

# MetaChess

## Play-to-Earn NFT chess game

MetaChess team is creating the first blockchain-based chess game where users can monetize their gaming experience with PAWN - the main utility token of the platform.

*PAWN will act as an official currency of MetaChess and also as a governance token. PAWN holders will also be able to participate in the governance of the platform via a Decentralized Autonomous Organization (DAO), where they can exercise voting rights on key decisions of the MetaChess game development and PAWN distribution. MetaChess aims to bring blockchain technology into a chess game, attracting both crypto and non-crypto game enthusiasts by offering the advantages of true ownership, digital scarcity, and monetization capabilities.*



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# The Whitepaper

## 1. Introduction

Since the publication of the Bitcoin whitepaper in 2008, the concept of blockchain has spread across the world. The original Bitcoin blockchain was designed as a peer-to-peer payment system that allows people to transfer value without intermediaries like banks or payment processors.

In 2014, Vitalik Buterin proposed a new blockchain infrastructure called Ethereum, which enabled developers to create various kinds of blockchain applications using “smart contracts”. However, Ethereum didn’t solve the scalability problem and, with its ~15 TPS, failed to support high-throughput applications such as gaming or decentralized exchanges. That is not Ethereum's only issue, with NFTs getting more popular Ethereum network is getting more expensive.

In 2017 Changpeng Zhao or simply known as CZ created Binance (BNB coin). BNB was initially issued as an ERC-20 token (on the Ethereum platform), but it will soon be transferred to the main Binance Chain.

In the following years, Binance Chain evolved into a better version called Binance Smart Chain, solving current Ethereum issues. Binance Smart Chain can process ~160 TPS and still have the same Ethereum features!

That makes Binance Smart Chain a perfect blockchain for our chess game!

### 1.1 Web3 & Metaverse

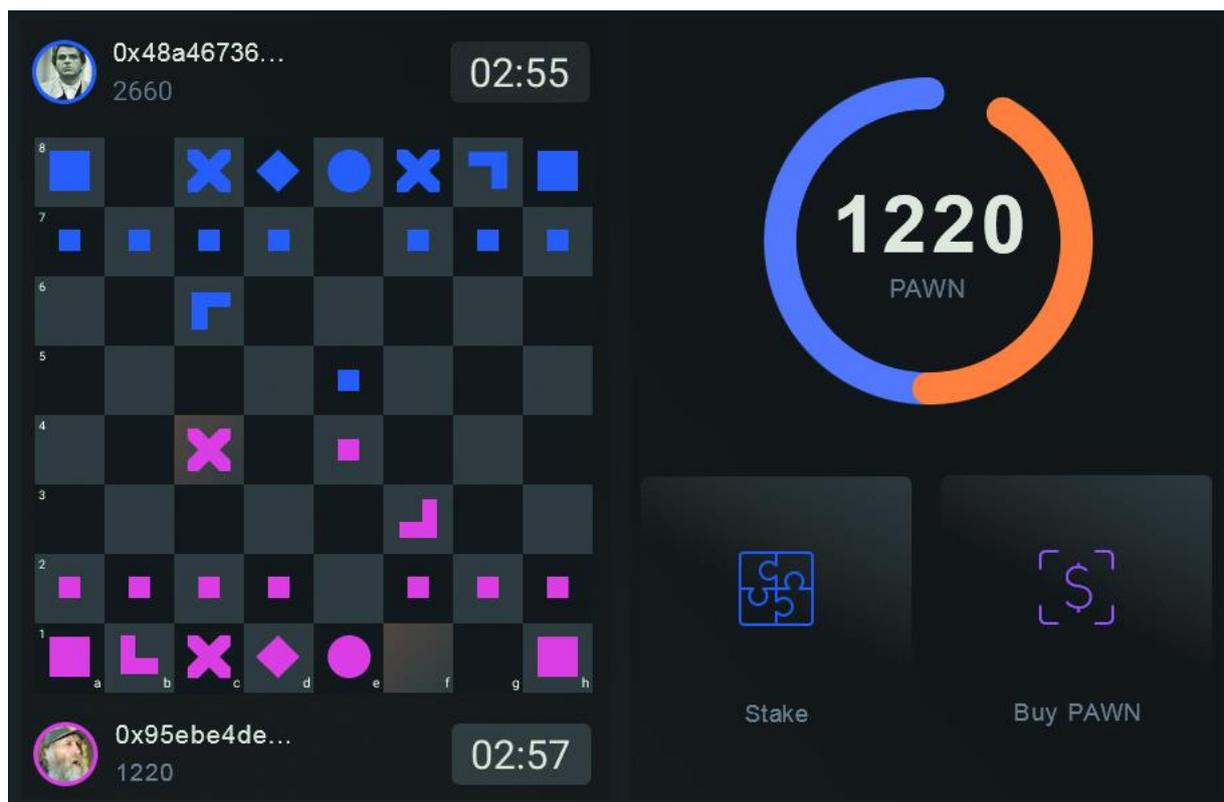
Web3, also known as Web 3.0 is an idea for a new iteration of the World Wide Web that incorporates decentralization based on blockchains. The term was coined in 2014 by Ethereum co-founder Gavin Wood, and the idea gained interest in 2021 from cryptocurrency enthusiasts, large technology companies, and venture capital firms.



