals may not feel so confident if they are selling that vehicle to a complete stranger. In that case, the seller may look to a third-party to insert an element of trust, such as a mediator or escrow company, between the individuals. Overtime, those

third-party institutions will inherently grow and become more costly because of a growing dependence on them.

Blockchain is a technology that fundamentally removes the need for trust between two parties because every part of the transaction is transparent on an open-source ledger. The term 'trustless' is not defined as the opposite of trust; it is the lack of a need for trust. A trustless DALO blockchain powering a free-market educational platform is a perfect use of blockchain technology by effectively and efficiently pairing instructors with students in an environment where participants can feel confident in the exchange of tokens for a service or product without the need for a third-party guarantor.

PROJECT PHASES

The Atheneum Project is divided into three distinct phases. Each phase builds upon one another in order to accomplish the mission of the project: to improve inefficiencies found in existing educational systems. The Atheneum platform will be much more than a "Udemy on blockchain"; the platform's free-market principles will make it possible to offer accredited education in a decentralized manner, putting the power to choose into a student's hands as they compare costs, requirements, quality, educational content, and peer reviews.

PROPHASE

/prophase def: the first stage in the growth of a cell, the first division of a cell.

- I. Goal: Foster a foundational ecosystem to build the value of \$AEM.

- II. Purpose: by the propagation of Masternode Operators and \$AEM stakeholders, a robust network will be built. This network, defined as the Atheneum Blockchain, is essential to the functionality of the Atheneum Marketplace.

- III. What Occurs During This Period: During the Prophase section of the project, network functionality is tested and governance protocols are put into practice. Masternode voting occurs where vested participants foster the development of the platform through budget proposals and other executive functions.

METAPHASE

/metaphase def: chromosomes align to prepare for the next phase of mitosis.

- I. Goal: Infuse the Atheneum platform with valuable and relevant content to create a proof-of-concept for the marketplace.

- II. Purpose: Metaphase is a critical stage in the maturation of the project and is necessary for the Atheneum Platform to become a worldwide educational marketplace that shifts the current educational paradigm. This proof-of-concept

phase presents a real-world utility for \$AEM tokens, creates a worldwide network of both instructors and students, allows for the formation of partnerships with outside entities, and builds a decentralized brand in education. These four components build the bridge to the Telophase.

- III. What Occurs During This Period: The Metaphase is defined as the launch of the platform mainnet and is the main onboarding phase for content, instructors and students. Once content is onboarded, marketing toward the consumer-side of the market (students) can be initiated. Throughout Metaphase, the free-market nature of the platform will evolve into an efficient, educational marketplace where both instructors and students can realize perpetual value. Instructors can provide premium, educational content at competitive rates, allowing them to boost their reputation and revenue generating potential. Instructors may even choose to be more readily available for student interaction, giving them another competitive advantage. Students are incentivized to consistently interact with the platform in order to find opportunities to earn \$AEM tokens, interact with peers, find new content, seek out new instructors, further their education and broaden the scope of their resumé.

TELOPHASE

/telophase def: the final stage of maturation of the cell

- I. Goal: Maintain a thriving free-market of both accredited and unaccredited educational content in order to make education accessible to everyone that seeks it.

- II. Purpose: Synergistically working with strategic partnerships throughout various forms of education such as community colleges, tutoring, trade schools, authors, private schools and universities. Telophase is when the Atheneum Mission Statement is brought to fruition — to make any form of education, from basic content all the way to accredited degrees, accessible across the entire worldwide.

