



## Welcome To Halo Platform

Congregate. Organize. Strategize. Execute.



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# Whitepaper v2.0

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## Introduction

Peer-to-Peer cryptocurrency usage is increasing at an exponential rate. Halo aims to be a keystone part of the crypto ecosystem by having a robust, fully encompassing platform that fuses the finest parts of the cryptocurrency world together. This in turn makes everyday life for the beginner, amateur, or veteran crypto user easier in multiple ways.

Halo has a vision of expanding the nature of cryptocurrency with a constantly evolving platform that grows with the needs of the user's. This serves the people, and derives its value from the respective success of each user on it's platform.

Each individual in the Halo Platform represents a new link in the ecosystem, creating strength and value within a safe platform and utility. The side effect of helping them with their own growth and promoting their own self-interest, is that it in turns creates additional value to and growth from using the Halo Platform.

The security and cloud load balancing will also bring a new, refreshing aspect to traders and investors. The Halo Platform will be orchestrated by top-tier cloud consultants who are leaders in their field, empowering everyone with solid trading capabilities.

The Halo Marketplace and Business Tools features add a smart and empowering dimension to the crypto ecosystem. The Halo Token Hub additionally will allow users to create their own tokens in a safe, secure, and consensus-driven environment for quality assurance.

The Halo Platform will also utilize a Zero-Transaction-Fee protocol so that when a user sends 1 HALO, the other party gets 1 HALO, period. The better the Halo Platform is built, the more it empowers the everyday user and the longer it will be around to serve the needs of the community.

## The Team



**Scott Morrison**  
Founder

Scott is an avid crypto trader, miner, finance specialist and entrepreneur who founded Halo Platform in 2017. He brings top tier crypto experience, consulting, and a clear vision of the Halo Platform experience and its potential.



**Phil Reale**  
UI/UX Design / Branding

With two decades in design and development, Phil brings brand power to the project. Artist, businessman, and avid crypto activist. He also built CryptoSwim in 2016 and founded his own firm, ProDeveloper, in 2006.



**Fabio Cardoso**  
Lead Developer

Fabio is a Full Stack Developer in the area of business application and automation. Creating robots and cars as a kid, the hobby has turned into AI and Data Science. An avid biker, Fabio makes his own carbon frames as well.



**Mike Quale**  
Cloud Architect

The Cloud architect every team should have, Mike brings elite IT and business experience to the team. A seasoned crypto trader, entrepreneur and weekend rockstar, Mike advises enterprise level IT clients daily.



**Shannon Duncan**  
Lead Full Stack Developer

Full Stack Perfectionist. Specializing in Angular, Javascript, and C#. He has many years of experience in the Financial Industry leading a team of developers with proven ability towards enterprise applications and security.



**Thomas Smith**  
Server Engineer

He has been a community member of the cryptocurrency ecosystem since 2011, and strives to use blockchain technology to benefit others. He is specialized in back-end technologies and automation.

## The Halo Masternode System

The Halo Masternode system will comprise of a 4-Tier system. This system will distribute transactions and allocate data in a structured design. Currently each block reward is set to 38 HALO per block with a 4 minute time frame between block minting. Masternodes will receive 28 HALO per confirmed block at an estimated 10080 HALO paid to Masternodes per day. Service fees will vary depending on the node, and Masternodes are limited in quantity.

### Front Running Invulnerable

Front running goes back to the days of using paper to do stock trading. People would have large orders and run their trades in front of the large order. This would create major profit for the front runner. Some tokens and coins are vulnerable to this same sort of issue with miners putting their transactions in front of larger transactions. The Halo Platform is immune to this issue.

All transactions in the Halo Platform are processed by the Masternode system only. The Masternodes have no access to change headers, and all transactions are handled FIFO (First In First Out). When a Variable Demand Transaction Block is produced each tier of Masternode independently validates that no headers, transactions, or time stamps have been altered, creating an internal peer consensus. Once a transaction is submitted then all other new transactions will be submitted after it and no one person or system can push a transaction to the front of the queue, only close out the current transactions for confirmation to the block chain.

### Masternode Graphic

The next page has a graphic that will show in detail the masternode system.







## Halo Dashboard Smart Features

### No Transaction Fees

Gone are the days to make sure you have enough currency to pay the gas to send someone a transaction. If you send someone 1 HALO then they will receive 1 HALO. We can do this because our masternode system will be always available to handle transactions and provide consensus. The smart contracts will have a public and private variations that control gas usage. Public contracts will use gas, and private will not. These are discussed in detail in the DAPPSTORE and SDK sections.

