Whitepaper

v2.0.0

Abstract: Solar aims to deliver users a blockchain framework that encompasses both unique and mainstream features, powering decentralised peer-to-peer payments and smart contracts, (non-fungible) tokens and smart contracts. Built with a DPoS consensus model, the Solar Network is secured by 53 elected block producers that verify all transactions as they produce blocks. The native coin is SXP and it is used throughout the protocol and Solar ecosystem.

The Solar community is distributed throughout the world and we encourage anyone to translate this whitepaper into their native language. This whitepaper has been written in a straightforward manner to make it easier to translate using automated translation tools. If you wish to translate the whitepaper, please add a commit to our GitHub repository.

Table of Contents

Introduction

The Solar Blockchain Foundation is a non-profit organisation established in Estonia that focuses on creating a blockchain ecosystem with open-source developers and community involvement.

Our mission is not to control the Solar Blockchain or become the only organisation to fund critical Solar-related technologies, but to build a thriving ecosystem and to provide both financial and technical support to projects and entities within the greater Solar community, in order to accelerate the growth of the ecosystem.

Applications for funding are open to anyone and not limited to people already working within the Solar ecosystem. Each application will be individually assessed on its merits and funding may be awarded to projects that directly benefit Solar.

Anyone can apply to become a member of the Foundation and applications are welcome. Members of the Foundation are encouraged to use their skills to enhance the work of the Solar ecosystem. There are a few requirements to becoming a Foundation member, which can be found on the Solar website.
https://solar.org/about-solar

Blockchain Framework

The Solar Network is powered by Solar Core, a safe and secure layer-1 blockchain framework. Solar utilises the Delegated Proof of Stake consensus model, also known as DPoS. The Solar blockchain has its own native coin named SXP and is fast, modular, sustainable, efficient and fully decentralised. The Solar blockchain does not have the known issues and vulnerabilities from traditional Proof of Work (PoW) blockchains, such as being energy intensive, the risk of 51% attack or other PoW-centred attack vectors. Solar Core utilises BIP340 Schnorr for signatures and with the upcoming release of Solar Core 5.0, Byzantine Fault Tolerance and Boneh-Lynn-Schacham signatures will be introduced. Solar Core also provides a more robust block production routine to minimise the likelihood of node failures and therefore creates a more stable and operational blockchain.

Security first

The blockchain framework is available as open-source software and is actively maintained on GitHub by dedicated Solar Core developers. Anyone is able to contribute using pull requests or open an issue on our GitHub repositories to discuss features or new implementations they would like to see. Any new features or implementations will be subject to review to ensure that the framework will always be safe to use for our users and for anyone using the Solar Network.

Every possible vulnerability discovered should be submitted via our private security track of which the proper procedure and contact information are included on our GitHub profile: https://github.com/Solar-network/.github/blob/master/SECURITY.md

A striking example of how Solar addresses possible vulnerabilities can be found in the *Security and Analysis Report for Solar Core*, which contains a thorough report on every vulnerability found, how they affected Core or its upstream and how they were mitigated. The Security and Analysis Report for Solar Core is publicly available and can be accessed from this link: https://github.com/Solar-network/security/tree/main/solar-core
Or visit this link to learn more about the security of the Solar Blockchain:
https://github.com/Solar-network/.github/blob/master/SECURITY.md

Voting and Delegation

The Delegated Proof of Stake (DPoS) consensus mechanism entrusts 53 block producers (BPs) with the task of securing and maintaining the network, utilising high-performance servers. Each BP has the responsibility of producing one block per round, with each round consisting of 53 blocks. The full production of a round is a joint effort by all 53 BPs, with an interval of 8 seconds between blocks.

The output of each round will be a maximum of 477 SXP, which is subsequently shared among the BPs. The individual reward for each BP is determined by their respective ranking within the top 53. Delving into the technicalities, the distribution of rewards adheres to the following formula:

$$reward = \frac{N+X}{D} \cdot \frac{R \cdot D}{S}$$

Where:

- N = rank (position of the block producer at the start of the round)
- X = 53 (a variable used to determine the reward ratio between the top-ranked and bottom-ranked BP)
- D = 53 (the total number of block producers)
- R = 9 (the average block reward in a single round)
- $S = \sum_{N=1}^{D} \frac{N+X}{D} = 80$

The active block producers (as of 6th July 2023) have approved a plan to reduce inflation by 10% by abolishing the donations that were sent to foundation and development funds, after both received appropriate funding. This has been incorporated into the rewards formula above by changing the value of R from the originally proposed 10 to 9.

