K STADIUM White Paper

K STADIUM White Paper V0.99

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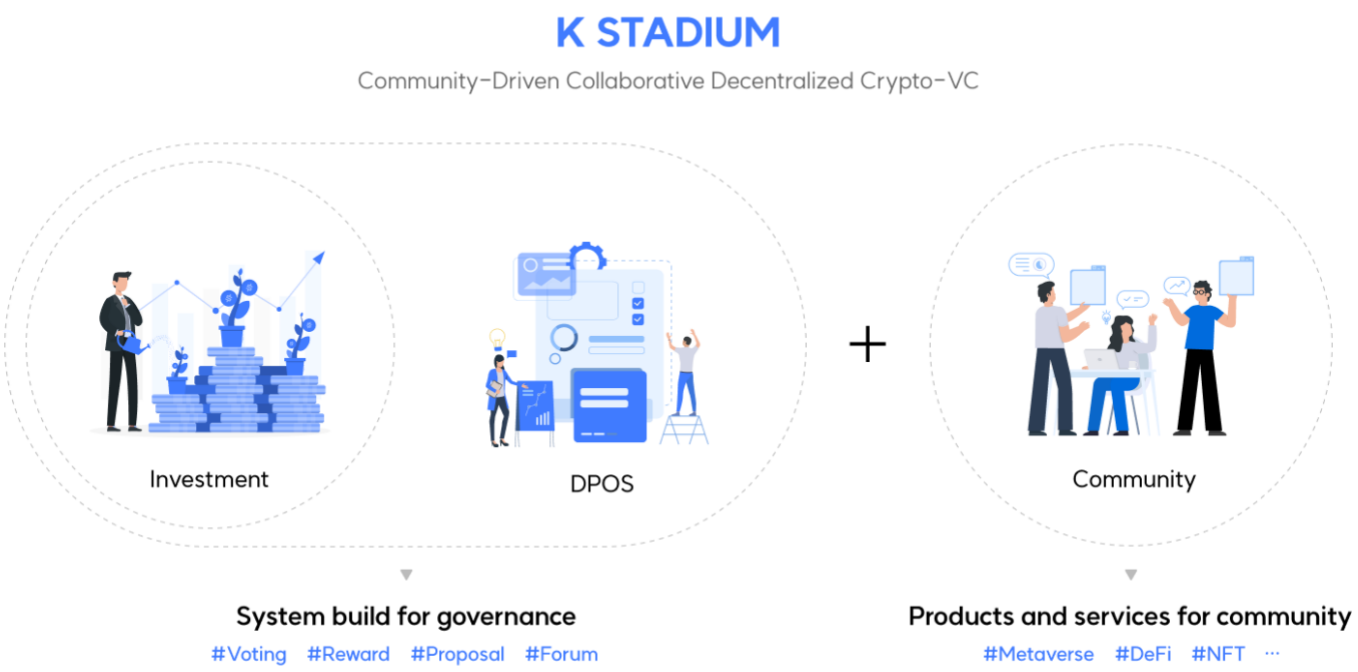
0. Executive Summary