### Safe, Instant, and Anonymous Sending Fees

These three sending features will incur a small fee, because these are not your average sending of funds.

#### Safe

This sending feature will validate the address being sent to to make sure it is valid and able to accept funds. If it is, the contract will send the funds. If it isn't, the funds are safely returned back to the sending address.

#### Anonymous

This sending feature will mask the sending address to protect where the funds came from.

#### Instant

This sending feature will instantly create a new block to be validated and sent up the tier list of masternodes. Using this for quick payments faster than normal blockchain transactions.

### Halo Token Hub

Some exchanges offer the ability to create tokens, but when not regulated in the proper fashion, new tokens can be confusing to the users and bad for the ecosystem. Our goal for Token Hub is to be the new standard in ICO creation. With support for ICO launches

from resources, to escrow funding, to community consensus for quality and launch process. We will be including this and more!

Our community-governance and oversight model gives new tokens a more solid vetting from the Halo community, aside from the support in creating the token. This gives the community more ease of mind about new ICO's and projects evolving.

### Halo Business Tools

Send or receive payments in crypto instantly for starters. We will also allow users to create Checkout buttons for their storefront or for embedding on their own website or blog. Users can accept payments for services and products, or tips and donations. Being their own boss is a dream for many not only in the crypto ecosystem, and we aim to make it easy. Accept payments, create products, invoice, and more! All done effortlessly with our platform.

The new Halo debit card will allow users an additional solid layer of functionality with the option to utilize their funds in the cryptosphere or right at the gas station, online, at the restaurant and more. This creates a solid, closed loop decentralized transaction system independent of traditional banking slag.

## Halo Marketplace:

The Halo Marketplace is a perfect compliment to the Business Tools section creating an independent and secure place to do business intelligently. Halo will be the complete crypto portal for this new multi-billion dollar industry, being utilized by newcomers and veterans alike. This props up the crypto ecosystem and creates strong revenue to bolster the Halo Platform's growth for decades.

Spend Halo and other tokens for services, electronics, clothing, collectibles, jewelry and more. Users can be both the customer and the merchant with the Halo Marketplace.

## Halo Dashboard

The Halo Dashboard is meant to give users instant access to nearly every feature they might want with the flexibility they need. At the same time it allows users access to their profile settings, security, API keys, account verification and more. With each user comes a particular setup that works best for them, and we want the modular dashboard to be easily reconfigurable to the users needs. Users can track every transaction made for each wallet they've integrated, all in one place. One of our goals was to make things easier for both veterans and newcomers alike, condensing the expansive universe of crypto into one smart, decentralized control exchange (DCE) hub.

## Halo Portfolio

Real traders want no trading lag when making serious moves in the market. Users can track gains like a pro and can get SMS alerts instantly. Users can check their ROI from holding monthly and yearly, track off-chain assets, and view their portfolio position in BTC and other base currencies as well. Halo is the last crypto tool anyone will need.

The HALO portfolio section will also allow users to quickly ascertain current positions and holdings with our secure integrations, with the flexibility to track alerts and gains fast. Halo utilizes CryptoSwim for recent gain or loss calculations and spotting trends without spending. The smart idea to add CryptoSwim to the Halo Platform gives newcomers and veterans alike the ability to quickly calculate how much they would have made or lost with various amounts, without risk.

## Wallet Integrations

Halo offers multiple wallet integrations so users don't have to access five different interfaces to get the info they need done fast. The Halo Wallet is meant to be the user's one-stop multi-wallet control hub. Users Import and control only the wallets and accounts they desire. They can be utilized for creating smart contracts, voting on consensus on Halo evolution, new features, and more. Our goal is to create a flexible environment for all the tokens users want to track, with a secure and strong backend backed by Cloud Hosting and top architects engineers in the field securing user data.

## Halo Exchange

Too often we hear the issues users have with extreme platform usage, losing funds on shorts during platform outages, etc. Halo has been carefully architected with the help of top cloud engineers, for a carefully load-balanced trading and platform experience that you can count on when it matters the most. Being the singular one-stop crypto control hub for users is what the Halo Decentralized Control Exchange experience is for. Halo DCE features are meant to be useful to users no matter what level they are at in the crypto scene. These are tried and tested tools and services that both ends of the spectrum can appreciate.

### *External Exchange Support:*

With the use of an outside exchange's API key, you can bring in price quotes and functionality from exchanges you have already used or want to use!