The formula implies that a BP at rank 1 can generate a minimum of 6.075 SXP per block, whereas a BP at rank 53 produces a minimum of 11.925 SXP per round as each rank lower increases the block reward by 0.1125 SXP. Additionally, each block also includes fees gathered from transactions within the blockchain, which serve as additional rewards for the BP running an active node on the blockchain.

Block rewards act as inflationary coins, increasing the total SXP supply by a maximum of 477 SXP per round. This consistent inflation gradually decreases over time due to the non-fluctuating rate of rewards. Nonetheless, the quantity of block rewards could be adjusted in the future through changes to the milestones of Solar Core. Such modifications, or the introduction of a halving mechanism, would require the consent of the block producers.

Voting

Voting is a voluntary and optional activity that can be, but does not need to be engaged in when interacting with the Solar Network.

As previously highlighted, block rewards and transaction fees are granted to the active block producer (BP) responsible for generating a given block and fortifying the network. This amalgamation of the SXP block reward and any accompanying fees is designated as the “total reward”. On the Solar Blockchain, a considerable number of BPs opt to take a minor commission from the total reward, distributing the residual amount among their voters. This reward sharing is entirely voluntary and not all BPs partake in this practice. The percentage of the commission taken from the total rewards can greatly differ among BPs, ranging from 0% to 100%.

block producers are elected by their voters, who employ the weight of their wallets (known as votes) to support their chosen BP. Should a BP gain enough votes, they will join the esteemed ranks of the top 53, subsequently commencing their reward accumulation. It is worth noting that voters do not lock or transfer their SXP coins to a BP. Instead, when a user casts a vote, their votes are assigned to their selected BP. These votes are automatically adjusted as funds move into and out of the address of the user, eliminating the necessity for repeated voting or (partial) unstaking. If a voter wishes to change their vote, they simply update their vote by broadcasting a new vote transaction, or sign an empty vote transaction to remove their vote completely. These transactions can be executed using wallets supplied by Solar. A single vote transaction can include 1 to 53 block producers, allowing users to vote for multiple block producers from one address at any time.

For more information regarding block producers and their proposals, please visit the proposal website: https://delegates.solar.org. Please note this will be decommissioned when a new implementation will be made available on the Solarscan explorer.

Burning Mechanism

The Solar Blockchain introduces a unique transaction type referred to as "burn transaction". This transaction type empowers anyone to burn SXP coins directly from their Solar Wallet, without requiring any technical expertise. However, this feature is not available in the current Solar Wallet. Once released, it will come with strong warnings and a prominent security disclaimer within the wallet interface.

Many Solar-associated products and features such as token creation, the metaverse, and launchpad, will integrate these burning transactions.

In addition to this, the Solar Blockchain incorporates an automatic burn mechanism that eradicates 90% of the fees from each transaction. This feature was activated in early 2022, contributing to a continuous reduction of the circulating supply.

While the Solar Blockchain incorporates multiple burning features, it is essential to note that all are integrated by third-party entities. The Solar Blockchain Foundation neither endorses nor promotes any of these burning activities, adhering strictly to the necessary regulatory compliance.

Roadmap

The founders of Solar provided a roadmap with milestones they aim to achieve together with the community, block producers and open-source developers. The goal is to make the Solar project more dynamic by improving on the roadmap items, but not being strictly bound to a single utility. As blockchain technology and market demand evolves over time, so will Solar. A dynamic overview of the roadmap will be published on the website. The roadmap is visible on the official Solar website:

The roadmap with the Key Features of the Solar project and Solar blockchain will be described in the next section.

Solar Core 5.0

The upcoming release of Solar Core 5.0 will mark the introduction of a large number of new features and improvements, of which the most significant have been included in this section. This covers not only a new consensus model and the Solar Virtual Machine (SVM) but also username registration, permissioned keys and node management.

Consensus

The most significant change to the blockchain core in Solar Core 5.0 will be the change of consensus model to a Byzantine Fault Tolerance (BFT) model. This model stems from *The Byzantine Generals Problem*, a game-theory problem proposed in a paper by Lamport, Shostak & Pease (1982) which describes how dispersed elements can reach consensus without the need for a central trusted party.

