



Zippie

Mobile OS bringing blockchain to the masses

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Executive summary

There are millions of mobile services which help people in their everyday lives. However, today many of the core services are built and controlled by a handful of multi-billion corporations.

This has created two major problems:

- **Developers find it extremely difficult to get users** even with a great service. And if they do, the product is often crushed or acquired by the platform it was built on, such as Google or Facebook.
- **Users have to give up their personal data** to these same platforms, free of charge, to be able to use the services.

Zippie, a blockchain OS working on any smartphone, aims to put developers and users back in control:

1. **Developers can acquire and retain users** by offering tokenized loyalty rewards
2. **Developers can get discovered** through a crowd-curated marketplace
3. **Users can earn and spend rewards** by doing purchases, reviews and other actions
4. **Users get control** of their own digital identity and related data

In short, Zippie envisions to enable **easy flow of value** between services and people without a controlling central party. Imagine a world where a college student gets micropayments for training an AI app; a grandma gets rewards for referring services to her friends and then share the rewards to her grandson; and where anyone can get cashbacks from online purchases, all within seconds, without middlemen, through **one easy to use mobile experience** and wallet.

Zippie OS is built on open web, blockchain and IPFS technologies and launched on the Ethereum testnet in April 2018. Zippie aims to enter the market with partners who already have brand awareness and user base:

- **Decentralized apps**, offering their users a 10-second signup which speeds up the onboarding by 10x compared to current solutions such as MetaMask
- **Traditional apps**, offering their users an easy way to send and receive rewards and micropayments without needing bank accounts, credit cards or wallet app installations
- **Online marketplaces and mobile operators and brands**, combining loyalty solutions like cashbacks, referral points and purchase bonuses into a one wallet

Users are intended to be incentivized to actively use and promote Zippie with ZIPT, the loyalty token of the OS.

The Zippie core team consists of former team members of the Finnish mobile companies **Jolla and Nokia**. At Jolla, the team developed and launched several mobile devices and Sailfish OS, the only commercialized and independent alternative to Android today.

1 Internet dominated by giants

Google and Facebook have direct influence over 70% of internet traffic [1]. This has led to a digital world where few large entities have the power to decide how our personal data is collected and used, and which businesses get discovered and flourish.

Users and their data are exploited

In return for not taking fees for their digital services, digital conglomerates such as Google and Facebook base their business model on advertising and collection of user data.

This can have major implications on user privacy, as shown by the Cambridge Analytica data breach discovered in 2018. The data analytics firm harvested 50 million Facebook profiles of US voters without authorization and used them to build a program to predict and influence choices at the ballot box [2]. This was followed by a data breach in which at least 50 million Facebook users' data were at risk after attackers exploited a vulnerability that allowed them access to the users' personal data [3]. Only weeks after, it was revealed that Google had exposed the private data of half a million users of the Google+ social network and then opted not to disclose the issue because of fears that doing so would draw regulatory scrutiny and cause reputational damage [4].

Collecting user data has become the de facto way of how digital services are monetized today, to a degree that people don't even pay attention to it anymore or silently approve it due to a lack of more privacy-respecting alternatives.

Developers are struggling to get loyal users

It's not only users who are hurt. While total mobile app revenues are increasing and are set to pass \$100 billion in 2018 [5], discoverability is at its lowest. 60% of developers make less than \$500 per month, as it requires a massive marketing budget to get noticed in Google and Apple app stores. As app researcher John Dinsmore put it: "A programmer would have a better chance of making an NBA roster than having an app go viral on its own." [6]

Earlier reports suggest that only 0.01% of apps can be considered a financial success [7], and that organic traffic to apps continues to decline [8]. On average, it costs developers anywhere from \$0.40 to \$4 to get someone to install their app and a staggering \$65 to acquire a user who makes a purchase via their app [9][10].

Moreover, only 6% of people return to the app one month after installing it [8][11]. Finally, Google and Apple take 30% tax for each in-app purchase and can remove apps from their stores at will.

The challenges with discoverability, user acquisition and retention, and platform rent-seeking are not limited only to app developers. Other digital ecosystem players and consumer companies such as mobile operators and device manufacturers, and lately the Web3 applications or “dApps” are struggling with some or all of the same issues. There is a clear need for a mobile platform which growth is fueled by fair discoverability, easy sign up, and free flow of value and rewards between users and service providers, while giving users control of their digital lives.

2 Zippie OS turns users into loyal communities

Zippie OS aims to enable seamless and fair flow of value between users, developers and other mobile ecosystem participants. Zippie's value proposition:

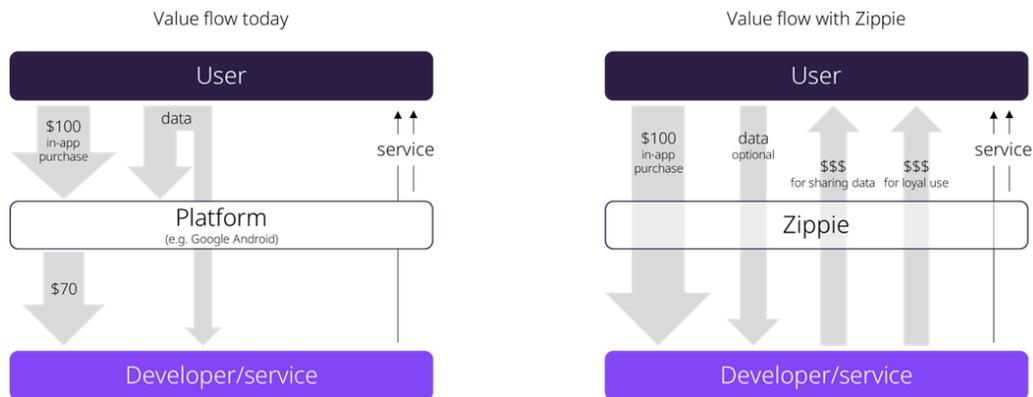
Users: Easily use dApps and earn & spend rewards