## Halo Community

Giving users the ability to use the Halo Platform friends and groups features to stay in touch with and organize solid groups for discussion and signals is our goal. The more power we put in the user's hands, and the easier we make the interface, the more people around the world will utilize the Halo DCE platform and increase its growth.

## Halo Business Services

We want to make a solid merchant processing platform as a key component to the Halo cryptocurrency ecosystem. We want to empower our users to be their best in the cryptosphere. Users will be in charge of their own pricing schedules with lower fees than other digital storefronts. We will offer an array of tools to work with their crypto store products, consulting, or other business services. These tools will be easy to manage, easy to invoice, and easy to track with reporting and more.

## Halo Financial Tracking

No one has integrated a solid financial tracking and business tracking technology for crypto users to date. More and more people are flooding into the cryptosphere daily. Giving them an opportunity to provide services and consulting, track earnings, create invoices, and estimates easily will be a great advantage for everyone. This is the future of currency, and we want to be a part of the crypto user's new business idea in every way possible, every day.

## Halo Smart Backups

The importance of backing up not only private keys but also the spreadsheets, images, conversations, screenshots, charts and the like was not lost on us. Making the backup experience for multiple data formats easy is as strong advantage and utility for our users. Keeping their data safe and secure is important to us and to a successful, long-lasting platform.

## Halo Pro Tools

Pro Tools are items crypto users have all been asking for, for a long time. Finally we are solving the problem by putting the tools they've been wanting and more all in one easy place to use. When it comes down to having everything, we thought some tools would be essential to the crypto ecosystem that both newcomers and veteran traders alike could appreciate equally. We want users to be able to draw and share all the charts they want, create spreadsheets, share them easily, and help with the evolution of toolsets on Halo through feedback and consensus.



## Halo Digital Currency

The Halo coin is designed to be an efficient store of value for the system as it is both tradeable on our platform and others, is mineable, and is generated by users on the platform in the form of fees. Our masternode setup will be whale-resistant with smart, multi-tiered architecture to incentivize top masternode experts to get onboard with Halo.

The HALO Coin is not an Ethereum token, it is a full coin with it's own network.

## Using Halo Digital Currency & Other Crypto

While we will be listed on exchanges and allow you to use the HALO currency within our platform, we have some added benefits for Halo Platform members.

### The Halo Platform Debit Card

Use our branded debit card internationally. We will be handling the crypto to fiat conversion, and providing you a way to spend your crypto at the grocery store even if they don't specifically accept crypto. To help facilitate this process we have financial sector team members with experience dealing with debit and credit cards.

### ACH & SWIFT

Along with the debit card platform, we are offering the ability to transfer crypto into fiat through ACH and SWIFT. Using standards and experience from the financial sector team members, ACH and SWIFT will be accepted at their respective countries and institutions that support them.

### Buying and Selling Crypto

Using the two methods above and the exchanges on our platform, you can buy and sell crypto's which are not just HALO. If you'd like to use BTC or ETH on your debit card or ACH then feel free to do so. We will provide the tools and information necessary for you to make it happen.

## Halo Chat

Using the **Quest Chat** module, Halo Platform will be including end to end, peer to peer, encrypted chat messaging. Real time quantum resistant encryption will protect messages sent to and from users.

What is **Quest**? It is an end to end encrypted messaging system that sends messages using the decentralized Halo Platform Network. Using both on-chain validation and off-chain speed it will be completely peer to peer, fast, and secure.

**Quest** uses multiple layers of encryption to secure your messages and data. That's right it can also be used to send other types of data such as files.

### Exchange

**Quest** will integrate directly with the Halo DCE Platform to allow you to communicate and interact with it directly from your chat. While it is directly integrated to Halo DCE you can use an API key to integrate with other exchanges and add more functionality to your chat room.

### Video Chat

A direct peer to peer video communication network using the Halo Network. Host group conferences and direct communications through the secure video chat.