- III. What Occurs During This Period: In the early part of Telophase, an emphasis is placed on partnerships with private schools and community colleges. The Atheneum Team sees a huge opportunity to partner with these institutions because these institutions possess state and local authority to satisfy educational requirements and bestow degrees upon their students. As platform participants, it's in their interest to offer competitive pricing for education. The benefit to these local institutions is access to a worldwide audience of potential students, an increase from the proximity-based reach of their physical campus. Additionally,

these institutions could potentially select platform-approved instructors to teach their degree programs. This would be an additional option to use in lieu of their own professors if they desired. By delegating content creation or simply giving certain instructors their proverbial “stamp of approval”, institutions would essentially be licensing their accreditation to the platform. A licensing partnership enables institutions to have virtually no overhead while simultaneously creating additional revenue streams. Thus, the Atheneum principles maintain fiscal reward to content providers (in this case the institution) as well as the low cost promise to students. These partnerships will enable Atheneum to develop a brand and use case beyond simply peer-to-peer educational and tutoring services. It marks the beginning of Atheneum’s ability to satisfy state education requirements and award real-world certificates and degrees through the power of blockchain.

Once accredited institutions are offering certifications, degrees, or diplomas on the platform, Atheneum will begin the process of acquiring its own accreditation. The importance of partnerships with accredited institutions for this next segment of Telophase is two-fold:

- 1.) Establish a brand in which students know that they can attain a quality education.
- 2.) Show that Atheneum has reliably fulfilled the fiduciary and educational duties of what a typical learning institution would, in

order to provide a proof-of-concept and track record to gain its own accreditation through local and state agencies.

The conclusion of Telophase is a fulfillment of the mission statement of the

project: “to be a free-market platform where students have a variety of educational content options from which they can choose and instructors can feature their content to a massive, worldwide audience rather than a localized one.”

PARTNERSHIPS

Along the Atheneum Roadmap, the Atheneum Team will seek strategic partnerships aimed at furthering the usability and brand awareness. The Metaphase will see the emergence of partnerships with existing tutoring businesses, trade schools, charter schools, authors and other more simplistic forms of non-accredited education, giving these businesses and institutions the opportunity to be pioneers in the formalized, content-production phase of the platform. These tutoring businesses benefit by providing content based on their core competency. In return, they may monetize their content to a worldwide network.

Telophase initially focuses on strategic partnerships with community colleges to provide 2-year degree equivalents. The process will continue while the project onboards colleges and universities that can provide undergraduate and graduate degrees.

In addition, partnerships with textbook companies, museums and historical landmarks can create a dual benefit. These benefits would include platform advertising revenue, enriching content and providing scholarships, or ancillary educational content regarding specific topics/places provided by the foremost experts in those fields. For example, an American National Landmark like Yellowstone National Park could create their own content about the park's history and geology. This content could create local and worldwide interest and encourage more tourism. Furthermore, a national landmark like Yellowstone could create a course certification that requires a visit to their landmark for course completion.

In conclusion, partnerships will be critical in the success of Atheneum's brand awareness and audience reach.

ATHENEUM FIRST-CLASS

As the platform evolves with the market, so will the educational material made available. We at Atheneum see this as a prime opportunity to begin taking strides toward Atheneum First-Class (AFC). AFC is the combination of our DALO with the popular and successful business model used by Netflix, a kind not seen before in the educational industry. More recently, Netflix has become known for producing their own films and series to release them as exclusive content to their user base. In 2011, Netflix began acquiring original content for its library and, in 2018, committed to invest \$8 Billion into original content. It's easy to state that Netflix has found great success by

producing original content and we believe this model can be successfully implemented into education. How does this work for AFC? Here is an example:

Let's say the market desires a high-quality, educational track about blockchain. Through the DALO, the track would be proposed with specific requirements to meet education standards, the price to compensate production, and a timeframe to be completed. The proposal would be voted on and approved for original content production. After approval, educational producers could apply to create the material. The DALO would then vote on the appropriate producer to undertake the proposal and complete during the specified timeframe. At completion, the material would undergo verification to ensure requirements were met. After it's verified, the producer would be paid, the material exclusively labeled as "Atheneum First-Class" and then released on the platform for purchase.

As a part of the AFC track of content, all AFC content will be recognized as qualified education, reviewed and verified by our educational team and approved by third-party educational organizations.