- Create your personal mobile wallet in 10 seconds - no downloads needed
- Earn rewards for doing purchases and other actions, easily to a single wallet
- Store, send and receive rewards and cryptocurrency without the hassle of private keys
- Send cryptocurrency through any instant messenger, even to people without a wallet
- Use decentralized applications without downloads or extensions or network gas fees
- Control your own digital identity and related data

Developers & businesses: Onboard & retain loyal communities

- Onboard new users in 10 seconds, even to decentralized applications
- Acquire new users through viral referrals
- Increase user retention by easily rewarding loyal users
- Get discovered through a crowd-curated app explorer
- Ease R&D workload by utilizing Zippie's wallet, identity and key management features

In essence, Zippie aims to enable easy and fair flow of value between services and people without a controlling central party, while enabling a beautiful out-of-box experience for end-users. Users are rewarded for activity such as purchases, referrals, service reviews or voluntarily sharing their data, compared to the current model where underlying platforms gather major share of users' data and overall value created in the ecosystem.

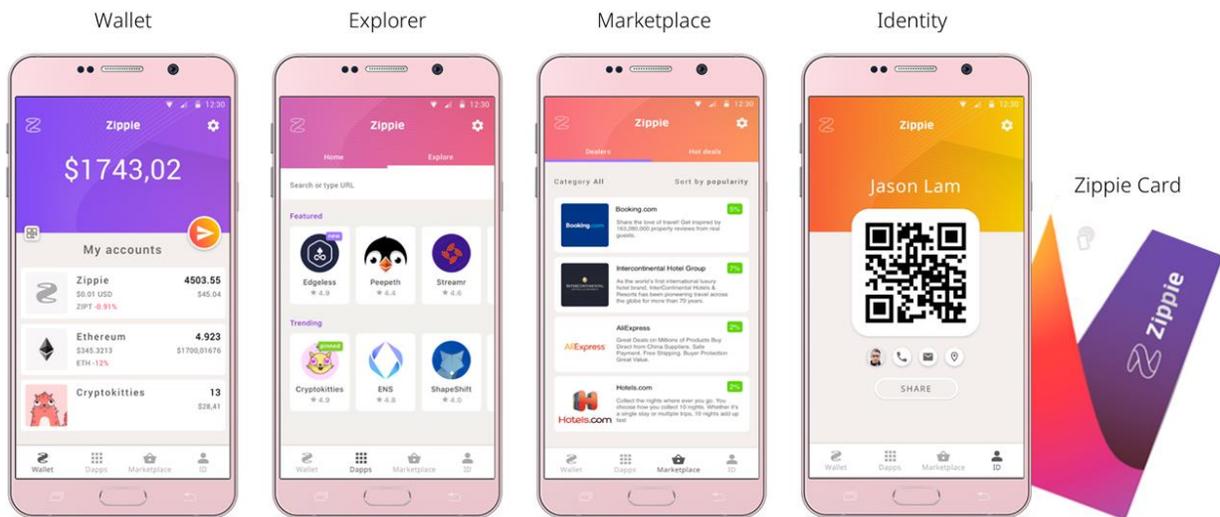


Value flow between mobile ecosystem participants currently and with Zippie.

The Zippie experience

Zippie OS is intended to consist of five key features:

1. **Wallet** - Enables user to use the same wallet across all services, receive cashbacks, and send and receive currencies through a one integrated experience
2. **Explorer** - Enables users to discover decentralized applications from a one, crowd-curated app explorer
3. **Marketplace** - Enables user to receive cashback automatically from online shopping, directly to their Zippie wallet
4. **Identity** - Enables user to disclose only the information they choose to, while providing access to decentralized applications with a single identity
5. **Zippie Card** - Enables user to confirm large transactions and recover identity with a physical card



Zippie OS main features.

How do these features make the Zippie OS look and feel like? Below is a walk-through of the planned Zippie experience.

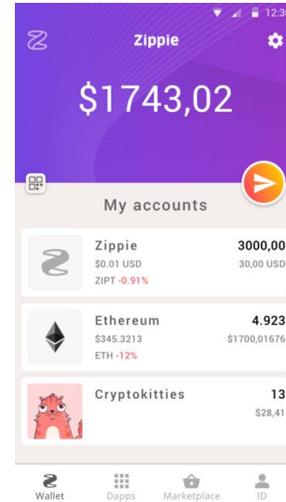
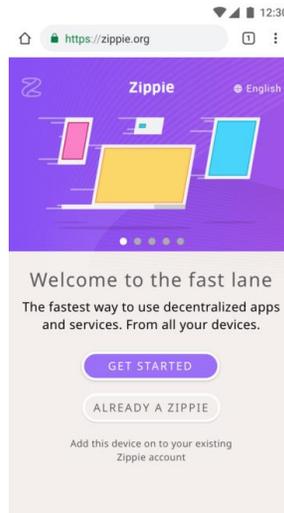
Note: Visuals and brands are for example purposes only and not established partnerships.