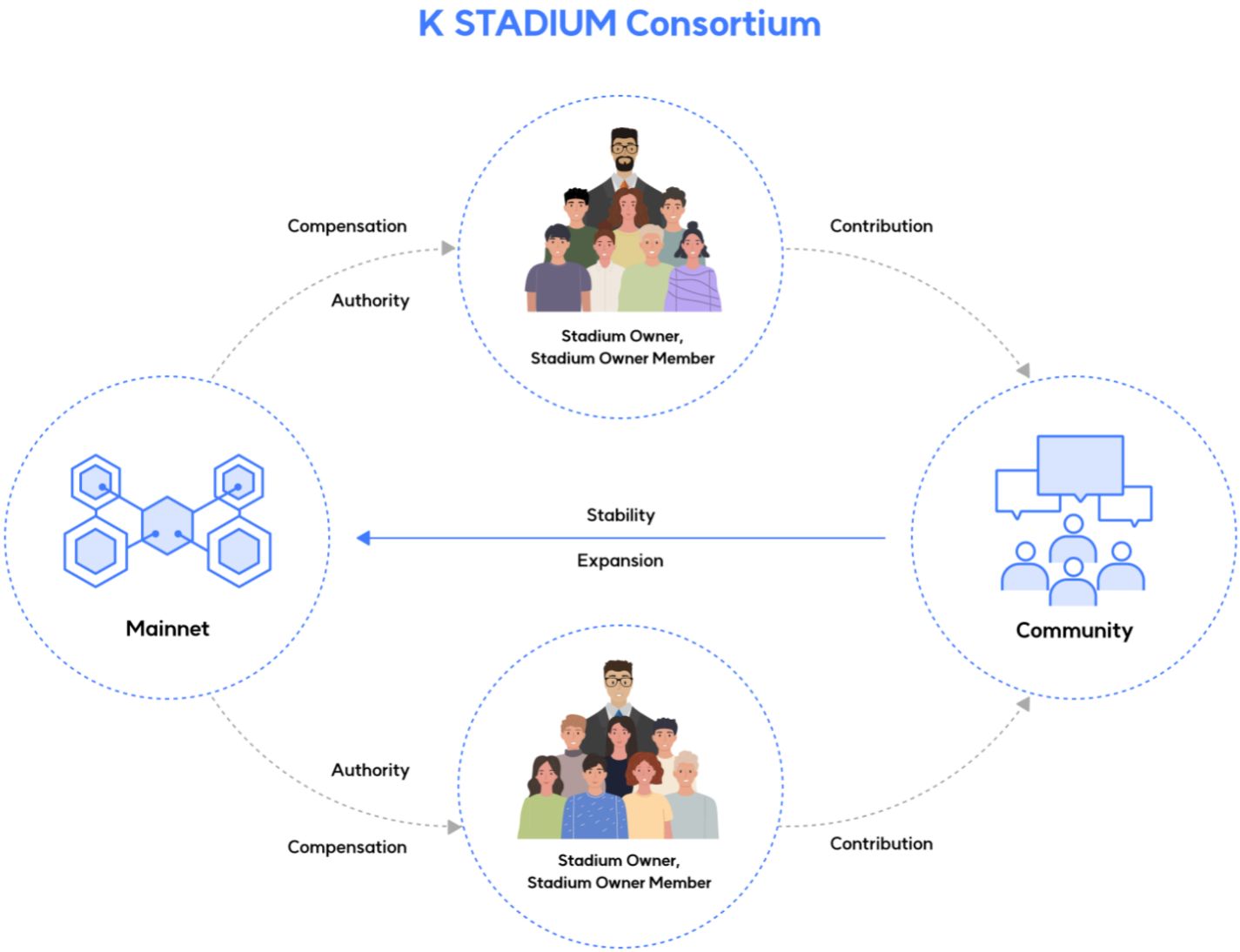


K STADIUM is a new consortium blockchain based on its own developed mainnet Ground Chain, which adopts DPoI (Delegated Proof of Investment), a 4th-generation consensus algorithm that combines investment and community with the existing DPoS.

K STADIUM is defined as a "community-driven joint crypto VC" and a "crypto funding system." Its governance, based on the new consensus algorithm DPoI, moves away from the short-sighted operation of traditional DAO and enables K STADIUM's community to function as a single venture capital through participation from holders. SOM (Stadium Owner Member), or K STADIUM participants, can participate as individual participants in the lucrative activities previously enjoyed only by VCs.

K STADIUM has a continuous three-stage structure consisting of Contribution, Expansion, and Reward, which can be explained as follows: Participants receive equity tokens in proportion to their contribution and qualify to participate in governance through discussions, proposals, and voting. Governance determines the platform's direction and the use of funds (Contribution). The executed funds generates profits and increases the overall fund. The invested projects expand the

ecosystem in the form of DApps, and K STADIUM becomes a more potent and influential VC (Expansion). The platform's participants receive a fair share of the wealth generated by the growth of the community and the platform's expansion (Reward).



1. Introduction

Revenue from traditional business models based on centralized platforms traditionally goes mostly to the owner, a reality far from that of one based on the merits of blockchain technology. Members who have participated in its initial network with significant contributions do not receive the appropriate rewards they fairly deserve. A “blockchain” based economy is one that keeps true to its core

value of transparency and democratic elements, resulting in a fair and equal distribution of profits generated through the contributions of its participants.

The economic model pursued by K STADIUM can be seen as an "Inclusive Economy.” Accordingly, a reward system is needed to encourage all participants or stakeholders to contribute to the ecosystem and governance as well as to share the wealth produced by the ecosystem in a fair and just manner. Once this prerequisite has been established, the next step is to consider how to maximize and leverage the profits generated, resulting in a virtuous cycle of growth. While believers of game theory may adhere to a “zero-sum” economic principle, the blockchain economy is based on the “reverse game” theory, where the sum of everyone’s gains and losses can equal to more than zero. Two core elements are necessary for materializing this principle: first, the collaborative effort of its community, and second, a self-sustaining token economy that continuously drives the platform forward.

The collaborative effort of participants signifies the individual’s dedication to the development of the network. This is made possible through positive behavior reinforcement, commonly in the form of compensation or rewards. Blockchain platforms typically increase the number of tokens issued to reward users continuously. This is the most common and straightforward method, so many platforms adopt the inflation token model. However, there is room for discussion on the method of enhancing platform value solely through the increase in token issuance. While a consistently growing token supply may seem attractive in some regard, a healthy token economy should ultimately be defined by its own driving force. An ecosystem that sits on a well-designed platform will allow for it to expand continuously, simultaneously raising the overall value of the project.

One of K STADIUM's major objectives is to implement a comprehensive blockchain model that distributes fair and just value to all participants while gaining enough momentum to be its own driving force.

2. Background

The biggest challenge for platform architectures lies in the difficulty of achieving both value appreciation and transparent governance that reflects users' intentions, which are fundamental principles of blockchain, while also providing suitable rewards for users within the ecosystem they design.

When architectures examine the aspects of consensus algorithms applied to existing platforms to apply an appropriate governance model, they are often faced with a dilemma between value appreciation and transparent governance operation. When combined with words such as "growth" and the terms "fairness" or "transparency," blockchain platforms can seem forever out of reach. Depending on the consensus algorithm, some governance models may inevitably lead to a decline in token value, while others may mean that users' intentions cannot be reflected.

i. Consensus Algorithms and DPoS

One of the first consensus algorithms to make its way into the spotlight is called “proof-of-work” (PoW). However, the intense computing power necessary to participate in the network created a demand for more efficient algorithms. This resulted in an improved algorithm called proof-of-stake, or PoS. In place of the significant computing power PoW required, the PoS approach generated blocks based on the number of coins a validator or node has staked on the relevant network. The proof-of-stake mechanism, which gives decision-making power to nodes that have acquired a certain stake without mining, seemed to solve the drawbacks of proof-of-work. This structure, which allows for greater influence in decision-making based on network contribution, appeared to be rational at first glance, but it has been criticized for silencing the opinions of users who do not meet the threshold for a certain stake. This latest algorithm still retained some of its predecessor’s centralized aspects. As a means of supplementing the aforementioned system, a form of delegated proof of stake (DPoS) was devised, taking inspiration from the structure of representative democracy as it exists in reality. The DPoS algorithm allowed those with even modest holdings to participate