THE ATHENEUM ROADMAP

The Mission Statement of the project will be achieved by completing the three phases listed above. Here is our development for the next two years:

Q4 2018

- Establish Core Team

- Build the final version of the Ember (v1.1.5.6) wallet in preparation for the swap from Ember to Atheneum
- Develop Cross-chain swap method
- Run Testnet for the Atheneum blockchain

Q1 2019

- Commence Prophase
- Launch the Atheneum Blockchain Mainnet
- Launch Atheneum Website 2.0
- Release Whitepaper 1.0
- Release AEM Wallet 1.0.0.1
 - Windows
 - OSX
 - Linux
- January 7th, 2019: Commence 30-day swap period for community members to transfer their holdings from Embercoin to Atheneum
- Begin Marketplace Platform Development
- Redesign Logo
- Strengthen network reliability by promoting Masternode operations
- Pursue additional listings on exchanges
- Pursue additional listings on staking sites
- Pursue additional listings on Masternode-focused sites

Q2 2019

- Release Alpha Phase of the Marketplace Platform
- Onboard Atheneum Testnet Instructors
- Onboard Atheneum Testnet Students
- Pursue additional listings on exchanges
- Pursue additional listings on staking sites
- Implement bounty program to incentivize early platform adoption

Q3 2019

- Release Beta Phase of the Marketplace Platform
- Implement Educational Review System
 - The review system was intentionally left out of the early testnet so that instructors' reputations were not negatively affected by any inefficiencies that were a product of the platform
 - 1-5 Star review system for a specific unit of content
 - 1-5 Star review system for an instructor
 - Show finish rate of students that complete specific content from an instructor
- Implement a course completion recording system aka: Proof of Learning (PoL)
 - Overall GPA calculation
 - GPA calculation within a specific subject
 - Factors in the reputation of the instructor and course content

- Launch the instructor communication page
 - Field within an instructor's course channel where students can post comments and questions and instructors can reply

Q4 2019

- Commence Metaphase
- Launch Marketplace Platform Full Release
- Initiate DALO model
 - Instructors may begin to apply to have new course content funded
 - Masternode Operators will vote on the acceptance of proposals and will have authority to distribute funds accordingly
- Pursue partnerships for the Atheneum Platform
 - Educational Institutes
 - Workplace Environments

Q1 2020

- Technical upgrades to instructor content reviews
- Technical upgrades to direct instructor reviews
- Technical upgrades course completion records for students
- Emphasize three ongoing initiatives:
 - Onboarding of instructors
 - Onboarding of students

- Partnerships with companies related to integrating Atheneum into their hiring/training processes

Q2 2020

- Initiate Atheneum First-Class content

BEYOND...

THE ATHENEUM BLOCKCHAIN

DESIGN

Bitcoin >> Litecoin >> DASH >> PIVX >> Atheneum

Bitcoin: the first cryptocurrency in existence. Bitcoin is a digital currency that uses encryption to provide security to the verification, transferring, and/or creation of Bitcoin(s). What makes Bitcoin unique is its design to operate independently of central banks through a decentralized network. The network itself is supported through “miners”. These miners offer their services to the network by agreeing to verify network transactions through a process called Proof-of-Work (PoW). In the PoW method, a miner’s machine is tasked with computing complicated math equations. If their machine answers the problem, they provide “proof” of the energy spent to answer. In return, the network rewards the miner with Bitcoin as compensation. Since it’s dawn, Bitcoin has become the measurement standard and is the foundation upon which every other digital currency is built.

Litecoin was one of the first cryptocurrencies to follow Bitcoin. It utilizes the same Proof-of-Work method to verify network transactions, but has a much faster block time. To this day, it has remained in the top 10 Market Caps. A common issue found in PoW cryptos is the threat of centralization through mining pools. Miners can mutually offer their resources to the pool and get a share of pool's network rewards.

With the emergence of the Litecoin-fork, Dash, a new layer of decentralization was introduced through the creation of a Masternode (MN). A masternode's purpose is to provide essential network services and additionally allow for near instant transactions. To operate a MN, an individual must allocate a significant amount of currency as collateral, but earn higher rewards in exchange.