In *The Byzantine Generals Problem*, multiple generals (nodes) must agree on a battle plan to invade an enemy city. They will only succeed if they all attack at the same time (reach consensus) while communicating only by messenger (ergo they do not all necessarily have the same information at all times). Some generals may be traitors trying to confuse the others (faulty or malicious nodes). The algorithm used to devise a solution functions as long as no more than one third of the elements is faulty or malicious, granting strong resilience to distributed networks that implement BFT. Its application in blockchain has proven successful due to its ability to reach consensus between distributed nodes even when part of the network is faulty or acting maliciously.

This model will be complemented by the introduction of aggregated Boneh-Lynn-Schacham (BLS) signatures which allows block producers to attest that blocks and transactions are valid when they are proposed to be added to the blockchain by any other block producer. The combination of BFT with BLS allows for immediate block finality (8 seconds as is the current blocktime) which in turn will make the network fully fork-resistant.

Better security resilience is achieved by allowing block producers to run multiple nodes for block production simultaneously combined by only selecting block producers that signal their nodes are online. This means offline block producers will not be included in the selection at the start of each round, better guaranteeing uptime and reliability of the network as a whole.

Solar Virtual Machine (SVM)

The Ethereum Virtual Machine is what allows smart contracts to function on Ethereum and many of its forks and competitors. This virtual machine captures the state of every contract on the network as each new block is generated and added to the blockchain. It functions separately from the distributed ledger that many would view as the actual blockchain.

Rather than just forking an existing Ethereum execution client like Geth and relying on Ethereum for updates, Solar is working on an implementation created specifically for Solar Core. This ensures our Solar Virtual Machine (SVM) will function without fault while running alongside the Solar blockchain and that it incorporates every feature required for the support of tokens, NFTs, smart contracts, MetaMask compatibility and any tools developed for the Ethereum ecosystem.

While creating a custom implementation is considerably more difficult and strenuous than just relying on Ethereum to progress, it is the only way to guarantee that Solar Core 5.0 brings all the features you are excited for in a safe, secure and easy-to-use way. The Solar Core nodes will process batches of transactions for both the blockchain itself as well as for the virtual machine powering smart contracts and more.

For the development of the Solar Virtual Machine, a provisional roadmap has been created of which the most important milestones are included here.

Beginning with a Proof of Concept (PoC), we will establish smart contract functionality within the SVM akin to how they have been implemented on Ethereum, opening up innovative avenues for the operation of smart contracts on the Solar Network. The SVM will incorporate persistent contract data similar to Ethereum, enabling the secure storage and reliable modification of smart contracts and their states.

The post-PoC phase is a refining process aimed at enhancing the robustness, scalability, and reliability of the SVM. This ensures we have a dependable and secure platform for managing and performing complex transactions. Upon completion of the first iteration, the SVM will be successfully integrated as a TypeScript module. This key milestone signifies the fusion of the various components of Solar Core and the SVM into one cohesive, interactive network.

Next up is the Core Integration phase, facilitated by the Core-SVM plugin. This phase marks the union of the smart contract capabilities of the SVM with Solar Core. The creation of API

endpoints will ensure compatibility with popular tools like MetaMask, enhancing the user experience and interaction with the Solar ecosystem.

Finally, a comprehensive private testing phase will ensure a bug-free, secure experience. This phase leads up to the Public Testnet Release, giving the wider community a chance to understand and test the extended capabilities of the SVM before its deployment to the mainnet. In essence, the SVM development expands the potential of Solar Network, providing a host of opportunities within the Solar ecosystem.

Permissioned keys

In the current (Solar Core 4.x) implementation, all end-user interactions with the blockchain core are based on their single mnemonic and (derived from the mnemonic) their public key and address. One mnemonic is used to transfer, vote and register or resign as a block producer. The same mnemonic is used for signing blocks in case the key has been registered as a block producer. This only differs if a user registers an extra public key, from which point onwards both mnemonics will be required when creating transactions, as an enhancement to its security. Solar Core 5.0 will introduce permissioned keys, with which you can access only pre-specified functionalities. This means you can use the balance in your wallet without ever using the mnemonic that generated it - enhancing your security even further.