1. Sign up in 10 seconds

User gets a wallet, identity, and access to apps in 10 seconds by signing up on Zippie website with their default browser. User doesn't need to install anything.

Zippie icon is added to the app grid of user's phone for easy access.

Zippie splits user's private key automatically between user's device and Zippie cloud, enabling easy recovery if user's device is lost. User does not need to worry about writing down back up phrases.

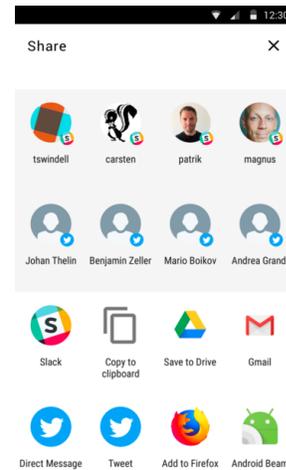
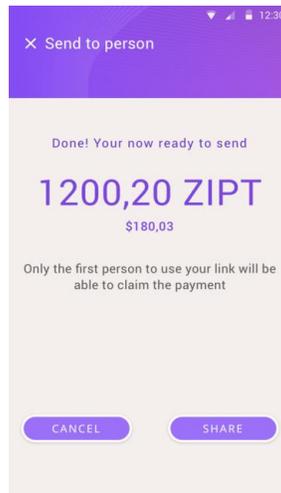


2. Send value to anyone

User can send and receive digital currencies with anyone - even with people who don't have Zippie or another wallet.

Sender can share a transaction link to receiver without a wallet through a chat app like WhatsApp or other sharing method. By tapping the link, receiver can access the funds after 10-second Zippie sign up.

Sender can use Zippie's pay-my-gas service and is not required to have ETH in their wallet.

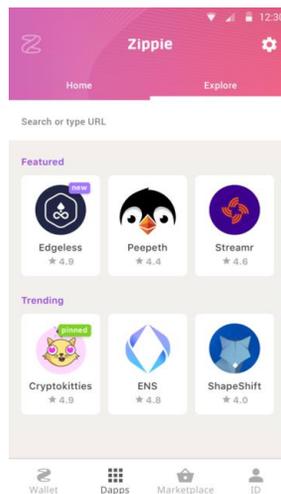


3. Use dApps

User can access decentralized applications and other Web3 services with a single tap in the Zippie Explorer.

Zippie OS and Explorer work in user's default web browser. User doesn't need to install browser extensions or separate apps to use dApps.

Explorer content is curated by ZIPT token -incentivized community.

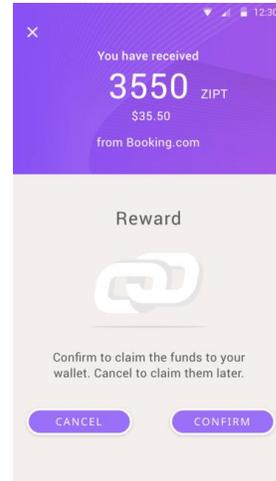
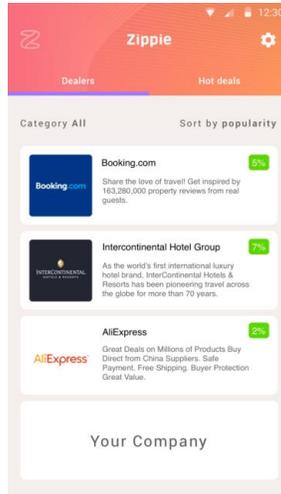


4. Earn digital currencies

User can earn digital currencies in various ways: by doing online purchases, by sharing their data, or by doing actions such as training an AI app.

The rewards can be even constant micro-transactions such as \$0.01 or \$0.05, enabled by blockchain technology.

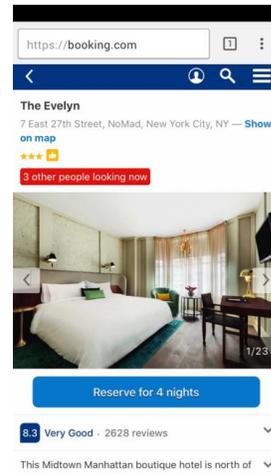
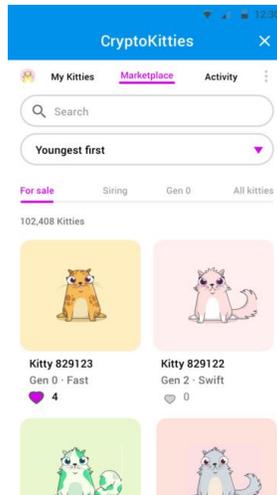
All rewards are automatically added to user's Zippie wallet.



5. Spend or cash out

User can spend their earned rewards for example to do further purchases or to access premium features in services.