or vote. The votes go toward a “representative” who is “delegated” authority on the individual’s behalf to oversee matters pertaining to the overall direction of the network, its security, and of course, the core duty of block generation by validating and ultimately reaching a consensus at which point a transaction would be complete. The search for a perfectly balanced and comprehensive algorithm can almost be seen as a “Whac-A-Mole” phenomenon in that issues will continuously arise as existing ones are addressed. And while it is difficult to measure the value of a consensus algorithm itself and the success or failure potential of a governance model through a singular criterion, the process of reflecting the opinions of members is as critical as the success of governance on the blockchain platform itself. Hence, a governance model that cannot fulfill both aspects may be faced with numerous roadblocks as the project and its network continuously grow. Now that the background of consensus algorithms has been somewhat established let us dig deeper into the intricate and crucial mechanisms needed for this new DPoS approach to be sustainable.

ii. Challenges of DPoS Platforms

It takes more than just the “right” consensus algorithm for a governance model to be successful in the long term. While DPoS is the most appropriate algorithm to reflect the opinions of members, governance management in DPoS itself yet poses some challenges. Governance members can be largely divided into voters and representatives. More specifically, the voter's main function, voting, is the critical activity that produces the “delegates” or representatives crucial to the DPoS process. In other words, governance cannot be achieved without voting. And while blockchain inherently assumes the “benign will” of individual participants, the good faith here is not some vague belief that humans are inherently good. It is based on the economic principle that participants will eventually act in the best interest of the community as long as those interests correlate with their own eventually. DPoS was designed with the logic that participants under the system will participate in the decision-making process for the public good of the network. However, looking at elections in real life, the majority simply will not make the effort due to sheer inconvenience. Even with well-designed reward programs, getting people to vote serves as a challenging task.

A representative DPoS platform, EOS, is a prime example that exposed the shortcomings of a DPoS approach. Out of the selected BPs, 21 become super nodes, or “Block Producers” who are compensated for their role of block generation, while the remaining BPs, or “Standby Producers” are compensated according to the number of votes they have received. Such rewards are modeled after EOS’ token economy of allotting 1% out of their annual 5% inflation resource.

Participants desiring to become BPs in the EOS ecosystem take on the role of node operation and information delivery to receive more votes and receive additional block production rewards. Rewards to the token holding individual, however, are not provided by the network itself, but through a 3rd party process explained below.

Individual token holders receive voting rights through staking, but do not receive rewards for the essential and necessary element, which is the vote itself. Ideal governance essentially anticipates members’ participation in decision-making for the future and positive development of the network in which one owns a stake. However, if said stake is not permanent, meaning if the network can be disrupted due to people leaving, there is a limit to the theory of “voter participation” for the public good of the network. Additionally, if there is no immediate reward for individual members taking the time out to vote, the reality of voting being a hassle may outweigh the ideology that members will ultimately vote for the good of the network.

Naturally, this has brought about a gradual decrease in EOS participants. To address this issue, a new model of voting agents called “proxies” took on the role of collecting voting rights for individual token holders while distributing the BP’s rewards for validations to voters as previously mentioned. Although this model seemed to solve the problem of rewards for voting, EOS governance is struggling due to the limit of rewards set by the EOS network itself (KRW 260,000 per year when delegating KRW 50,000,000), which can hardly be seen as a true motivator of the required activity itself.

3. Why K STADIUM

i. Governance

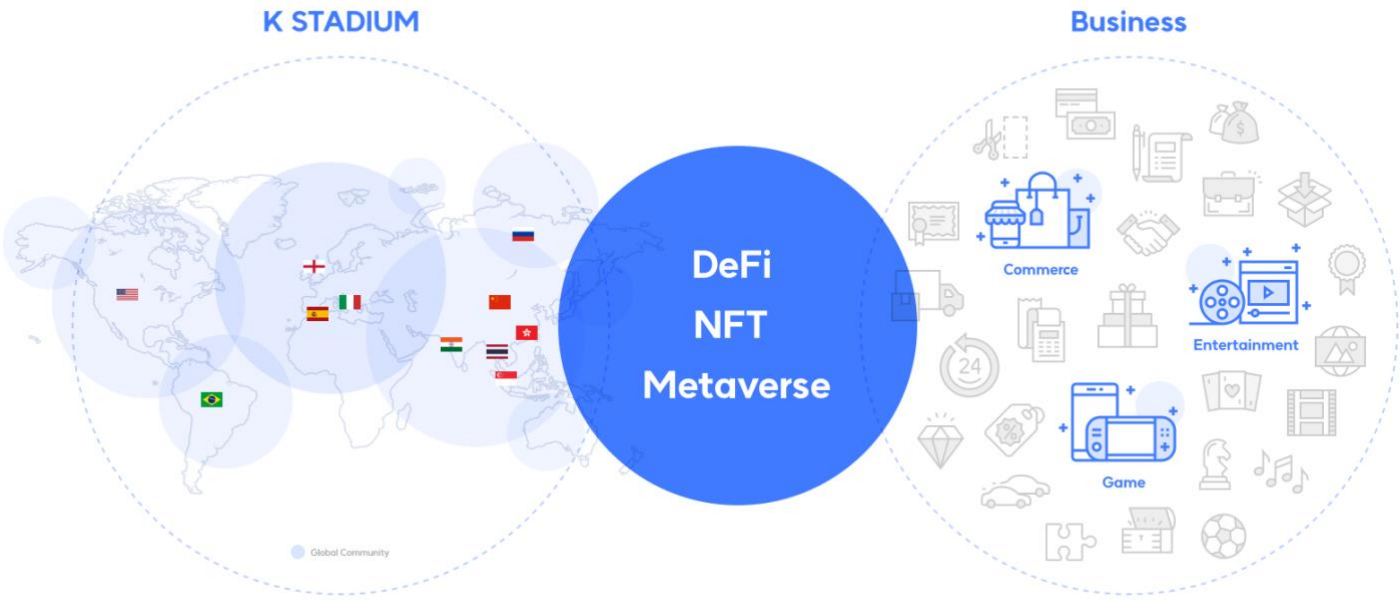
In the previous section, cases in which DPoS governance and its shortcomings has resulted in a gradual decrease in participation were discussed. This phenomenon poses risks of DPoS governance eventually leading to a potentially abandoned network. In this regard, it is safe to assume that the success of a governance model or its network largely depends on a solid driver of participation.