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A metaverse is a network of virtual worlds focused on social interaction where people can interact in different ways, by playing, working, or socializing. Even Facebook CEO Mark Zuckerberg believes it is the future of the internet and he rebranded the Facebook ecosystem simply as a “Meta”.

## 2. Executive Summary



MetaChess is a blockchain-based chess game where players can monetize their wins in the Binance Smart Chain using PAWN, the platform’s utility token.

We are aiming to disrupt existing game makers like chess.com and chess24 by providing players free access to all parts of the game and rewarding their participation with our utility token – PAWN. In the current game market, centralized ownership allows game makers to have multiple subscription plans, and players need to spend a certain amount of money each month if they want to have the full benefits of an online chess game.

[metachess.info](https://metachess.info)



With MetaChess, we aim to overcome these limitations while accelerating blockchain adoption to grow the blockchain gaming market. All game benefits will be available to everyone free of charge! Investing in MetaChess will be a matter of choice, and every player will be able to earn PAWN simply by playing MetaChess!

## 2.1 Market Overview

Chess, a game that can be traced back at least 1,500 years, is suddenly one of the coolest games topping wish lists this holiday season and retailers are struggling to keep it in stock.

The game's popularity can be explained by two big factors: People are spending more time at home during the pandemic, and the popularity of "The Queen's Gambit," a Netflix show that follows fictional chess prodigy Beth Harmon.

After the show premiered in October, sales of chess sets spiked by 87 percent in the United States, while book sales about the game rose 603 percent. The sudden gains come after flat and negative growth in those categories, according to the report.

The global chess market is expected to rise significantly during the forecast period, between 2021 and 2025. In 2021, the market has grown steadily and with the increasing adoption of strategies by major players, the market is expected to rise in the expected horizon.