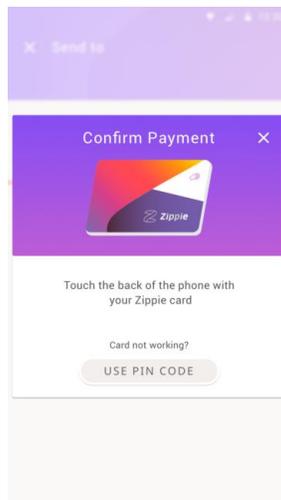
In the future, Zippie aims to support also cash out to fiat such as US dollar.



6. Store securely with Zippie Card

Active Zippie users can also get the Zippie Card, which they can use to confirm large payments. This way only the card holder can move large amounts.

Moreover, users can use the card to recover their Zippie ID and wallet in case they lose their device.



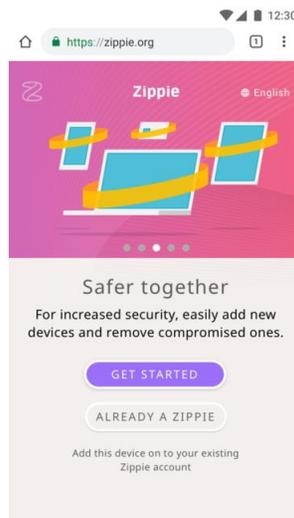
7. Own your digital identity

Each Zippie user gets a digital identity which they fully control. User can use the ID to identify themselves among other people and across services, similarly like they login with their Google or Facebook credentials to different services. Only that with Zippie ID the user, not the service provider, owns the identity and related data.



8. Recover with buddies or Zippie Card

In case user loses their device, they can recover their Zippie ID and wallet to another device by either through buddy recovery or the Zippie Card.



The Zippie experience can be also customized to match partner's brand. Read more about Blacture, one of our partner cases: <https://blacture.com/>

3 Product architecture and roadmap

The vision for Zippie is to be a full-stack mobile environment for decentralized protocols, apps and other Web3 based services. As a web-based OS, Zippie is intended to work on any modern web browser in Android, iOS and most desktop devices.

Web-based OS

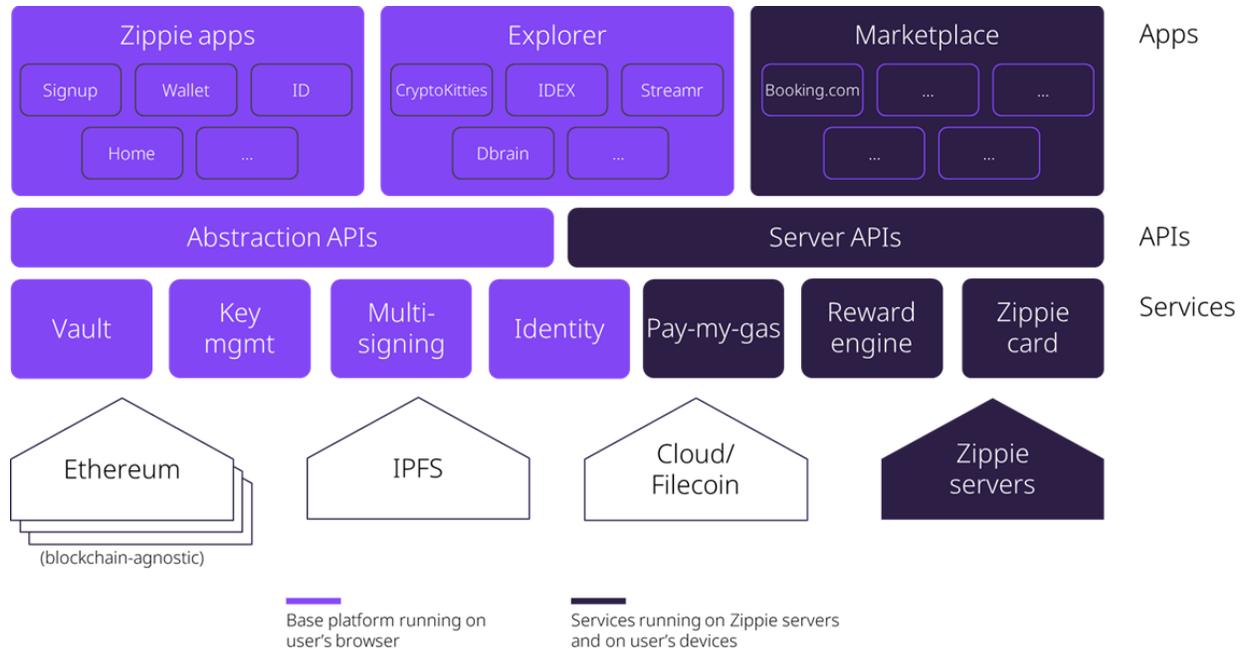
Zippie's web-based architecture has several benefits over native application or device level OS approach:

- **Compatible with existing mobile devices** - Users can run Zippie in their existing Android or iOS devices through their default web browser such as Chrome, Firefox or Brave. Zippie is not tied to specific device models or underlying operating systems, and can be expanded to support also desktop devices.
- **Censorship resistant** - Users can access Zippie from their phone's home screen or through their default browser just like any other app or website. Zippie is not dependent on app store channels such as Google Play or Apple iTunes where it could be removed by store owners at their will.
- **Always up to date** - Zippie can update the OS at any time, and all users have the latest version in use automatically.
- **Spreads virally** - It's as easy to start using Zippie as to visit any website. Users can onboard in 10 seconds and do not need to install anything. Moreover, users can send digital currencies to anyone who have a mobile phone and internet connection - and the receivers automatically become Zippie users.
- **Supports Web3 natively** - Zippie is built from the ground up to support Web3 - the internet of value - and its underlying technologies such as blockchains and IPFS.