### Anti-Spam

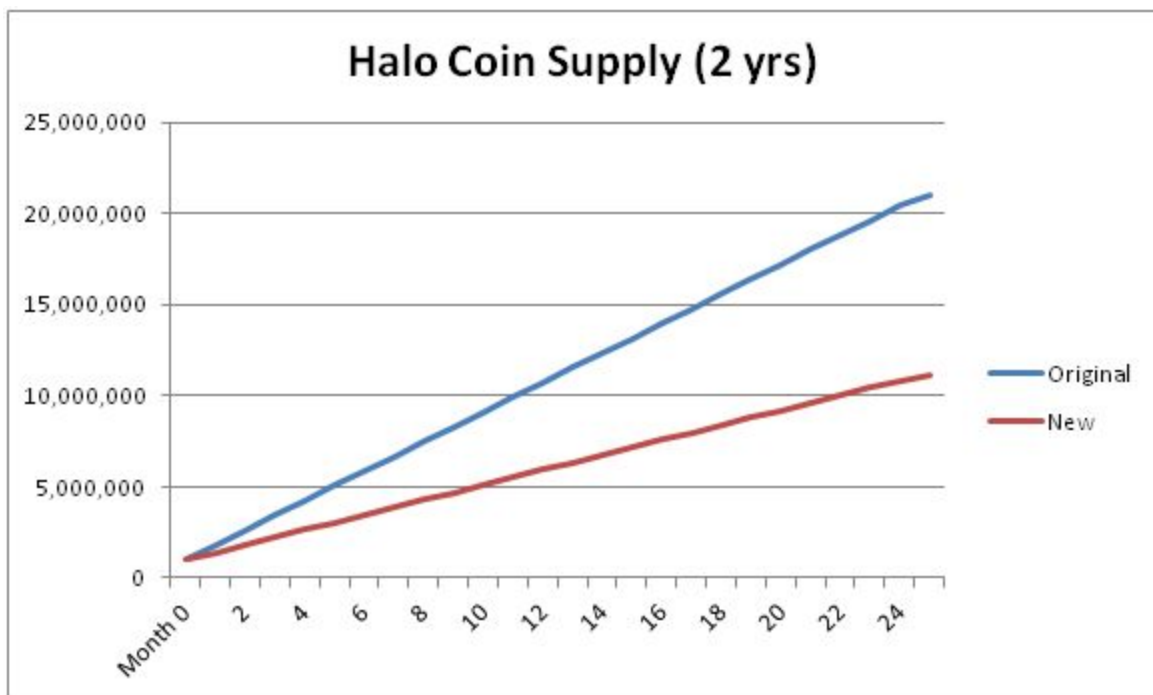
Gone are the days of MEW spamming in slack. We are actively building in rules for untrusted users messaging. We will build systems to collect and intercept spam messages before they go out to users. Giving the community admins the option to ultimately delete/ban/pass through the messages as needed.



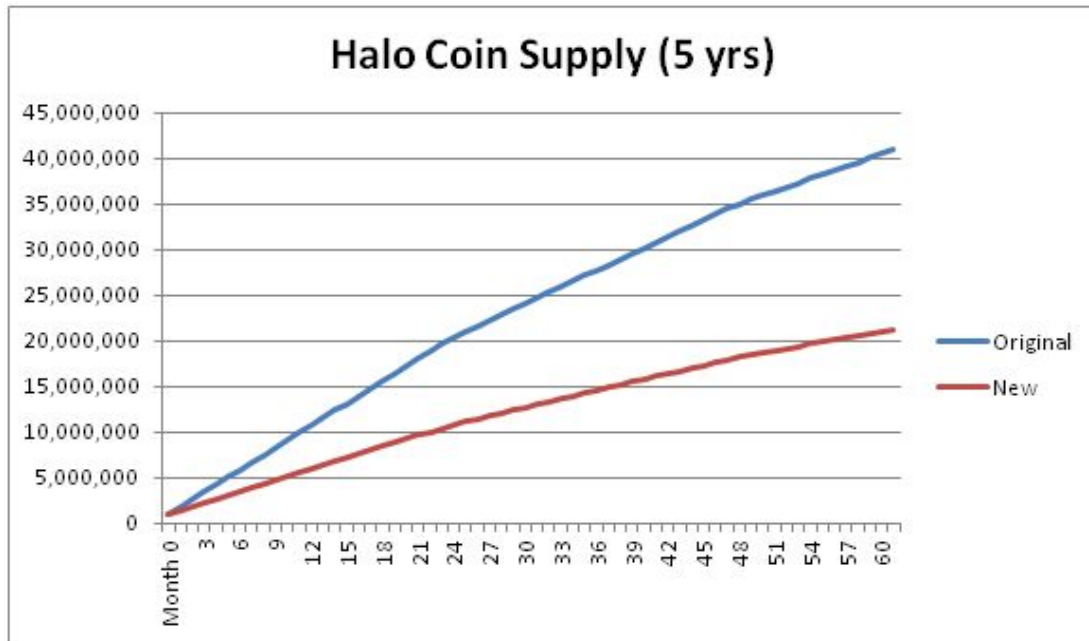
## Allocation

The ICO has the chance of generating 1,000,000 HALO Coins. If we reach full funding during the ICO then we will generate all 1,000,000 coins. If we do not obtain full funding, then whatever was not funded will not be generated. Coins during ICO are sold at \$10 / HALO Coin.