Two critical elements were mentioned for a potentially successful governance model in the introduction: collaborative effort by the community, and a self-sustaining token economy. As such, what could qualify as a solid driver to activate and sustain the behaviors or mechanisms most difficult to achieve simultaneously most critical for the DPoS approach to be effective? The innate structure of a DPoS-based governance model allows for efficient authentication and validation resulting in unprecedented transaction speeds; however, its weakness is exposed when the token holder acts based on “individual benefit” as opposed to acting on behalf of the “community.” While there is no singular solution that will guarantee a perfect participation scenario, we have an agenda which we believe would be the most relevant to our initiative’s scope. We believe that the weakest link in the DPoS environment is the connection of the individual to the community. By this, we mean that the individual has the freedom to withdraw their stake at any given time regardless of financial benefit. However, a network where the individual’s identity strongly aligns with the community’s identity will have a higher probability of retaining its members through a value that outweighs abandoning the project. As such, another look at the EOS network and their 0.5% annual reward simply cannot outweigh the “hassle” of governance participation.

In K STADIUM, participation in governance is a direct decision by participating, beyond changing the structure or interest rate of simple “tokenomics.” This decision is directly related to the direction of funds in the community. Thus, participation in the network carries more weight than just a “vote” to elect someone to decide on their behalf. Allowing users to participate in decisions can be a solution to the fundamental problem of governance stagnation by fostering stronger bonds between communities and individuals through clear rewards.

ii. Community Pool

Venture Capital (VC) refers to financial capital itself or institutional investors who own such capital, which invests in potential startup ventures to generate high capital gains. Start-ups receive investments to solve initial capital problems, and investors hope for a win-win scenario by receiving high yields on their investment should the company perform as projected. Solana is a representative blockchain platform that has received investment from venture capital. Solana is expanding its ecosystem by nurturing Solana-based decentralized finance (DeFi), gaming, and ecosystem-based startups with investment funds. Since it takes considerable cost and time to expand and develop the blockchain ecosystem, rapid growth is guaranteed if funds and manpower are secured through initial investment. However, it is not easy for companies to receive the so-called investments from venture capital, and Individual investors cannot participate in investments on the same scale as those led by VCs. This led K STADIUM to devise a funding system that aggregates the funds of participants into a community pool to expand the ecosystem. The community pool itself functions as a VC. The fund collected in the community pool is used to improve and update the system and supports services to be launched on the mainnet. The expansion of platforms to NFT, deFi, as well as the metaverse leads to high holders' returns, and holders’ returns soon, and the profits from funds are recollected into the Community Pool, leading to the growth of the VC. The larger Community Pool lead to larger project planning and implementations than before, and growth in project size results in increased holder returns. This process creates a sustainable cycle that ultimately increases the size of the fund known as the Community Pool, which results in higher profits for individual participants who have participated in it. As a result, the platform continues to expand while benefiting its users.



K STADIUM seeks to address the issues of a DPoS based environment and encourages holders to participate as decision makers that challenge the traditional participating concept at a direct or indirect level. The choice in direction of their contribution is ultimately up to the community, which allows for expansion of the community pool. Through the activation and expansion of community pools, platforms may secure a more diverse community, resulting in a stable and consistent growth of an expanding platform ecosystem. The fund of holders is an active choice, a proactive contribution to decision making essential for the momentum of K STADIUM's ecosystem.

iii. Technological Capacity

Even with an improved governance system and a vast investment fund, ecosystem activation, and expansion cannot be achieved without the platform's technological capability. Any online based system providing relevant services should be applicable to the blockchain platform. For service providers to implement competitive blockchain-based services online, they need the respective technological approach, which at times may be difficult to achieve on their own. A blockchain developer's technical capabilities rely on the transaction processing speed required to expand the platform, the DApps that sit on the mainnet, as well as other 3rd party-based services. Boasting the world's highest speed (TPS) based

on MDL, K STADIUM ’s technological capacity will play one of the key roles to its expansion. K STADIUM’s developer has taken the existing consensus algorithm and has developed a new algorithm that addresses the issues in the existing one. The new consensus algorithm, called DPoI (Delegated Proof of Investment) aims to strengthen community functions in the existing DPoS by improving the existing DPoS algorithm, while also activating the community pool. The DPoI consensus algorithm, the core of the K STADIUM ecosystem design, becomes the foundation for value appreciation while involving users' participation.

The technical content of the DPoI algorithm can be found in the Yellow Paper, to be announced at a later date.