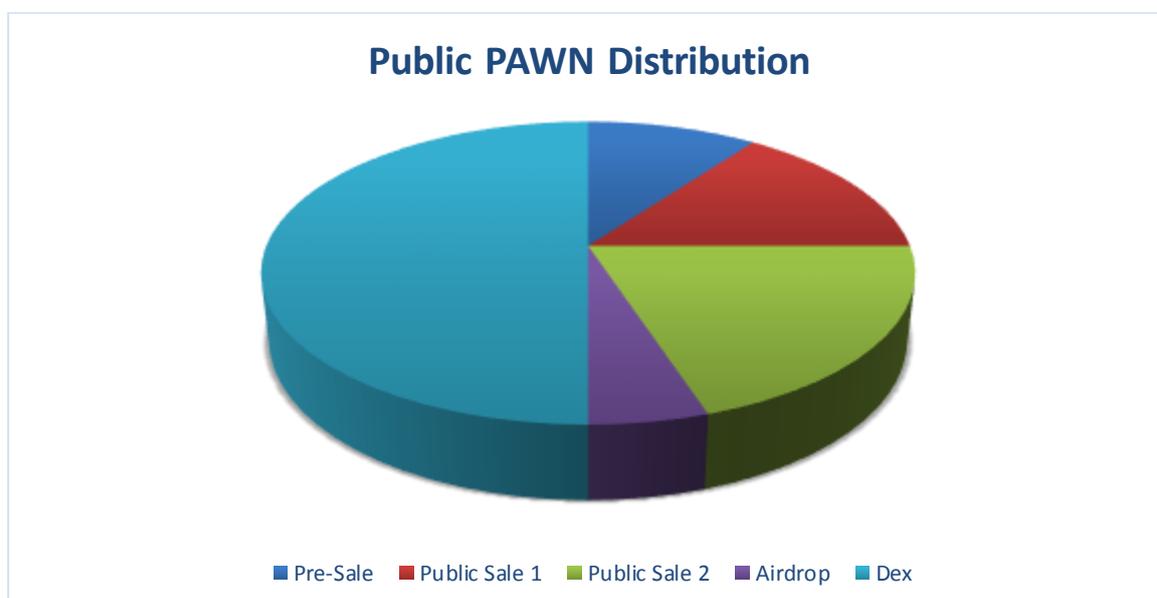
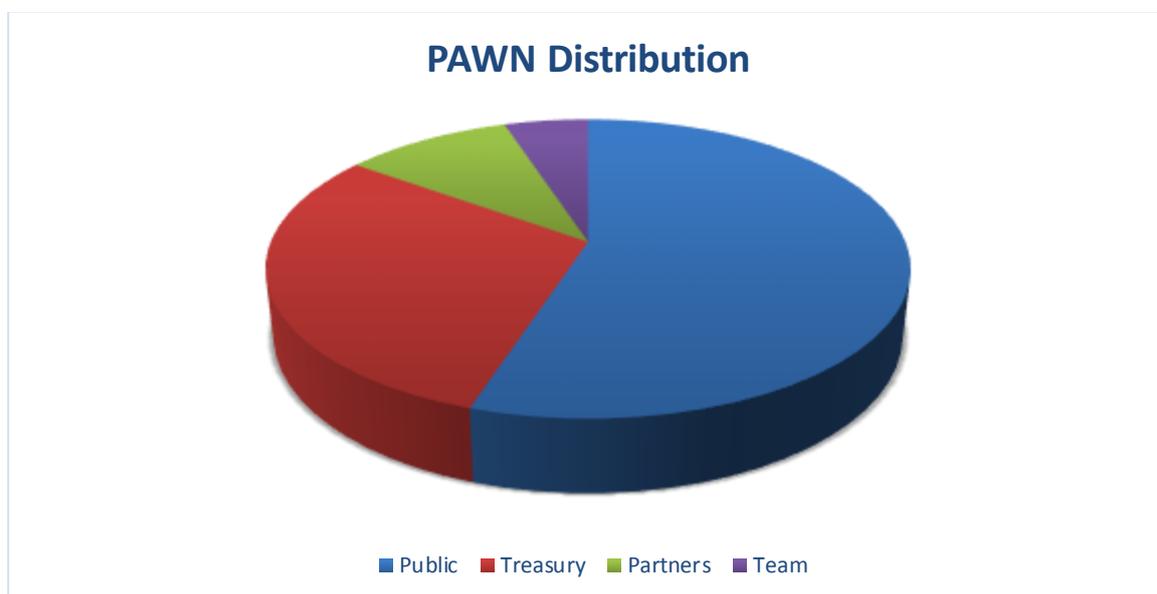
## 2.2 What is PAWN and what is used for?

PAWN is an essential part of MetaChess platform, allowing users to earn, trade & stake PAWN tokens! PAWN will serve as the main currency of MetaChess and also as a governance token allowing users to vote on upcoming game development & tokens distribution!

*PAWN is a BEP-20 utility token built on the Binance Smart Chain.*



- **Governance:** PAWN is a governance token that allows holders to participate in governance decisions of the platform, using a DAO structure. PAWN holders can vote on upcoming game development and token distribution!
- **Staking:** Users will be able to stake their PAWN tokens in the MetaChess app & earn up to 12% in PAWN rewards!
- **Fee Capture model:** 10% of PAWN distribution will be allocated to the "Treasury."
- **Treasury:** The role of the Treasury is to support the ecosystem of the Metachess, offering rewards to MetaChess players.