The original “master” mnemonic will still retain all functionality, however users will be able to register additional permissioned keys that use a separate mnemonic for specific predetermined functionalities. The original mnemonic can be used to register any number of permissioned keys and a user can therefore create any number of additional mnemonics that can only transfer (an unlimited or predetermined amount of) SXP or that can only be used to update the vote of the wallet, for example.

As an example, this allows users to register a permissioned key for their wallet with a spending limit, which they can share with a relative or friend and give them access to a specific amount of funds. It allows them to share their wallet and/or funds with a preset amount.

However, if anyone registers an extra (non-permissioned) mnemonic on their wallet besides their original “master” mnemonic, as a matter of security this will still be required to transact even if they use one of their permissioned keys.

Username registration

With Solar Core 5.0, a separation will be made which allows usernames to be registered without immediately registering as a block producer. Currently, a username is automatically registered as block producer - this will no longer be the case but all existing usernames will retain their functionality as block producer. With Solar Core 5.0 anyone can still choose to

upgrade their username to block producer status in a separate upgrade transaction, but this is not required.

Having usernames registered on-chain allows for a number of improvements. Usernames (both regular and those upgraded to block producer alike) can store additional metadata like avatars and biographies associated with their account that can be accessed by external apps for a more inclusive and friendly experience. Additionally, usernames can function as a human-readable account name so you only need to know a username rather than a full blockchain address to transfer funds to someone else. This simplifies the process of sending transactions and makes it more user-friendly while minimising the possibility of errors when inputting a recipient, which in turn improves the user experience.

Usernames can be combined with (smart) contracts or decentralised applications to allow for a wide array of use cases. These include domain names leading to personal or corporate websites, (encrypted) messaging apps and cross-chain support, contracts which allow for transferring SXP and receiving a different currency to a specified address, or implementing a digital ID connected to a username. There are numerous possibilities and usernames can play a vital part in making Solar Core a powerful tool for your blockchain applications while enhancing accessibility.

Node management

Anyone that wishes to run a Solar Core node, whether as a block producer, exchange or other network participant, will see several improvements with the release of Solar Core 5.0. These improvements increase both security and reliability by implementing new features or changing existing features.

Solar Core will have a more minimal footprint by not requiring the overhead of the PostgreSQL database, by switching to SQLite3 which improves performance. Operating a node will be easier due to an improved node management interface. Security is enhanced by the ability to run with all ports closed due to no longer requiring an open P2P port, and by disabling the Public API by default. Additionally, plugins will only run on relay (non-block producer) nodes. The combination of these features make for a more reliable, secure and user-friendly experience for any and all Solar Core node operators.

Wallets

The primary tool for direct interaction with the Solar blockchain is the Solar Wallet. Initially, these wallets, which have been forked from the ARK repositories, provide fundamental functionalities such as sending and receiving SXP coins and voting for block producers on the Solar blockchain.

However, the evolutionary journey of the Solar Wallets does not end here. We are in the process of developing new desktop and mobile wallets that will enhance user interaction with the diverse features offered by the Solar blockchain. These new-generation wallets will offer functionalities such as token creation, interaction with the smart contracts, blockchain monitoring tools, and much more.

A significant leap in wallet capabilities will come with the release of Solar Core 5.0. This upgrade will enable compatibility with MetaMask or any other ERC20/EVM compatible wallet, enhancing the adaptability and convenience for users of the Solar blockchain ecosystem.

Documentation and SDK

Solar will provide a dedicated documentation suite with all the required documentation and SDKs to help developers kickstart their projects on the Solar blockchain. Initially, Solar will focus on providing support for the following programming languages: TypeScript, JavaScript, Python and Solidity. More support for other programming languages will be provided over time, if needed or desired. The documentation suite is a work in progress and will be expanded upon as we add new features or implementations to the Solar blockchain. Technically, anyone is able to interact with the blockchain by using the Public API and/or WebSocket API. The dedicated Solar documentation suite is available here:
https://docs.solar.org

Solarscan

Solarscan is the latest addition to the Solar ecosystem. It is a cutting-edge block explorer, meticulously designed to integrate flawlessly with the upcoming Solar Core 5.0. This modern explorer enables users to conveniently track transactions, stay updated on the latest blocks and monitor network health in real time. As Solar Core 5.0 evolves, Solarscan will parallel its progress, continuously updating its features to provide you with the newest advancements.