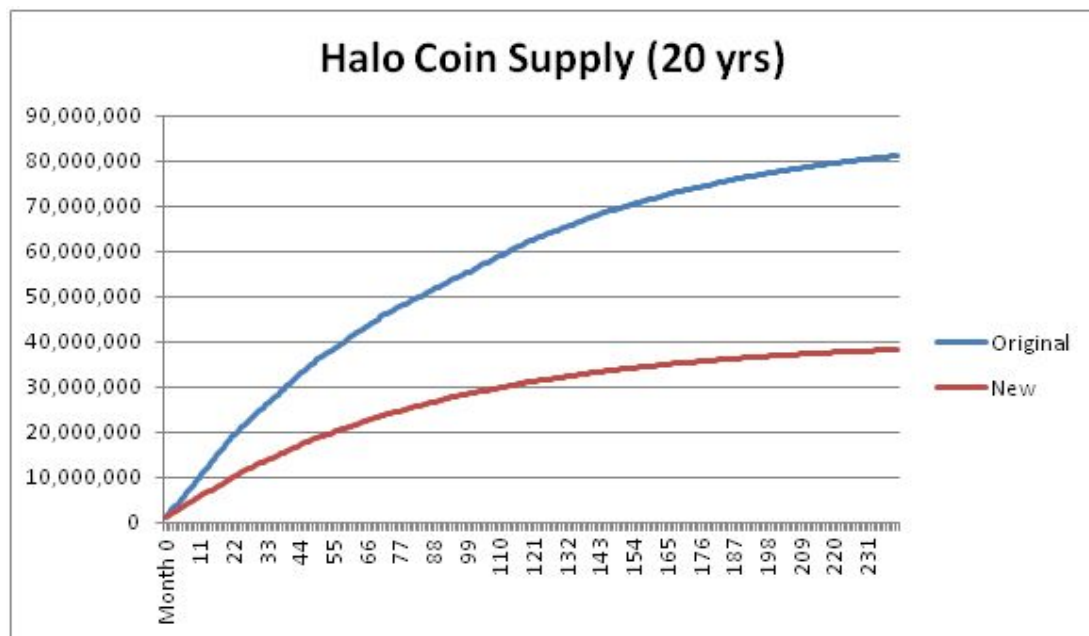
Over the next 20 years we will continue to release a supply of HALO Coins into the network. The release schedule looks like so:



Approximately 10,000,000 coins in supply after 2 years.



Approximately 20,000,000 coins in supply after 5 years.



Approximately 40,000,000 coins in supply after 20 years.

## Platform Technology

Some of the programming technology we will utilize to create the Halo DCE Platform:

**Halo Wallet:** The Halo Wallet will be built using Javascript and more specifically Electron/Angular.

**Halo Coin:** The Halo Coin will be constructed in the Go programming language.

**Hosting:** Halo will be load-balanced properly on cloud servers by core team engineers.

## Generating Revenue / Growth

The Halo Platform will generate revenue via usage in multiple ways:

**Platform Fees:** Certain transactions done on Halo will generate fees.

**Marketplace Sales:** Flat percentage rate for merchants selling on the Halo Marketplace.

**Masternode Distribution:** Intelligent smartnode system for strong distributed networking.

**PoW / Miners:** The Halo token is based on ethhash and is GPU mineable to increase supply.

## The Halo DAPPSTORE

We will be building out additional tools and features for DAPPs on the Halo Platform. Many of these will give DAPPs the ability to talk to other DAPPs, add additional communication protocols, and increase security with encryption standards.

Included in the Halo Platform will be a DAPPSTORE of curated apps that meet our stringent security and usability guidelines and requirements.

### DAPPSTORE Users

Users will be able to trust DAPPs that are listed in the DAPPSTORE. Our users will also be able to find and access DAPPs quickly and effortlessly.

### DAPPSTORE Developers

Developers will have access to new tools and options, and increased exposure. Using our standards developers can offer their DAPPs for free, for a flat price, or even for monthly subscriptions.

### DAPPSTORE Audited Contracts

Along with publishing DAPPs through the DAPPSTORE, developers will be able to have their contracts audited, vetted, and published by the Halo Platform Dev team. While this will incur a cost to the developer submitting a contract, the result will be a contract that its state changes cost 0 (ZERO) gas. For more on this see the Halo SDK area.