Pivx is the successor to Dash and Atheneum's direct predecessor. One thing that sets Pivx apart is the incorporation of a new verification method; Proof-of-Stake. You can read more on Proof-of-Stake later in this document. Pivx made a home for itself in the cryptosphere continuing development of Zerocoin Protocol, based on the academic paper [Zerocoin: Anonymous Distributed E-cash from Bitcoin](#) released by the John Hopkin's University. It's purpose is to add privacy and anonymity to transactions, but it carries the risk of a denial-of-spending attack. For security reasons, we have not included the Zerocoin protocol as a function component in our network.

Ultimately, our lineage speaks for itself. From Bitcoin to Pivx, our predecessors have innovated and pioneered new realms into the cryptosphere. As we pull from the best pieces of each, Atheneum will blaze a trail of its own in pursuit of education reform.

COIN SPECIFICATIONS

Ticker: AEM

Algorithm: Quark

Block Time: 180 Seconds

Difficulty Retargeting: Every Block

Beginning Circulating Supply: 25 Million AEM

Max Supply: 100 Million AEM

Minimum Stake Age: 60 Blocks

Masternode Collateral: 10,000 AEM

Block Rewards:

AEM Per Block: 13 AEM

AEM to Masternode Operators: 7.15 AEM

AEM to Stakers: 3.9 AEM

AEM to Budget: 1.95 AEM (15%)

Estimated AEM Minted Annually: 2,277,600

PROOF-OF-STAKE

Proof-of-Stake (PoS) algorithms achieve consensus by online nodes. PoS shares many similarities with PoW, but also differs in fundamental ways. As in any blockchain-based consensus algorithm, the goal is still to achieve distributed

consensus — to create a secure system whereby users are incentivized to validate transactions while maintaining integrity.

In PoS, the miner of a new block (the forger), is chosen in a semi-random, two-part process. The first element to be considered in this selection process is a user's stake. How much of the currency in question is the user staking? Every validator must own a stake in the network. Staking involves depositing an amount of tokens into the system, locking it in what you can think of as a virtual safe, and using it as a collateral to vouch for the block. The more a user stakes, the better their chance of being selected. In the majority of PoS consensus algorithms, the incentive to validate blocks is a payout in the form of transaction fees, as opposed to freshly created currency in PoW systems.

GOVERNANCE

MASTERNODES

A Masternode is simply a full node or computer wallet that keeps the full copy of the blockchain in real-time and is responsible for block validation among other duties.

But, masternodes are considerably different in their functionality than normal nodes.

Some of the special functions that these nodes perform are:

- Performing instant transactions
- Participation in governance and voting
- Budgeting and treasury functions of the DALO model

These masternodes are not standalone, but rather they are in constant communication with other nodes, providing a decentralized network of participants that have a highly-vested interest in the reliability and integrity of the Atheneum Blockchain.

Masternodes are, by necessity, nodes in the network that provide maximum uptime and service. Running an Atheneum masternode requires a collateral of 10,000 AEM, and is rewarded with dividends from block rewards. By requiring a collateral to operate a masternode, significant portions of AEM tokens are locked up, reducing the real circulating supply of the token.

DECENTRALIZED AUTONOMOUS LEARNING ORGANIZATION (DALO)

The Atheneum Marketplace will be governed by the world's first Decentralized Autonomous Learning Organization (DALO). In order to understand the DALO it is first important to understand its predecessor - the DAO. A decentralized autonomous organization (DAO) is an organization governed by rules encoded as a computer program that is transparent, controlled by stakeholders and not influenced by a centralized authority. A DAO's fiscal transaction record and program rules are maintained on a blockchain ledger.

In the case of the DALO, the governance will occur in the form of democratic Masternodes (MN's), rather than just stakeholders. Since MN's require significant collateral to operate, MN operators are individuals that are highly invested in the success of the platform and are penalized substantially for bad action.