Solarscan significantly enhances the user experience with the Solar blockchain by offering a host of novel features. With personalised wallet pages, users gain a dynamic view of both mainnet and testnet blockchains. Real-time data is dynamically loaded on every page, providing immediate updates on transactions and other key network activities. In terms of terminology, Solarscan is in sync with Solar Core, thereby easing navigation and comprehension. Equipped with such robust upgrades, Solarscan is your ultimate tool for exploring the Solar blockchain like never before.

A testament to the merits of Solarscan are the endorsements it received from block producers who tested its functionalities extensively and provided valuable feedback. Their unanimously positive responses highlight the innovative, easy-to-use interface, robust build, and real-time updating features of Solarscan. These advances are expected to strengthen the position of Solar as it prepares to compete with the large third-generation blockchains of 2023 with the launch of Solar Core 5.0 later in 2023.

In light of the emergence of Solarscan, the legacy explorer previously managed by the Solar Blockchain Foundation has been discontinued. Users will be redirected to Solarscan for viewing blockchain data. Even as we appreciate the seamless integration of Solarscan with the Solar blockchain and its growing popularity within the community, it is essential to clarify that Solarscan is not a product of the Solar Blockchain Foundation. As such, all data displayed on the Solarscan website is independently maintained and does not reflect any endorsement by the Solar Blockchain Foundation. This stance is particularly important in the context of regulatory compliance, given that certain features or third-party data on Solarscan, such as burning mechanisms or block producer proposals, should not be construed as endorsed or promoted by the Solar Blockchain Foundation. Our redirection of users from the old explorer to Solarscan is purely based on its user experience and technological compatibility with the Solar ecosystem.

Dokdo

Dokdo, as a dedicated and independent entity, thrives on the advancement of the Solar ecosystem. The product line-up that Dokdo brings to the table is both innovative and expansive, fostering vibrant dynamics within the ecosystem. The portfolio includes Solar Debit Cards, District 53, tymt, and moon.store.

Given the proprietary mechanisms involved in Dokdo products, such as SXP burning, we maintain discretion regarding detailed specifications of Dokdo and its offerings. This approach is designed to preserve the integrity and security of our operations.

For comprehensive insights into Dokdo's operations, we invite you to explore the Dokdo lightpaper, a streamlined documentation encapsulating their vision, products and strategy. Discover more at https://dokdo.sh.

District 53

District 53 is another innovative product in the Dokdo lineup, a metaverse that has been designed with a unique mix of entertainment, commerce, and user ownership. Inspired by successful elements from existing metaverse projects such as Decentraland and Sandbox, District 53 has crafted a unique environment that provides users with a diverse set of activities and rewards.

Land Ownership

In District 53, users have the opportunity to purchase virtual land through an auction format. This approach ensures that a staggering 90% of the initial transaction cost is burned, with the remaining 10% being distributed to the developers of District 53. This land, once purchased, is handed over to the wallet address of the respective user as a non-fungible token (NFT), enabling them to enter the District 53 game with the same wallet address. Owners can build, modify and control these assets until they decide to sell them on an NFT marketplace, where they retain 100% of the sale proceeds. Note that the feature to sell and transfer these lands as NFTs will become available after the SVM is available on the Solar Network mainnet.

In-Game Activities and Rewards

District 53 offers more than just land ownership. Users can engage in numerous in-game transactions, featuring mini-games as SXP earning opportunities. These mini-games include Capture the Flag, Parkour, kart racing, arena wars, poster search, and more. The metaverse currently holds bi-weekly events, averaging 35-40 users per event. Dokdo expects user engagement to increase significantly once all District 53 roadmap items are completed, and they kickstart marketing efforts.

Advertising and Income Opportunities

District 53 is not just a playground but a dynamic marketplace for businesses and brands. They can leverage the platform to advertise their offerings in the main square, where users spawn. In addition, users can earn additional income by placing advertisement boards on their virtual land, further integrating the virtual economy with real-world utility.