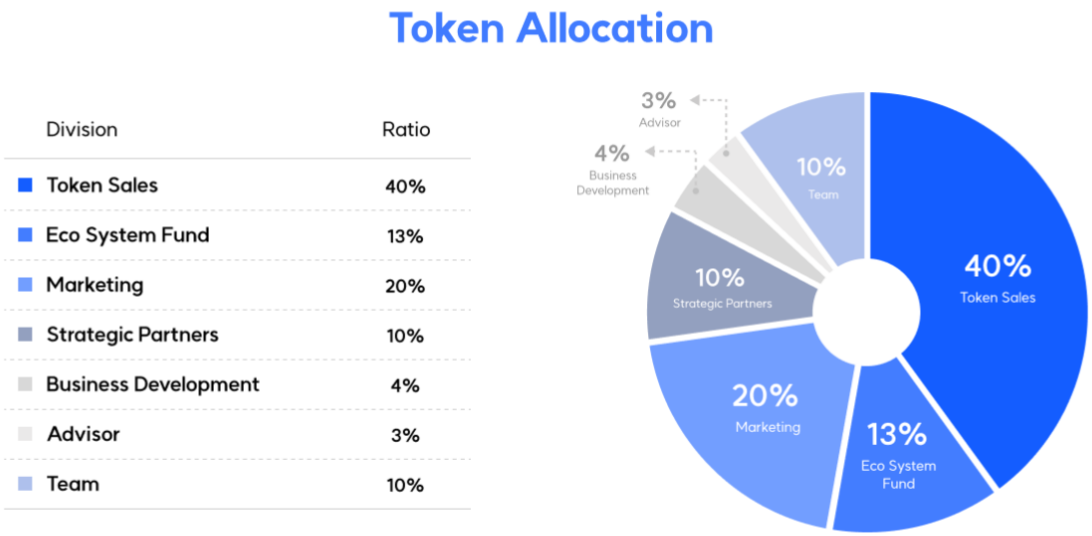
4. K STADIUM

i. Token Economics

a. KSTA

KSTA (K STADIUM) is the primary cryptocurrency utilized within the K STADIUM ecosystem. It serves as a means of contribution, distribution, and rewards and is utilized as gas fees for transactions within the Ground Chain protocol. Protocol contributors receive rewards through an inflation model; however, the total issuance of KSTA is limited to 3.5 billion. To prevent the over-issuance of rewards and the subsequent depreciation of their value, the protocol utilizes a "Restricted Inflation Model," which generates inflation at a designated ratio within the issuance amount over a 15-year period.

- **Coin Name: K STADIUM**
- **Coin Symbol: KSTA**
- **Coin CAP: 3,500,000,000 KSTA**



- **Coin Information**

  KSTA rewards are a form of incentive given to participants and contributors. within the ecosystem of K STADIUM, which are distributed through an inflation-based system. The inflation rate generates 100 million KSTA annually. The design of KSTA aims to preserve its value by limiting the total issuance. Consequently, the issuance of inflation-based rewards for contributors is also limited to a duration of 15 years.

  The goal of K STADIUM is to create crypto-based fund where any individual participants can participate, lowering thresholds and helping DApp operators achieve meaningful results.

- **Sales**

  KSTA is circulated in the market, and anyone who wants to participate in the ecosystem can hold them, exercise their rights by participating in governance, and obtain rewards based on their contribution.

- **Ecosystem funds**

  Ecosystem funds are used to discover and cultivate promising DApps that will lead the ecosystem, integrate blockchain technology into various businesses, and provide resources for close alliances and growth between different industries.

- **Marketing**

  Marketing funds are allocated as referral rewards to recommenders who promote and advertise the ecosystem and are used to facilitate interactions with brand advocates and promote marketing activities.

- **Strategic partners**

  Potential global partners are provided with funds for strategic partnerships related to mainnet expansion.

- **Business development**

  Business development funds are used for administrative costs, such as development, security, equipment, solutions, outsourcing, global expansion activities, and other expenses needed to improve the protocol's performance

and ecosystem development.

- **Advisors**

  Advisors' funds are distributed to experts who have provided critical information in designing the ecosystem and contributed to enhancing its value, as well as to external organizations.

- **Team**

  Team funds are used for infrastructure construction and operation to manage the Ecosystem.

The K STADIUM ecosystem employs governance principles whereby policy changes are subject to community voting. In the event that proposed changes are deemed to impede platform development or decision-making becomes challenging due to low governance participation, K STADIUM Pte. LTD, Singapore, reserves the right to conduct prior reviews of proposed changes and participate in the decision-making process to mediate and improve them.

Furthermore, the operator has the ability to leverage the open-source software (OSS) developer community that is essential to the K STADIUM ecosystem. Some of the operator's distributions can be utilized as compensation for contributors involved in OSS activities.

The ratio specified in the token economy of K STADIUM is subject to variability depending on the amount of available funds in the community pool and prevailing market conditions. When services are reliably deployed on the platform, a coin distribution policy that prioritizes rewards for participants, such as SO and SO delegation, may be implemented.

These policy adjustments are intended to ensure the sustainability of the K STADIUM ecosystem without favoring either growth or distribution policies. The reward system within K STADIUM is designed to distribute generated wealth fairly among all participants who contribute to the ecosystem, including fund amounts, governance activities, and marketing initiatives such as referrals.

b. SOP

SOP is the governance token of K STADIUM. The governance token's primary role is to be used for voting by community members pertaining to K STADIUM governance, which is operated through smart contracts as well as through votes and cannot be traded based on the timeline of the recently published white paper (May 22) and can only be obtained from sending crypto assets to KSTA's Community Pool. If 1 KSTA is remitted to the Community Pool, it will be exchanged for 1 SOP, and the SOP paid can be delegated to the Stadium Owner (SO), a leader verified with a delegable token, for compensation. Along with the delegation of the SOP, the right to vote is delegated, but the delegation does not mean a transfer of value, so the SOP does not expire after the delegation. The SOP delegated to the SO is calculated as the Voting power proportional to the entire SOP. The exchange ratio of SOP and KSTA is not a fixed value and can be changed for the purpose of controlling inflow and price adjustment.

ii. Stadium Owner(SO) & Community Pool

1. Definition and role of SO

SO, or Stadium Owner, refers to a block creator and node operator that executes the entire node of the K STADIUM ecosystem to verify each transaction made on the network. Anyone can apply for the SO role by submitting a separate application, and the SO plays three major roles.

i. Information provider organizing and announcing established

ii. Governance leader who receives delegation of stake from delegators

iii. Operator and validator of all

Additionally, as a large-scale participant of K STADIUM, the SO's role is to promote various policies related to networks and proposals and encourage voting.