3-layered architecture

Zippie OS consists of three core layers:

1. **Apps** - Zippie system apps and 3rd party apps and services which user interacts with.
2. **APIs** - Zippie services are made available for app developers through easy to use APIs.
3. **Services** - Zippie services to enable superior user and developer experience.



Zippie OS architecture.

Apps

The apps layer is what's visible for the Zippie OS user.

Zippie apps

The Zippie-built system apps include some of the core functionality of the OS such as Signup, ID, Home and Wallet. Users can access these apps directly in the OS. Moreover, the core apps provide some key capabilities which 3rd party app developers can utilize in their own apps and experiences. For example, when a user wants to make a transaction in a 3rd party app, the app's developer can interface with the Zippie wallet without needing to build a separate wallet to their app.

3rd party apps & Explorer

3rd party app developers can add their apps to the Zippie explorer, where users can access these apps with a single tap. The Explorer content is intended to be curated by a token-powered Zippie community.

Marketplace

App layer is planned to include also the Zippie marketplace. The market consists of 3rd party online marketplaces which reward user with digital currencies for made purchases, directly to the user's Zippie wallet. The rewards are mostly referral rewards which are traditionally available only for businesses or aggregators. Zippie makes these rewards available for all users.

APIs

Zippie OS has several APIs which enable 3rd party developers to utilize all of the core services built by Zippie. There are two types of APIs: abstraction and server APIs.

Abstraction APIs

Abstraction APIs are APIs that simplify the use of underlying provided Zippie APIs and cryptographic primitives.

Server APIs

For services that currently cannot be decentralised in a meaningful manner or without hurting user experience, Zippie provides a number of APIs that Zippie-based apps can leverage.

Zippie API documentation is available at GitHub: <https://github.com/zippiehq/>

Services

Zippie services aim to make the OS' user experience as stunning as possible and save developers the trouble of building all the bits and pieces themselves. Majority of the services are fully open source and available for all apps utilizing the Zippie OS. Some of the services are proprietary due to running on Zippie servers and can be licensed by developers and partners separately.

Vault

The Zippie Vault takes care of all the challenging key management tasks so that developers can focus on making their app and dApp experience the best they can. Things like creating, transferring, backup, and recovery of cryptographic keys all come as standard.

The Vault is the main entry point for a Zippie based dApp, and it runs as a service worker inside the user's web browser. By using the Zippie Vault, developers can easily generate and use dApp specific cryptographic keys for signing transactions or encryption of data.

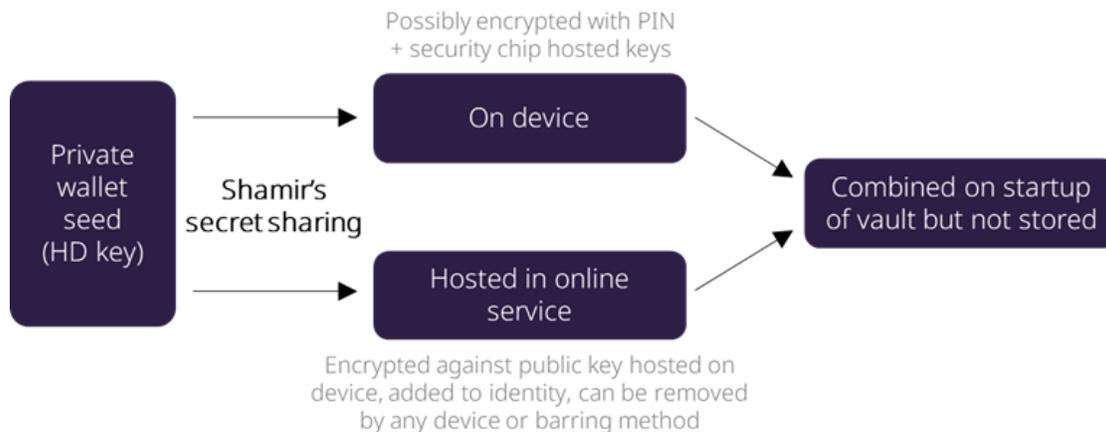
Each Vault has its own unique master seed, and from that all the application keys are deterministically generated. This means that we can keep the master seed secure by only allowing application keys to be accessed externally, and all your application keys can be regenerated from the master seed only.

Private key & identity management

Identity management and cumbersome use and storage of one's private keys are some of the key hurdles in the current cryptocurrency experience. Zippie aims to solve this challenge by utilizing Shamir's secret sharing to private key management.

The users' main cryptographic identity (mnemonic) is never fully stored on the user's device, but is split up through Shamir's secret sharing and stored partially on device and selected online service provided by Zippie or another service of the user's own choosing. This second piece of the split secret is encrypted with a key only available on the device.

Upon vault initialization, the pieces are put together and decrypted with a device-specific key, ideally hosted in the devices' security chip. If the device is lost or stolen, the user will be able to ban the device from accessing the second piece of the split secret through another of their devices or other methods set up by user.