Roadmap and Future Developments

District 53, a fork of Minetest, has several exciting updates on the roadmap, aimed at enhancing the user experience and expanding the gameplay:

- Improved graphics with the addition of shaders, bloom, and ray tracing
- VR development to deepen immersive experiences
- The introduction of a special server for meeting rooms, conferences, and school classes
- Enhancement of the main server with added NPC activities
- New skin packs and servers for varied gameplay
- Introduction of new PvP games and daily play-to-earn activities

While District 53 offers an environment rich with SXP burning and in-game transactions, it is essential to clarify that these activities and the governance of the metaverse itself are under the purview of Dokdo, and not affiliated with Solar. The development and future of District 53 are fully steered by Dokdo, ensuring a unique experience distinct from the Solar ecosystem.

tymt

Developed by Dokdo, the same innovative minds behind District 53 Metaverse, tymt is a promising solution set to revolutionise the gaming industry. This next-generation game launcher bridges the gap between traditional, blockchain, and Web3 games, overcoming the challenges that have often hampered blockchain gaming.

District 53, a voxel-based Metaverse game utilising the Solar Blockchain, has drawn significant attention and reached significant milestones under Dokdo management. It successfully garnered a dedicated and active community of gamers that transformed District 53 virtual land into a dynamic metaverse filled with unique concepts and ideas.

However, throughout District 53's development and operation, Dokdo identified several industry-wide obstacles. Major game libraries and launchers such as Steam and Epic Games are resistant towards games involving crypto transactions or NFTs. The monopolistic tendencies and high fees of platforms like the Windows Store and Apple Store conflict with the decentralised nature of crypto. Furthermore, there are significant challenges in making games platform agnostic, appealing to wider audiences, and increasing user bases among open-source and Web3 game communities.

Dokdo created tymt as the solution to this problem, which leverages the power of blockchain technology to disrupt and innovate within the gaming industry. This platform provides a unique solution for games across different systems and takes a decentralised, user-first approach to game development and distribution.

While the Solar Blockchain plays a pivotal role in tymt's ecosystem, Dokdo's design ensures that the platform is capable of supporting various projects, including Ethereum, Binance Smart Chain, Solana, and many others. The games on tymt are designed to be platform-agnostic, enhancing the user experience across Windows, Linux, and macOS.

Moreover, tymt respects user privacy. It eliminates the requirement of providing personal details for account creation, instead, users can use their non-custodial wallet address secured by a 24-word mnemonic. This approach extends to purchases as well. With tymt, players can purchase games or other services without having to disclose any sensitive information.

Dokdo has big plans for tymt beyond the initial release. It is important to note that while the Solar ecosystem is excited to support tymt, its development will be continued by Dokdo. Major improvements and updates to tymt are expected after the release of Solar Core 5.0. So, stay tuned for the future of gaming – tymt is only just beginning its revolution.

Solar Card

We are thrilled to introduce an exciting new product: the Solar Debit Card. This development exemplifies our commitment to our community and broadens the utility of the Solar ecosystem.

Developed in partnership with the well-established company, Choise.com, the Solar Debit Card provides seamless crypto and fiat transactions. Known for issuing over 50,000 debit cards and processing over 2,000,000 transactions monthly, Choise's robust platform extends to approximately 140 countries, including the USA, China, Republic of Korea, and Turkey.

With the Solar Debit Card, you gain access to a wide range of features including IBAN accounts, low fees, generous card load limits, and support for multiple currencies like USD, EUR, GBP and KRW. Additionally, you'll be able to easily buy and sell crypto, pay for goods and services globally, withdraw money from ATMs, and enjoy concierge services and discounts on a range of goods.

Due to regulatory requirements and in the spirit of comprehensive transparency, we must stress that the specific details concerning the Solar Debit Card will be shared by Dokdo in their forthcoming whitepaper. This approach ensures that all elements of our operations comply with the highest standards of regulatory compliance.

moon.store

moon.store is a unique e-commerce initiative from Dokdo, designed to integrate the Solar Blockchain into everyday transactions. It is a universal marketplace where users can purchase a wide variety of merchandise, from clothing and accessories to exclusive branded items and potential future offerings such as Ledger devices. All transactions on moon.store are conducted using SXP, further promoting its utility in real-world applications.

Dokdo has consciously chosen to name the platform agnostically, thus aiming to cater to a broad ecosystem of users, beyond just the Solar community. The idea behind this is simple but powerful – why limit the platform to only Solar-related items and users when there's a whole universe of potential customers and projects out there?

To this end, moon.store welcomes other projects to apply and list their custom merchandise on the platform. Projects can list their branded products for a small listing fee, paid in SXP. This inclusionary approach not only benefits the listing projects by providing them with a platform to sell their merchandise, but it also encourages a wider user base to buy and use SXP, thereby expanding its ecosystem.

