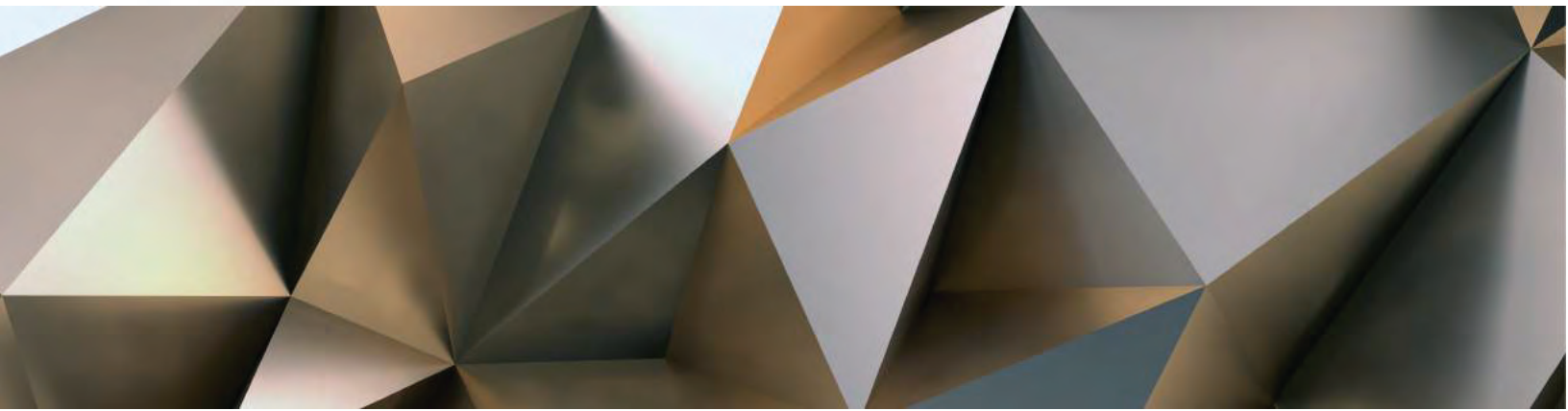




ETHEREUM METAL





METAL

## **1. Disclaimer**

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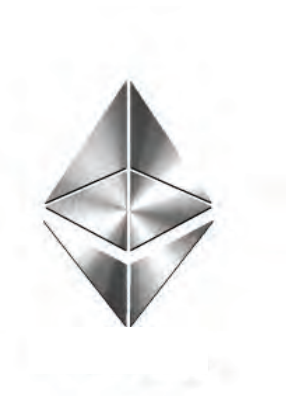
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While the community's opinion and feedback can be considered, Ethereum Metal tokens do not give any right to participate in decision-making or any direction of business related to the Ethereum Metal product or services. Ethereum Metal tokens can be used for purposes defined in this Whitepaper. All examples of the calculation used in this paper were provided only for demonstrating the industry's averages and do not constitute a guarantee that these results will be achieved, according to the marketing plan or roadmap. Certain statements, estimates and financial information contained herein constitute forward-looking statements or information. Such forward-looking statements or information involve known and unknown risks and uncertainties, which may cause actual events or results to differ materially from the estimates or the results implied or expressed in such forward-looking statements.



## **2. Our Vision**

Our vision for Ethereum Metal is more of an ideology. We believe that we are in an age of extreme disruption to the status quo. An age that will eventually bring upon the dissolution of economic, racial, gender, and judicial inequalities, and all other forms of social inequality that plague mankind from living free and happy lives. Humans are becoming increasingly aware of the inadequacies of the oppressive social framework that constitutes daily human living, and as we become more aware our ideas and concepts are thus evolving. The evolution of our ideas and the desire to do things smarter and contrary to the status quo. This is what essentially powered the creation of Bitcoin, and as a result, the complex world of cryptocurrency has been conceived. All major power structures will have to suffer disruption in this age. Uber and Lyft disrupted the taxi industry. Airbnb disrupted the hotel industry. Zipcar disrupted the rental car industry. Online schools have disrupted the education industry. It is technology that serves as the underlying essence of this great age of disruption, but the greatest disruption that could possibly occur is the disruption of the Financial Industry. Cryptocurrency is wedging a stake through the very heart of a once invincible power structure that indirectly controlled and regulated everything on earth. Our purpose in creating Ethereum Metal is to: 1. Further promote and facilitate the adoption of cryptocurrency for the world populace. 2. Promote the Ethereum protocol and the benefits that the technology could offer to make human life more efficient. 3. Create another stable medium to trade commodities that also increases exponentially in value, which in turn could serve as a better option to savings accounts and traditional banking options with small percentage gains over morbidly long periods of time. 4. To create open source products and build a strong community that will help with the promotion and the development of the Ethereum Metal platform which will inevitably raise it's value for everyone involved. We intend to promote and market the Ethereum token vigorously before and after

the ICO sale for the benefit and security of our token holders, and for the overall value and stability of the token.

Ethereum Metal has the added benefit of storing your ETM tokens on the mobile, windows, or desktop wallet of your choice with the ease of of an issued ETM card for all your payment needs.

### **3. Ethereum**

Launched in 2015, Ethereum is a decentralized software platform that enables Smart Contracts and Distributed Applications (DApps) to be built and run without any downtime, fraud, control or interference from a third party. Ethereum is not just a platform but also a programming language (Turing complete) running on a blockchain, helping developers to build and publish distributed applications. The potential applications of Ethereum are wide ranging.