Splitting user's cryptographic identity with Shamir's secret sharing.

The key management software is also intended to provide methods for enabling passphrase-accessed mnemonic derived keys akin to the feature of Visa PayPass where only fund transfers above a certain amount would require a PIN, so a frictionless experience is achieved for smaller

transactions. The Zippie project has also created the Zippie Card for easy but secure cryptographic identity recovery in case of device loss.

Personal multisig

Personal multisig is one of the fundamental building blocks for Zippie to make it as easy as possible for users to start using blockchain based services. Personal multisig enables any Zippie user to send digital currencies to anyone via links. All the user needs to do is to define an amount and a currency they want to send and then send the link via sharing, for example through popular messaging apps such as WhatsApp or Facebook. Recipient needs to just open the link, perform a 10-second Zippie signup, and the received currency is in the recipient's newly created Zippie wallet.

Pay-my-gas

Ethereum uses “gas” to pay for work performed in the network, such as making transactions. The concept of gas fee, paid in ETH, is rather foreign and complex for people outside of the cryptocurrency community. Zippie makes gas fees invisible for the user by paying gas on behalf of the user. This way the user doesn't need to worry about having ETH in their wallet every time they make an ERC20 transaction. Zippie might take a fee or require holding ZIPT token for providing this service.

Reward engine

The Zippie reward engine is intended to calculate the rewards each user gets from actions such as marketplace purchases, and transfers rewards to a user's wallet accordingly. The reward engine works autonomously through smart contracts.

Zippie Card

The Zippie Card acts as a 2-factor authentication for user's large digital currency transactions for added security, and as a recovery card in case user loses their Zippie ID powered smartphone. The card is made using industry standard smart cards and is not custom hardware. Similar cards are used by banks, for example, as credit cards. The technology is proven and widely used, which also significantly lowers the card's production cost and increases availability.

Buddy recovery

The Zippie buddy recovery is intended to work through a users' Zippie contact database and allow the possibility for other Zippie users to help authenticate a users' real-life identity in order to let them recover their Zippie ID.

Roadmap

The Alpha version of Zippie OS was released on April 2018 in Ethereum testnet for a limited number of community testers. With the help of feedback from over 1,000 testers and other Zippie project participants, the OS has been significantly improved both technology and user experience wise throughout Q2 and Q3 2018. Moreover, a security audit was started by a well-known and respected 3rd party auditor.

Once the security audit is passed, Zippie OS launches on the Ethereum mainnet, expected in Q4 2018. This marks the readiness to use Zippie with real digital assets, with caution and with limited amounts. Commercial readiness of the Zippie platform is scheduled for early 2019.

Released Alpha in Ethereum testnet	Q1	2018	
Released key features: signup, wallet, identity, vault			
Announced first commercial partnerships with Borqs & Blacture	Q2		
Announced first dApp partnerships			
Released key features: recovery, multi-signing, pay w/ Zippie Card	Q3		Pass security audit
Delivered first Zippie Cards to community			Release Beta in Ethereum mainnet
	Q4		Release key features: explorer, pay-my-gas, key management
			Launch 'Sign in with Zippie' with first dApp partner
		2019	Release commercial release
			Launch first products with commercial partners
			Release key features: reward engine, marketplace, explorer curation & rewards, ZIPT loyalty program, fiat connection, desktop version <i>(tentative)</i>

Zippie roadmap with achieved and planned milestones (subject to change).

4 Go-to-market with partners

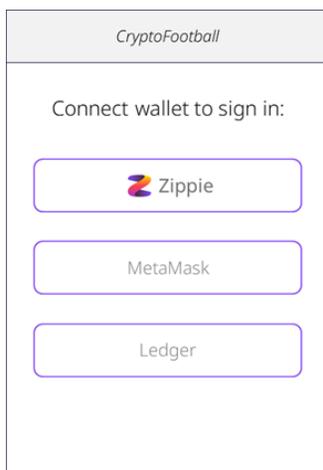
Zippie is building not just an OS for the next generation of the web but an ecosystem of products and services. The more Zippie has useful services on top of the platform, the more value it brings to users.

Zippie aims to enter the market in phases with service and channel partners. Importantly, Zippie intends to utilize the partners' already established brands and userbases to gain traction.

Decentralized applications

The current onboarding and use of blockchain-based, the so-called dApps or Web3 services, leave a lot to be desired. User either needs to install extensions such as MetaMask to their browsers and follow complex and cryptic procedures to back up their “seed phrase” and set “gas” - on a service which might not be available on mobile at all - or install separate “dApp browsers” from app stores. Without a doubt, vast amounts of potential users give up trying blockchain-based apps due to the steep learning curve to get even started.

As described in Chapter 2, Zippie OS helps blockchain-based apps to onboard their users in 10 seconds, without needing to install separate extensions or apps. Users can simply visit the app they wish to use with their default internet browser, finish the Zippie onboarding with a few taps, and access the app. After the initial sign up, users can access the app and other apps which support Zippie with a single tap through the ‘Sign in with Zippie’ button.



3. Choose your Button Style

import the button graphics, you get a choice of light or dark themed buttons



```
import zippieButtonDark from '@zippie/vault-api/static/img/zippie-button-dark-default.png'  
import zippieButtonLight from '@zippie/vault-api/static/img/zippie-button-light-default.png'
```

Example of ‘Sign in with Zippie’ button to sign in to a decentralized application, and instructions for developers to add the button to their application (available at <https://github.com/zippiehq/>).