In the future, Dokdo plans to continually expand the product offerings on moon.store. The platform will also consider user-provided designs or those provided by Solar block producers. For those interested in collaborating, they can easily get in touch with Dokdo or use the contact form available on the moon.store website.

moon.store represents an innovative blend of e-commerce and cryptocurrency, fostering greater utilisation of SXP and promoting its acceptance among a broader range of users. Its development aligns well with Dokdo's mission to drive blockchain integration into mainstream usage.

Partners

As part of our ongoing growth strategy, we have been prioritising the development of regional partnerships. Our belief is that establishing strong local connections is more effective for market penetration than global marketing campaigns or a one-size-fits-all approach. Regional partners provide an understanding of the unique culture, market dynamics, and specific needs of their locale.

Currently, Solar is in collaboration with several regional partners beyond those listed within this document. Additional partnership announcements will be made, either directly through Solar or through the independent entity, Dokdo.

The Solar Blockchain Foundation is actively engaged in discussions for potential collaborations in Japan, Turkey, and the USA. These partnerships, when solidified, will be disclosed separately through our social channels and the whitepaper will be updated accordingly to reflect these new alliances. As we continue to broaden our regional reach, we look forward to accelerating Solar's growth in diverse markets around the globe.

Lysithea Ventures

Lysithea Ventures is a renowned entity in the business services sphere with a specific focus on assisting projects to efficiently break into the Korean market. Their expertise, coupled with a comprehensive understanding of both the international and local market dynamics, has allowed them to craft and execute successful strategies for numerous projects.

This partnership brings invaluable benefits to Solar, including expanding Solar’s reach, understanding the Korean market’s idiosyncrasies, and offering Solar’s innovative solutions to an extensive network of potential users and investors in the Republic of Korea.

ICO Pantera

ICO Pantera, another crucial part of Solar’s strategic alliance, is acknowledged as the leading Korean community in the crypto and blockchain arena. As a direct creation of Lysithea Ventures, ICO Pantera serves as a platform for crypto enthusiasts and investors.

This community not only shares insights and information but also spurs the growth of projects in the blockchain domain. Solar’s association with ICO Pantera brings Solar a step closer to the Korean audience, fostering a more profound engagement and opening doors for collaboration and growth.

ChangeNOW

ChangeNOW is a non-custodial instant crypto-to-crypto and fiat-to-crypto exchange. Users can trade over 200 coins without creating an account. ChangeNOW and Solar have been working together for many months. We will continue collaborating with ChangeNOW and working together on further marketing initiatives.

StealthEX

StealthEX is an instant non-custodial crypto exchange that enables users to exchange over 670 assets. Solar has been working with StealthEX since late 2022. We have enjoyed working on several marketing ventures together and will continue to work with StealthEX to promote SXP.

NOWPayments

NOWPayments is a non-custodial crypto payment gateway that allows anyone to accept crypto payments on their websites, online stores and social media accounts. It currently supports over 150 cryptocurrencies, including SXP. Solar has been working with NOWPayments for many months, and we shall continue to work closely with them to bring SXP to a wider user base.

Travala

Travala has been collaborating with Solar since 2022. We are proud to be associated with this leading blockchain-based travel booking platform. Travala users can book flights, activities and accommodation using various cryptocurrencies, including SXP.
Travala represents an exciting example of how SXP can be used in the "real world". We are looking forward to our continuing relationship with Travala.

Final word

Thank you to all the Solar community members for sticking with us since the start of the mainnet. Our journey has had many highs and lows. 2022 was a year of uncertainty where we had to focus on getting listed on different exchanges and laying the groundwork for Solar. Despite these challenges, Solar has grown stronger and is now one of the top 200 crypto projects. We are also listed on many major exchanges.

We couldn't have done this without our community, our dedicated block producers, our partnerships, and our solid plans for the next year. All these things are helping Solar become a top-level project in the blockchain industry.

We promise to keep updating our roadmap and this whitepaper as needed. Now that the hardest part is behind us, we are ready to work on and promote our best products and utilities. Our exciting partnerships and collaborations make us believe that we can become one of the leading projects in the industry.

Thank you for reading this Whitepaper. As always, you can get in touch with us through our community channels. It's an honour to lead this great project and work with such an amazing community.

Nayiem Willems
CEO - Solar Blockchain Foundation

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