In the earliest phase of the project, Prophase, MN operators act in a manner similar to a board of trustees and vote on budgetary or treasury issues, key positions within the team, third-party partnerships, in addition to other operations. During Metaphase, MN's play an increasingly important role in the content, instructor, and student onboarding processes. Their votes dictate which types of content are sought to increase marketplace adoption. Metaphase also introduces a very important DALO function: funding instructor and content grants. Instructors may apply for grants within the platform to fund new course content of which MN operators vote on. This process is intended to perpetuate a higher level of content in the marketplace. Better content translates into more transactions and therefore a higher fiscal incentive for MN operators. Their influence over content will be restricted to grants for new premium content.

OUR REACH

SOCIAL MEDIA AND OTHER PLATFORMS

Follow us and join the Atheneum community on social media. Easily stay up to date via platforms you use on a daily basis, conveniently share our project and news on your feeds, plus you can join the conversation and have your say, too. These days, social media is a powerful tool to drive and engage with audiences. By communicating

who we are and where we're going, we hope to spread Atheneum in such a way that invigorates and produces passionate people who want to make a difference.

We are mainly active across Facebook, Twitter, Telegram, Youtube, and Reddit – while all internal project communications remain on Discord.

Facebook: Being the most popular social media platform in the world, Facebook is great for connecting with the everyday consumer. It's a powerful way to put content directly in front of large audiences and You can go like our page here:

<https://www.facebook.com/atheneumchain/>

Twitter: Twitter is fast-paced yet easy-to-use and is fantastic for sharing quick information. It's a gold mine of millions of blockchain and cryptocurrency enthusiasts who use the platform on a daily basis. Go follow Atheneum here:

<https://twitter.com/Atheneumchain>

Telegram: An instant-messaging application widely used as a place to release info in a channel that immediately targets users who have joined said channel. You can join our Telegram channel here: <https://t.me/joinchat/DiluSE-NK5ul3utrXFOBNg>

Youtube: The top video-sharing platform in the world and has become extensively accessed to learn more about a specific cryptocurrency. We will utilize YouTube as means to host all of our video content that can be quickly cross-posted across other social media platforms. Subscribe to Atheneum on YouTube here:

<http://www.youtube.com/c/Atheneum>

Discord: Discord is used for all internal project communications for Atheneum. We house multiple channels for our departments that allow users sneak peeks into the

everyday workings of the team. If you wish to see what we're up to inbetween social media posts, join our Discord here: <https://t.co/8etT0XtN0L>

Reddit: If you frequent Reddit threads, we have a subreddit for you. Redditors can follow the discussion here: <https://www.reddit.com/r/AtheneumChain/>

LinkedIn: We have extended our reach to other business professional networks within the LinkedIn platform. Connect with us here:

<https://www.linkedin.com/company/atheneumchain/>

Bitcointalk: A message board where people interested in the technical details and the development of Bitcoin software can talk to each other. Join here:

THE TEAM

CORE MEMBERS

Chief Executive Officer - Marshall Clark / Marshmallow

Chief Technical Officer - Chris Black / Chris

Chief Operating Officer - Joel Phillips / Proshark

Chief Marketing Officer - Brian De Mint / Brian De Mint

Lead Community Support - Anthony Rush / Oblivion

Lead Exchange Rep - Jt42

Lead Web Dev - Jan / Jan

Platform Developer - Zach Johnson / Zjohnson13

JOIN THE ATHENEUM TEAM

As an emerging blockchain that is solving real world problems for real people, the Atheneum Team is constantly seeking new members that are eager to establish the ubiquity of the Atheneum Marketplace. Team members must be loyal to the Mission Statement stated herein in addition to holding values aligned with the core team values of integrity, truthfulness even when difficult, commitment to free market principles, and faithfulness to the ideals of blockchain.

If you are interested in joining the team, please go to the “Jobs” link at the bottom of our homepage.