*Any unsold tokens from our “Pre-Sale”, “Public Sale 1” and “Public Sale 2” will go back to our Treasure funding and will be distributed via staking & play-to-earn system!*

Name	MetaChess
Symbol	PAWN
Max circulating supply	10,000,000,000

## 2.3 PAWN Stakeholders

We have developed a 2 Stakeholders approach to ensure that the success of MetaChess accrues value towards the PAWN token. Therefore, we will set through smart contracts, that revenues generated through the MetaChess will be distributed across 2 stakeholders to provide support to the MetaChess ecosystems.

- **Staking Pool:** Is designed to provide yield and value to token holders.
- **Treasury:** Is designed to ensure that revenue generated through the game accrues value to the token. PAWN players will get their PAWN rewards from the treasury.

## 2.4 PAWN Revenue Streams

MetaChess has 2 Revenue Streams where players will exchange PAWN tokens. Those PAWN tokens will be allocated as detailed below:

- **PAWN distribution fees:** 10% of every earned PAWN via MetaChess distribution goes back to Treasury.
- **NFT's sales:** 50% of company NFT sales will be transferred to the Treasury, effectively increasing the value of PAWN.

## 2.5 PAWN Distribution in MetaChess game



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Generally, earning wins in MetaChess means earning more PAWN tokens, so we introduce the Checkmate score system!

- When a player wins a match in MetaChess he is earning 1 Checkmate.
- When a player loses a match in MetaChess he is earning a -0.5 Checkmate.
- Drawn matches will not count in PAWN distribution.

Every month, MetaChess tallies up everyone's Checkmate Score and distributes a set amount of PAWN tokens. The percentage of those PAWN tokens that you earn from the distribution is the same percentage of the Checkmate score you earned.

If a player makes 20 wins, 10 draws and loses 20 matches, he will earn a 10 Checkmate score.

For example, let's say you made 10 Checkmate scores out of 100,000 Checkmate scores made by all MetaChess players for the month and there are 10,000,000 PAWN tokens for this distribution. You would have earned 0.01% of the mutual Checkmate score, which earns you 0.01% of the distribution, which is 1000 PAWN tokens.

If a player ends up with a negative checkmate score, he will not be eligible for PAWN tokens distribution in the next 3 months. The player will still be able to play metachess, but he will not get PAWN tokens from monthly distribution.

Each month, PAWN tokens available for distribution will decrease by 10%.

*\*Players will have 3 months to claim their PAWN tokens. If he fails to do that, unclaimed PAWN tokens will go back to the treasury.*