Each user who uses Zippie to sign up and then sign in will be automatically also a Zippie OS user with all of its features such as wallet, identity and explorer. Apps and services can utilize all of these features without having to build the components themselves. For example, when a user wants to make a transaction in an app available in Zippie, it's done via the Zippie wallet. The app itself doesn't have to build a wallet function.

Partnering with dApps and helping them to onboard users is the first phase of Zippie's go-to-market strategy. Importantly, the partnerships might provide Zippie brand exposure among these app developers and their users and communities.

Traditional applications and other mobile ecosystem players

One of the key challenges to digital ecosystem participants such as mobile operators, manufacturers, online marketplaces and traditional applications is user acquisition and retention. Zippie aims to partner with established players by offering them a platform which simplifies loyalty solutions like cashbacks, referral points and purchase bonuses by combining them into a single wallet. User can then use these points for further purchases, share them to any of their friends who have a smartphone, or cash out. Easy rewarding and viral sharing can increase user acquisition and retention significantly, while lowering the cost of running a loyalty program.

Besides rewarding, Zippie intends to provide traditional applications a way to easily send and receive other micropayments or cryptoassets with other users or the service provider without needing bank accounts, credit cards or wallet app installations. These assets, such as in-game items or wealth and reputation, could be transferred even between different games. These in turn increase user retention and engage the service provider's community across all of its own and its partners' services.

The lead time of seeking potential partners, opening and closing negotiations, and launching product to the market is significantly longer with established players than with decentralized applications which are only entering the market. Zippie aims to launch its first commercial products with established partners during 2019. To date, Zippie has announced two major commercial partnerships: with Nasdaq-listed Borqs to create blockchain phone reference designs for smartphone brands worldwide, and with Blacture to create the first blockchain smartphone, "the phone that pays you back", in the US. Read more about these partnerships: <https://medium.com/zippie/>

5 ZIPT loyalty token supercharges OS usage

The traditional business model in consumer mobile platforms is based on user data monetization. Such a model sacrifices the privacy of the users and puts them at risk from hackers. Further, the model eventually creates an oligopolistic ecosystem where few dominant players capture most of the revenue while most users, developers and other contributors struggle to capture value regardless of how much they have contributed to the ecosystem.

Tokens provide the means to change the traditional consumer platform business model. Each contributor can be rewarded according to the value they create in the ecosystem. The more you use and give, the more you get.

Loyalty token model and its benefits

Loyalty tokens, some of them known also as discount tokens, are a new innovative concept to drive product usage and reward active users over token speculators. Different kind of discount and fee credit token concepts have been introduced for loyal users of networks by Sweetbridge [12], Binance [13], Gnosis [14] and SpankChain [15], among others.

In essence, by having loyalty tokens in their possession (some refer to this as “staking”), users or other stakeholders can get benefits or discounts of the product they are using. As suggested by Alex Felix of CoinFund, discount-based cryptoassets can fulfill three critical properties which very few other token models can:

1. An instrument that is digital, secure, trustless and globally accessible
2. A developing ecosystem to use and accept it
3. A utility function that correlates value with fundamentals [16]

The key benefit of a loyalty token is that it always benefits an active user more than a passive holder: active and loyal user gets full discount value of the token, while passive holder gets only the resale value of it. The value created in the platform flows to offset cost to the users, incentivizing users to continue using the product and drive further growth of the platform.

If the loyalty token provides only an access to the discount or benefit and is not required to be used as the currency for the payment, meaning that the platform fees can be paid also in other currency, it creates even more robust and user-friendly token model. For example, user could pay platform’s fees with a stable currency instead of a more volatile loyalty token. This makes it easier for the users to understand the fee and discount dynamics and enables users to hold their precious loyalty tokens to continue receiving benefits in the platform.

Furthermore, similarly to OmiseGO’s token model which is preferred by Ethereum inventor Vitalik Buterin [17], loyalty token has favorable attributes such as not being a medium-of-

exchange token, having a clear valuation model (expected discounts minus costs), and requiring network-benefiting action to get the full value.

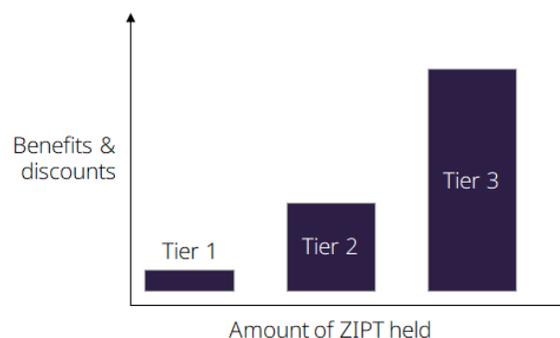
Loyalty tokens can be either fixed or perpetual in nature. Fixed means that by holding a certain amount of the token, the user is granted a fixed set of benefits, say 20% discount on service fees. Perpetual means that the benefits received by the user are equivalent to a revenue or fee royalty of the service, according to the amount of loyalty tokens the user holds. In both cases, user has to utilize the service to receive the benefit. While the perpetual model is more directly linked with the success of the service, it is more challenging to communicate to the end-user as the amount of benefits varies depending on the total future revenue of the service. Moreover, it is unclear how regulators see a model where the amount of discounts or benefits are directly tied to the amount of revenue. On the other hand, a fixed model is easier to understand by the user and the limits of tokens held and benefits gained can be adjusted over time, according to business realities.