2. SO & Voting Power

The ranking prioritization of an SO is carried out in the order of the SO‘s equity

ratio. The SO share is synonymous to (voting power) that can be exercised and is calculated as the ratio of the SO contribution to the total contribution.

$$ SO equity ratio (voting power) = (SO's and delegated governance tokens) / (SO's and community's total governance tokens) $$

The higher the SO stake, or the higher the voting power, the higher the ranking among group leaders, and the higher the number of rewards according to ranking.

3. Roles and Control Flow

The coin holder of the K STADIUM blockchain mainnet, or, the holder sends his KSTA in the community pool and receives a stake token (SOP) (Stadium Owner Power). The mainnet's holder, who has received the equity token, can delegate the equity token (SOP) to the node operator, or the SO (Stadium Owner).

SOs entrusted with equity tokens are ranked according to the number of tokens delegated to them. The role of SO according to the ranking may be modified by voting on the policy of the mainnet.

SOs that have not been put into block generation are broadcasted the agreed upon ledger through gossip protocols. In order to participate in the SO Pool, the retention of the entire ledger is a basic condition as well as being able to operate a node. And to ensure the performance of the entire network, the node server must meet server specifications (hardware and software) to participate in the SO Pool. The ranking of SOs may be performed for each predetermined period according to settings, referred to as a "round." SO selection for the next round is carried out through a snapshot according to the amount of equity tokens held at a certain point in time when each round begins, and rewards for each round is paid at a certain point after the end of the round. Main net users, who have acquired equity tokens through sending crypto assets to Community Pool, can select SOs to delegate their equity tokens after reviewing public data such as ranking, rewards ratio, participation in previous rounds, voting (asset management, policy-making) and policy-making directions through voting.

4. Community Pool

The funds collected by K STADIUM in the community pool by KSTA holders will be returned to the community pool. Funds from the Community Pool can be used as funds for system improvements and updates, such as technical updates to the mainnet (blockchain platform) and development of 3rd Party solutions for mainnet operation, and participants can make investment decisions in services to be launched on the mainnet through governance systems. According to each rewards rate, the return token obtained from the investment is paid, distributed, or returned back to the community pool for a set period of time.

5. Forum Pre-debate and Pre-investment Screening

i. Forum Pre-debate

Any KSTA holders can submit a proposal and conduct a pre-debate on the proposal through the K STADIUM forum. Forum debates are not mandatory for the submission of proposals, but the use of Forums is encouraged to validate proposals and promote a healthy governance culture.

ii. Pre-investment Screening

K STADIUM investment team can make proposals and submit them to voting. in the early stages of K STADIUM governance and thereafter. The proposals may be subject to pre-screening if deemed necessary. The selected projects must be able to prove technological perfection and expected business performance while providing a blockchain-based service that can be launched as a DApp. The projects that passed the pre-screening are disclosed to participants through public channels such as Forum and go through a voting process of the governance community like other proposals.

6. Proposal

The KSTA holder may proceed with a proposal by depositing a certain amount of coin as a deposit. The minimum deposit amount for the proposal can be defined according to the policy, and in order to place the proposal on the voting list, a certain amount must be deposited within a set period of time. Voting begins when a proposal is registered in the voting pool. The deposit paid to register the proposal is

refunded only if it is passed with more than a certain number of approvals through voting. This is a policy to prevent indiscriminate proposals and encourage participation. After registration of the proposal and the completion of the deposit process, the main voting process will be held and the deposit will be refunded or incinerated depending on the voting result.

7. Voting

K STADIUM helps the community to function as a “VC” by adding the participation of holders to the existing DPoS algorithm. Since the execution of funds in the community pool is done through voting, the governance organization of K STADIUM is the driving force and core of the ecosystem. The voting function of K STADIUM is designed to realize an inclusive economy where all participants can contribute to the ecosystem through voting. Even after the disclosure of the community voting function and the launch of the governance organization, K STADIUM will continue to listen to the opinions of its participants to pursue the best interests of the entire community. More information about the current version of the community and voting policy can be found at K STADIUM Docs. Once the proposal is passed, the proposer's deposit is refunded and the community pool funds are executed according to the content of the approved submission.

8. Community Pool Funding

If the content of the proposal passed in the voting includes the execution of funds from the community pool, the funds from the community pool will be executed through a certain process. The method of fund execution, execution timing, and execution standards are subject to a prior agreement when the proposal undergoes a pre-investment screening. In principle, the fund execution plan is disclosed to participants when the proposal is presented or before the actual execution of the funds even for proposals that have not undergone the screening. The fund to be executed is the amount raised in the community pool. In addition, the voting Electoral College and the recipient of project tokens or benefits are also determined. Funds sent in the community pool after the determination of the Electoral College are not included in the execution amount. Therefore, regardless

of the amount, the fund sent thereafter is not subject to the distribution of project tokens or benefits that are given as a result of the participation.