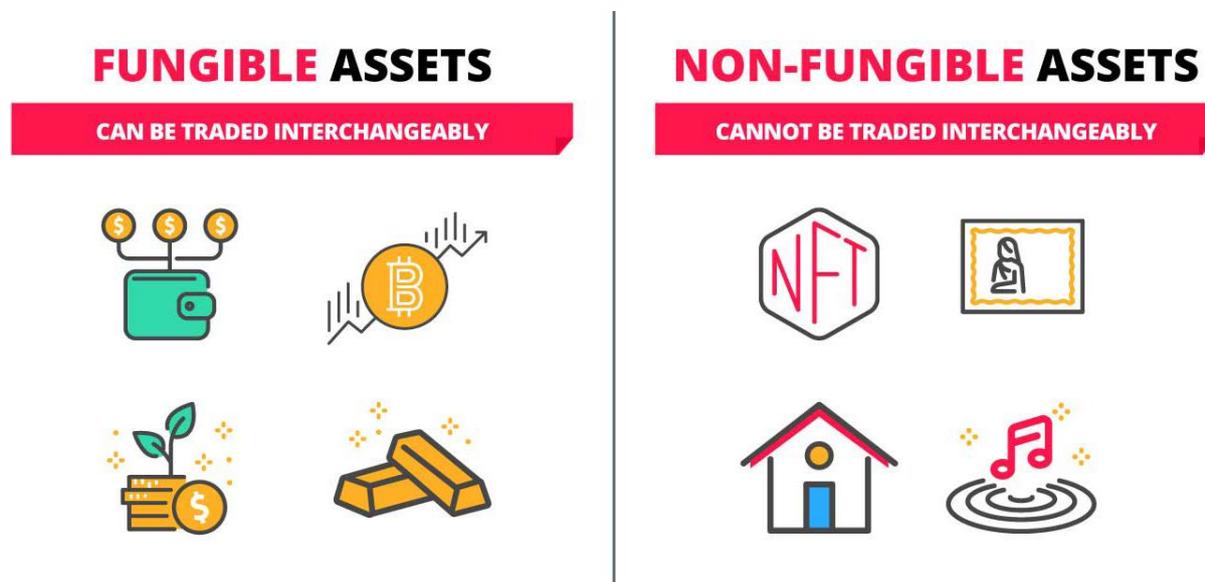
## 2.6 Use of NFTs

The MetaChess uses blockchain technology and NFTs to empower players. NFTs are an emerging segment in the global game market: virtual tokens for digital

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scarcity, security, and authenticity. Each NFT is distinct or unique; it is indivisible and it is not interchangeable for another.



Through the use of NFTs, the MetaChess players will be able to benefit from:

- **TRUE DIGITAL OWNERSHIP:** Gamers are the true and perpetual owners of their digital items, even if the game was shut down or abandoned.
- **SECURITY AND IMMUTABILITY:** Digital game items can be easily tokenized and traded in primary and secondary markets that are managed and facilitated by blockchain technology.
- **TRADING:** Blockchain-based gaming platforms can provide users with ultimate control over their digital assets. They can buy and sell items freely without concern that they will be ripped off or that a platform will close and cancel all the value of their in-game items.

The MetaChess uses several tokens (fungible – PAWN, and Non-Fungible NFTs) to create a circular economy between the players. These are the Grandmaster, Early Pass, Avatar, Chessboard, and PAWN, a token based on the BEP-20 protocol which will act as governance token and the official currency in the MetaChess.



- **Grandmaster NFT:** is BEP-721 token and will be available to purchase on MetaChess marketplace. The Grandmaster NFT will contain a total of 7800 NFT's from 6 different chess pieces. Each Grandmaster NFT can be sold on the MetaChess marketplace.



Name	Rarity	Quantity	Price	Rewards rate
Pawn	Common	5000	0.1 BNB	10% more PAWN
Bishop	Rare	1000	0.5 BNB	50% more PAWN
Knight	Rare	1000	0.5 BNB	50% more PAWN
Rook	Super Rare	500	1 BNB	100% more PAWN
Queen	Epic	200	2.5 BNB	250% more PAWN
King	Mythical	100	5 BNB	500% more PAWN

- **Early Pass:** is BEP-721 token and will be airdropped to everyone who participated in PAWN “Pre-sale”, “Public sale 1” and “Public sale 2”. Early Pass will grant beta access to early investors in MetaChess.
- **Avatar:** MetaChess will release 10 unique Avatars NFTs each week from chess grandmasters around the globe.
- **ChessBoard:** players will be able to borrow their chessboard to other players and earn interest from that.



## 2.7 Fair Play & Anti cheat detection

Cheating in chess is a serious issue. The issue is magnified online, where there is no arbiter to physically observe play.

We aim to make MetaChess as decentralized as possible, which means giving full control to the players, so implementing an anti-cheat system and keeping the game decentralized is a real challenge.

The MetaChess anti-cheat system is synchronized with chess engines like Stockfish and Houdini, and will flag suspicious players. The MetaChess anti-cheat system is a statistical model that evaluates the probability of a human player matching an engine's top choices, and surpassing the confirmed clean play of some of the greatest chess players in history. Because of MetaChess decentralized manner, we can't ban any player, but other players can!

*MetaChess players can check flagged players games, and vote them out of PAWN distribution.*

Players that will get voted out, will lose earned PAWN tokens, and dose tokens will remain in the treasury.