### **4. BREAKING DOWN 'Ethereum'**

The applications on Ethereum are run on its platform-specific cryptographic token, ether. During 2014, Ethereum had launched a pre-sale for ether which had received an overwhelming response. Ether is like a vehicle for moving around on the Ethereum platform, and is sought by mostly developers looking to develop and run applications inside Ethereum. Ether is used broadly for two purposes, it is traded as a digital currency exchange like other cryptocurrencies and is used inside Ethereum to run applications and even to monetize work. Ethereum was not originally created to serve as a digital currency.

Ethereum Metal was created to be a fundamental digital currency to serve as a medium to trade commodities. Like Ethereum, Ethereum Metal can be used to “codify, decentralize, secure and trade just about anything.” One of the big projects around Ethereum is Microsoft’s partnership with ConsenSys

which offers “Ethereum Blockchain as a Service (EBaaS) on Microsoft Azure so Enterprise clients and developers can have a single click cloud based blockchain developer environment.” One of our goals for the Ethereum Metal token is for the continuous promotion and evolution of blockchain technology in general, and more specifically, the decentralization of the monetary system.

## **5. Ethereum: Approach and Methodology**

The Ethereum blockchain has attracted much attention to itself in the last year and many companies have decided to utilize it for their projects, exploiting the extreme flexibility offered by the "smart contract" of Ethereum. This has caused a proliferation of Ethereum tokens but, at the same time and in respect to promises, the user applications has not been in step in terms of usability and security level. The reason for this is that Ethereum is a highly experimental technology still incomplete and in rapid evolution. Furthermore, the "account based approach, enabled for the type of smart contract offered by Ethereum, is very weak regarding privacy.

## **6. Ethereum: Wallet Architecture Light Client**

In Ethereum, the term "Light Client" means a technology that is the SPV correspondent of the Bitcoin environment. Briefly summarized, it consists in the ability of the "client" to verify all the hash chains necessary to validate the information received by other nodes and concerning only its own Ethereum address, without the need to download and validate the entire blockchain. Unfortunately, solid implementations of Light Client Ethereum do not exist, they are all experimental, and still too heavy to

function on a mobile device. An Ethereum full node doesn't have the need to index all the transactions that concern an address (or even to know its balance); it does not index the data of the token, which from his perspective are simple codes to execute (smart contract) that modify a group of generic data constituting the memorized state in the blockchain. The indexing servers have the task to accomplish a high-level analysis of all the transactions of the blockchain, to index the movements by address, to find which represent movements of token and also to index the movements of token. This is an activity which is too heavy to be done directly on mobile devices.

## **7. Mnemonic seed**

Ethereum uses the same digital signature algorithm used by Bitcoin and many other blockchains. Bitcoin has long defined standards for key generation and storage: BIP32 and BIP39. These standards define how to derive many keys from a single seed, according to a hierarchy, and how to generate and use a mnemonic word phrase to get seed for key generations.

## **8. Ethereum Metal Wallet**

The current number of unique active users of cryptocurrency wallets is estimated to be between 2.9 million and 5.8 million. The user adoption of various cryptocurrencies has really taken off, with billions in market cap and millions of wallets estimated to have been 'active' in 2016. The main purpose of this wallet is integration with a simple to use interface. The Ethereum Metal Wallet will allow users to manage and store their ETM tokens safely and securely. The ETM wallet will be available in the IOS app store, Google Play, along with desktop and web versions. It will allow users to store, receive and exchange ETM to Ethereum. No personal information or registration will be needed to access your wallet, just your private key for security.

## **9. Transaction History**

The Ethereum blockchain stores the status of each account directly. Hence, to know the balance of a certain address it is not necessary to know which transactions it concerns. For this reason, most of the wallet clients in circulation do not provide information on the history of transactions (especially for ETH



receivables from other accounts). From a user perspective, the chronology of Ethereum or token transfers is fundamental information nearly as much as the balance. To complicate things, the fact that when we are in the middle of Smart Ethereum contracts (and all the tokens are smart contracts), there is no longer a one-to-one correspondence between the concept of moving an asset and an Ethereum transaction on the blockchain.

## **10. Ethereum: "Smart" Assets**

The Ethereum protocol introduced in the blockchain world the ability to write and then globally verify the states of a general-purpose virtual machine residing on each single node of the network. This design allows for generality and flexibility in blockchain uses that go far beyond the simple transfer of value. In addition to the ability to execute and certify the status of smart contracts, Ethereum blockchains can be used natively to create and manage custom assets. These assets are actually smart contracts that are in line with a well-known standard known as ERC-20. At present, it is not possible to enforce unique names and symbols for ERC-20 tokens: users can then create new tokens that have the same name or symbol as other pre-existing ones. This fact is a problem for a simple and secure use of the wallet: each token has a different Ethereum address but, being it a complex alphanumeric code, difficult for human to read, write, memorize and compare, each token is usually recognized with a Name, an abbreviation, and an icon symbol.

## **11. Token Auto Discovery**

In the status of an account stored on the Ethereum blockchain, you can only find the Ethereum balance but not the token one. In fact, the tokens - from Ethereum's point of view - are smart contracts like

every other one, and their balance remain within the state of the token smart contract. Hence it is necessary for the user to know the balance for a specific token directly querying the smart contract since there is no way to know in advance which tokens are owned by a certain account. Fortunately, Ethereum transactions that move Ethereum tokens are recognizable by a data structure stored in blockchains, called transaction receipts. Indexing servers catalog all transactions related to a specific address, including token shifts.

## 12. ETHEREUM METAL ROAD MAP

**2018**