When the amount of KSTA in the community pool decreases as the funds in the community pool is executed by KSTA withdrawal or other forms, the supply of SOP is also adjusted proportionally. As the execution amount is determined based on the amount raised from the community pool, the amount of SOP supply adjusted due to the decrease in the amount of KSTA in the community pool is also based on the total amount of delegated SOP. Since the supply of the entire delegated SOP is simultaneously adjusted at the same rate, the amount of the participant's delegated SOP may be affected by the voting power.

9. Profit

If the passed proposal involves the use of funds that can be returned to external project tokens or other token-based profits, the results of community pool fund execution will be distributed to participants in new project tokens or other forms of medium. The profit is paid according to the rate of the participants' delegation and follows the reward payment mechanism. To be specific, the rate of return is basically determined according to the payment formula of the basic reward, rank reward, and block reward that SOM receives through SO delegation. Non-delegated SOP is excluded from the benefit. The profit payout is calculated from the reward distribution data. However, the payment date and amounts may vary from project to project.

The "data" determination of the returns, the execution of the community pool funds, the adjustment of the SOP, and the return refers to the same data. The reference time related to the execution of funds may be adjusted according to changes in the policy, and the operator needs to notify the change before the revision.

iii. Roadmap

K STADIUM has implemented a participation system that includes a wallet function as a mobile app to lower the entry barrier to the blockchain environment. Its “app” characteristics makes it more accessible to the public and its structure allows for “dapps” to be expanded in various ways down the road.

To expedite the swapping of assets pertaining to funds through K STADIUM, the team is currently preparing to launch Athene Swap, a DeFi service that will be accessible through the K STADIUM App. Through K STADIUM’s DeFi, users can explore various new assets through token linkage as well as DeFi derivatives resulting in additional rewards.

As the number of users increases, KSTADIUM will use MDL as a Layer 2 solution to provide a more practical user experience to accommodate the growing user base.

Based on MDL's high performance TPS speed and small fees, the launch of dApps in various sectors, i.e., games, metaverse, as well as additional NFT platforms will become a reality whereas performance and cost issues hindered them from being so. They will all be implemented on MDL, and will also be serviced through the KSTADIUM App.

The R2E (Referral to Earn) system, which forms part of the user referral reward program, and the DPoI open platform service are expected to be released in 2023. The most recent version of the detailed roadmap for these services can be found on the K STADIUM website (kstadium.io).

5. Technological Background

i. Background: Ethereum & Layer 2 Solution

Blockchain scalability problems may be divided into two scopes: speed and commission. Existing versions have faced challenges in both areas. For example, Ethereum suffers from high transaction fees with low tps speeds. Ethereum's average speed of 20 tps is significantly slower than that of Visa Card's 24,000 tps.

Currently, the wait-time required for internet users for games or electronic payments rarely exceeds a few seconds with low fees. Users who are accustomed to this internet experience have difficulties enduring the inherent limitations plaguing blockchain. In order to implement various extended services based on blockchain as well as provide users with the same user experience comparable to the internet experience, these two crucial issues needed to be addressed. To this end, a method of stacking another layer on the existing Ethereum chain (Layer 1) (Layer 2) has been devised. This increases speed by performing operations on layers outside the existing chain, recording and verifying transactions, and recording only the result values on the existing chain, while stabilizing the entire blockchain network to lower fees. This is called the Ethereum “Layer 2” solution, one of the solutions to the blockchain scalability problem. Representative Layer 2 solutions include Polygon (MATIC), OmiseGo (OMG), Synthetix SNX, and The Sandbox, a polygon-based game.

ii. Ground Chain - Hyperledger Besu

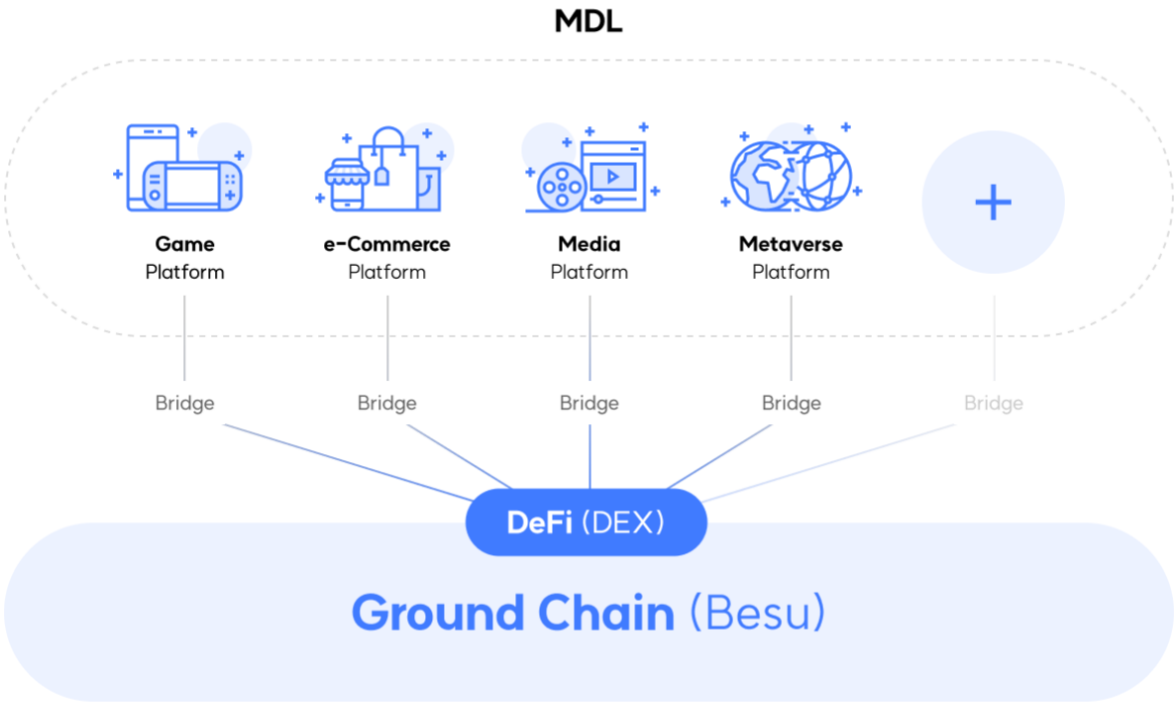
K STADIUM solves the scalability problem in a similar manner to the Ethereum Layer 2 solution described above. K STADIUM uses Hyperledger Besu as layer 1. The ground chain is superior in terms of usability and service scalability due to the usage of Solidity, the same development language as Ethereum, while showing better performance than Ethereum in terms of speed. However, performance issues still persist in being able to provide an internet-like experience to the user.