# 3. Road Map

## 3.1 Previous Milestones

### **2021 Q3**

- Core team identified
- White paper
- Partnerships & integrations research

### **2021 Q4**

- Social Media awareness



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- Website launch
- Marketing campaign

## **2022 Q1**

- Prototype
- Token launch
- ICO starts

## **3.2 Future Milestones**

### **2022 Q2**

- NFT's announcement
- Liquidity launch
- Dex launch

### **2022 Q3**

- NFT Airdrop
- NFT Sale
- MetaChess Beta Test

### **2022 Q4**

- MetaChess android & ios app
- MetaChess windows app
- Partnerships; New IPs and Premium NFTs to be announced

### **2023 Q1**

- Governance app
- Staking
- Partnerships; New IPs and Premium NFTs to be announced

### **2023 Q3**

- We are switching our focus in integrating virtual reality and creating a 3D world in MetaChess

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## 4. Technology

Blockchain technology is used to record the ownership of tokens and allows owners to transfer, sell and use them without restriction.

These different blockchain protocols will be integrated into the MetaChess ecosystem.

- **BEP-20** for PAWN
- **BEP-721** for the NFTs

### 4.1 Binance Smart Chain

Why are we using Binance Smart Chain? We found many benefits to doing so as detailed below:

- **Ease of use:** Binance Smart Chain has been built with flexibility in mind, which perfectly fits our use case with Asset tokens. Binance uses the same infrastructure as Ethereum who has the largest number of developers, which allows for well-established standards, best practices, and support.
- **Interoperability:** Binance Smart Chain is a protocol, a base layer on top of which all applications can build and interact with each other.
- **Scalability:** Binance solved Ethereum scalability issues, currently handling ~160 TPS.

Binance Smart Chain is a blockchain that has been proven by thousands of dApps and developers for its robustness and offering a large ecosystem, resources, and support from developers.

### 4.2 Game Engine

MetaChess is developed in Unity engine.



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By using Unity we are able to support Mobile platforms, without sacrificing the render quality of our game for Desktop platforms.

MetaChess will be available for Windows, Android & iOS users.



### 4.3 Wallets & Security

We minimize the security risk on our backend by reducing the responsibility of hot wallets that are only used for referral and whitelisting.

The other wallets are cold storage wallets that hold responsibility for updating the platform with new contracts and new parameters. These could later be part of a governance mechanism.

In relation to the methods of payment, the user will be able to pay with BNB - will then be processed by a smart contract on-chain and the user shall receive the PAWN directly into his wallet.



The MetaChess marketplace relies on the security of the Binance Smart Chain for the functioning of its smart contracts.

## 5. MetaChess VR



Virtual Reality is one of the technologies with the highest projected potential for growth. After the base game is finished this year, in late 2023, we are switching our focus and we will start working on integrating 3D virtual reality into MetaChess.

## 6. TEAM

We have assembled the right senior team to execute our vision: 5 full-time employees in Norway, 4 in Germany, and 1 in Finland.

### 6.1 Core Team

- **Shiva Agarwal** - *Founder & International Rated Chess Player at FIDE*  
He is associated with Hewlett Packard Enterprise as a Software Engineer.  
He played a key role in the facilitation of complete automation from



commit to deployment by implementing a CI/CD pipeline involving GitHub actions, CircleCI, Docker, Kubernetes, ArgoCD, and Terraform. He was also responsible for developing cloud-native applications using tools like Golang, Gin.

Now, he is focusing his love for chess on Blockchain Gaming as Founder and lead member of the MetaChess.

- **Filip Lien** – *Game Developer*

Experienced Developer with a demonstrated history of working in the information technology and services industry. Skilled in C#, SQL, Java, XML, and HTML.

- **Edward Steward** – *Blockchain app developer*

Senior blockchain developer, experienced with Solidity development, non-fungible tokens, system architecture and software development.

- **Hani Bhat** - *Technical Project Manager*

Solution-oriented software developer with broad experience in the IT domain. Passionate about cross-platform development, blockchain and ML.

## 6.2 Advisors

Morten Rongaard	Danish entrepreneur and recognized as a pioneer in the fields of Blockchain, Augmented Reality Technology, NFTs and cryptocurrencies. Co-founder CEO Reality Gaming Group.
Gloria Martin	Crypto Enthusiast & Investor. Skilled in cryptocurrency related trades and provide services to beginners interested in cryptocurrency trading.
Damian Brown	Economist with great interest in data processing and data driven analysis, complexity theory, digitalization, macro-finance, money, Bitcoin and blockchain
Wilhelm Gosser	Based in Japan has realized 6 successful ICOs and raised \$14M in total. Advisor at SmartContract Japan. Blockchain enthusiast.