## The Halo SDK

The Halo Platform will be a diverse array of complete applications for users to control their entire cryptosphere. To help support the diversity of applications, we are providing both API's and SDK's to developers to extend the wallet, core applications, and provide new applications to solve new problems in the future.

Included with the SDK will be a complete set of tools in addition to the API. The tools are as follows:

### Contract IDE

A complete development environment to test contracts on a private blockchain, test network, or a client side VM.

### Example Applications

If you need a quick jumpstart to developing on the Halo Platform, we will provide some quick start applications that have everything setup and ready to go to start development. We will include quick starts for Angular, React, Vue, and even Meteor.

### Angular Tooling

All of our core modules will be built on Angular, and we want to provide developers with a stress free way to interact with the Halo Platform in Angular. We will be providing typing files, service dependency injection, and more. Expect a vast array of tools for Angular developers.

### JS API

We will provide a new layer of interaction with our wallet using a javascript API that can be consumed by DAPPs. This API will allow you to interact with currently installed core modules, modify theming and shortcuts for the wallet, modify theming for core modules installed, and much more!

### Test RPC Network

We know that loved feature for development in the community is the Test RPC option. It allows you to do blazing fast testing without connecting to an actual private or test

blockchain. We want to help you take your app a step further and provide you with the tools to do instant testing without waiting for blocks to be mined. The Test RPC will take care of all those needs for you.

## Browser Plugin

We are also developing a browser plugin to allow your DAPPs to be used outside of the Halo Wallet. Users will be able to interact with your DAPPs using the main net, test net, local private nets, local test rpc, or even through an embedded VM running inside the plugin when needed.

## Halo Domains

Get easy to remember domains mapped to your DAPPs so that your users can find your site and index it easier within the Halo Platform DAPP network. This will be used in conjunction with our new protocols for serving static files.

## Gasless Contracts

The point of having transactions and state changes to a contract cost gas is to prevent contracts from entering into continuous loops and causing malicious problems. This helps keep contracts within the bounds of the network and prevent scaling and timing problems. To keep these same checks in place we are still going to require gas on public contracts. Just like contracts today, anyone can publish a public contract. However we are going to offer a unique feature to developers and token creators. If you wish to submit your token code to a security audit, and it passes, then your token can be published by the Halo Platform developer team as a private contract. Private contracts can only be published by the Halo Platform developer team, and incur 0 (ZERO) gas costs when changing contract states or sending transactions.

## The Universe Expansion

We are building new features on top of the Swarm protocol built by the ethereum network. We are calling it the Universe, and the project is the Universe Expansion. Outlined below are the features we are adding into swarm for standardization and tooling.

## NoSQL JSON Datastore

Giving you standardized API and tooling to use a NoSQL database stored in swarm on your application. DAPPs will have direct access to storage and management through the halo.js API.

## Asset Control

A familiar situation as with the current swarm, the asset control API will allow you to store files and information within the swarm network. This will be particularly good for PDF's, images, and other items that aren't related to serving a web page but needed for general storage purposes.

## Static Site Server

Using the distributed decentralized network to store your website and serve it to others is a major goal of the Halo Platform. As long as your website assets are static files (Ex: HTML / CSS / JS / JPG / PNG / etc...) then they can be served from the network. We are taking some key notes from other distributed and decentralized website hosting projects. The ability to deploy your website and update it will be given through the SDK tooling.



## Roadmap

We are setting a solid roadmap that gives the correct time and allowances to build your amazing city for crypto currency. The times we have set allow us to do proper testing, evaluation, community feedback acceptance, and much much more. We are dedicated to building you a quality product that you can stake your investment and time into.

2017 Q4	Network Live Wallet App Universe Expansion
2018 Q1	Quest Chat Portfolio
2018 Q2	Portfolio Multi-Coin Support Token Hub Distributed Exchange
2018 Q3	Community Hub Quest Video Chat Traditional Exchange
2018 Q4	Business Services Full SDK (Early Q4) DAPPSTORE (Late Q4 to give developers time to use SDK) Personal Finance Manager Debit Card

## Current Competition

There is no current competitor that does what we are doing. No platforms, tokens, or applications that provide all these features that Halo Platform does.

There are few or no high volume exchanges with proper load balancing for zero trading lag.

There are no decentralized exchanges that provide smart, safe, consensus-driven token creation.

There are no exchanges with marketplaces that offer solid business tools and financial tracking.