iii. MDL

The Medium Distributed Ledger (MDL) is based on Hyperledger Fabric, the most commonly used core blockchain system, and serves as K STADIUM's unique software acceleration technology that improves Hyperledger Fabric's performance(3000tps) by more than five times (15,000tps). The K STADIUM team first analyzed and tested transaction flows for each section of the Hyperledger Fabric, where bottlenecks across roughly 50 sections were exposed. Accordingly, various async techniques such as parallel processing of sequentially processed sections, reusage of repeated computational results through memory cache

storage, and minimizing latency for DBI/O were employed to improve performance.

Furthermore, MDL was recognized for its performance from KOLAS (Korea Laboratory Accreditation Scheme) through their measurement of tps, (transactions per second), transaction processing time (latency), transaction block transmission and reception time, as well as confirmation of normal operation through the establishment of an empirical environment.



As mentioned in the previous chapter, the reason why existing Ethereum's Layer 2 solution platforms can provide services such as games is due to its design in being able to provide superior speeds compared to Ethereum. K STADIUM employs MDL, which achieved the world's best tps, higher than Ethereum's representative sidechain, Polygon. MDL, consisting of Ground Chain's sidechain, features much higher performance and lower fees than the existing blockchain. Furthermore, it requires immediate data processing and is expected to be particularly effective in payment, e-commerce, and game sectors where a high number of users need to access the network simultaneously. MDL composed of sidechains can utilize Bridge technology for exchange of transactions with Ground Chain and heterogeneous blockchain platforms or, may be configured to ensure completeness (finality) through the sidechain itself. It may be configured to check

the completeness twice through anchoring technology on the ground chain as well. Based on this MDL technology, K STADIUM is planning to expand its platform by designing several side chains connected to the ground chain. Due to MDL's superior speed, game platforms, e-commerce platforms, media platforms, and the metaverse are implemented as services to form the entire K STADIUM ecosystem. These expanded platforms aim to provide the same user experience as the Internet beyond the speed and convenience provided by existing services.

iv. K STADIUM Bridge

The K STADIUM Bridge is a chain-to-chain asset transfer technology. Currently, it is designed to change K STADIUM's network from Ethereum to K STADIUM Ground Chain. When services such as MDL-based games, shopping malls, and the metaverse are launched in the future, K STADIUM Bridge technology enables free asset transfer from the Ground Chain in Hyperledger Besu to the side chain MDL-based platform.

6. K STADIUM Distributors

K STADIUM Pte. LTD, Singapore

Panjong Kim
CEO/ K STADIUM Pte. LTD, Singapore

William Kang
Vice President/ K STADIUM Pte. LTD, Singapore

Crypted Co., Ltd.
Development & operation

7. Legal notice

i. Legal notice

By accessing this document or any part thereof, you unconditionally accept and agree to the following representations and warranties made to K STADIUM:

This whitepaper is intended solely to describe and provide information about the K STADIUM project. It is important to note that the information provided does not guarantee the project's feasibility, viability, or competitiveness in accordance with your expectations. The information contained within this whitepaper is not intended to provide legal, financial, tax, or any other type of advice, nor does it offer any form of warranty. K STADIUM, its employees, and advisors make no representations and disclaim all express and implied warranties. This document does not constitute a contract or security that guarantees any form of rights, nor does it have legally binding force. The terms used in this whitepaper, such as investment, funding, profit distribution, etc., are not terms related to securities law. This whitepaper is not legally binding, and it does not create any contractual relationship.

While we have made every effort to provide accurate information in this whitepaper, we do not assume any responsibility for its accuracy and completeness. It is also important to note that the information contained herein may

be subject to change at any time.

K STADIUM coin does not possess the legal nature of a security or a stock and, as such, does not grant any rights to dividends or profits. Furthermore, the K STADIUM coin does not guarantee any specific rights or value outside of the blockchain platform.

Acquiring and storing K STADIUM coins may involve various risks, including K STADIUM's failure to launch the blockchain, improve technology, or provide the services outlined in this whitepaper. As a result, before acquiring the K STADIUM coin, all users and participants should carefully consider the risks, prices, benefits, and other related issues. participants are advised to conduct their own investigation of relevant information and regulations and should be aware of the relevant laws within their jurisdiction.

It is important for K STADIUM coin buyers to fully understand this whitepaper and the legal disclaimer and to conduct their own due diligence in compliance with all local laws regarding cryptocurrencies, taxes, securities, and jurisdictional regulations. K STADIUM coin buyers are solely responsible for any and all actions they undertake, including the acquisition and storage of K STADIUM coins.

ii. Privacy Policy and Data Security

K STADIUM's privacy policy and terms of service can be found in K STADIUM app and Forum.