ZIPT as a loyalty token

ZIPT is intended to be a loyalty token. The more users or partners hold ZIPT in their possession, the better discounts and other benefits they get using Zippie OS and its services.

ZIPT's loyalty model is planned to have three tiers to choose from:

- **Tier 1:** Hold no ZIPT, get least benefits and pay standard platform fees
- **Tier 2:** Hold moderate amount of ZIPT, get moderate benefits and discounts on platform fees
- **Tier 3:** Hold large amount of ZIPT, get large benefits and discounts on platform fees



Benefits and discounts increase according to amount of ZIPT a user or partner holds.

The tiered model is familiar to people from other loyalty programs, and thus easy to communicate and understand. The required amount of ZIPT in each tier is set and adjusted by Zippie from time to time to keep the tiers attractive for potential and existing users and partners. For example, if the platform usage increases and the demand for ZIPT increases as more users

want access to loyalty benefits, Zippie might decrease the amount of ZIPT required to reach each tier. This makes the loyalty scheme more attractive for new potential users and enable existing users - who now have excessive amount of loyalty tokens - to sell some of their tokens in the open market and still keep their existing benefits, or reach the next tier and increase their benefits.

User fees & benefits of holding ZIPT

For a user, Zippie aims to initially provide three fees and benefits in the Zippie OS:

1. **Pay-my-gas fee** - Zippie is planning to charge a fee for paying the Ethereum network gas fee on behalf of the user. This means that the user doesn't have to have ETH in their wallet to be able to send ERC20 tokens or execute other actions. Using Zippie's Pay-my-gas service is intended to be optional for the user.
2. **Zippie Card** - Zippie is charging a fee for the Zippie Card (\$50 as of October 2018). Purchasing and using the Zippie Card is optional for the user.
3. **Cashbacks from purchases** - User can get cashbacks from online purchases made through the Zippie Marketplace. The cashback varies per purchase and can be up to 5% (estimate).

If the user holds a certain amount of ZIPT tokens, they can get discount on Zippie's Pay-my-gas fee, Zippie Card, and increase their cashback percentage.

A hypothetical example on user discounts and benefits (subject to further consideration and change over time):

	Loyalty tier		
	Standard	Silver	Gold
PayMyGas fee	1% (max \$5/tx)	0.5%	0% (max 50 tx/month, then 0.1%)
Zippie Card	\$50	\$25	Free
Cashback % (estimated average)	1%	2%	5%
Zippie OS	Free	Free	Free
Minimum ZIPT held	0	5,000	15,000

To be eligible for the discounts and benefits, the user must lock the designated amount of ZIPT for some months at a time through the Zippie wallet. User can upgrade their tier at any time by locking more ZIPT and starting over the lock-up period.

Partner fees & benefits of holding ZIPT

For partners such as decentralized applications and brands, Zippie aims to initially provide three fees and benefits in the Zippie OS:

1. **Review reward fee** - Zippie enables app developers to reward users automatically for rating and reviewing their application in the Zippie Explorer, in any currency supported by Zippie. Zippie is planning to charge a fee for providing the service. The fee might be lower if the developer chooses to use ZIPT as the reward currency.
2. **Explorer visibility** - Applications and brands can increase their visibility in the Zippie Explorer by holding ZIPT. There are prominent placements in the Explorer UI, such as being one of the top featured applications. The more ZIPT a brand holds, the more visible it will be in the UI. Zippie is also considering experimenting with a monthly Harberger tax, explored by Simon de la Rouviere in the context of blockchain among others [18], to ensure an opportunity for everyone to get fairly valued visibility in the Explorer.
3. **Sign in button** - As described in previous chapters, Zippie provides decentralized applications an easy way to onboard users with the 'Sign in with Zippie' button. Initially, Zippie plans to offer the button for interested parties without requiring them to hold any ZIPT, to get traction for the service and onboard as many users as possible to the Zippie platform and decentralized services in general.

A hypothetical example on partner discounts and benefits (subject to further consideration and change over time):

	Loyalty tier		
	Standard	Silver	Gold
Review reward fee	5%	3%	1%
Explorer visibility	Moderate	High	Very high
Sign in button	Free	Free	Free
Zippie OS access	Free	Free	Free
Minimum ZIPT held	0	100,000	300,000

Similar to user benefits, partner must lock the designated amount of ZIPT for some months at a time through the Zippie wallet. Partner can upgrade their tier at any time by locking more ZIPT and starting over the lock-up period.

Below is a further description on the Zippie Explorer and mechanics around getting visibility and rewarding users for ratings and reviews.

Getting visibility in Explorer

Zippie app explorer is a crowd-curated platform for easy access to the world of Web3 applications. It is an inclusive tool for the discovery and utilization of partly or fully decentralized applications, as well as in itself aiming to be a decentralized system both ran and curated by the community that uses it.

The explorer can host any application that has enabled its use on the Zippie system through a 'Sign in with Zippie' button. This onboarding button integrates the application with the Zippie wallet and ID systems, and provides interoperability between the payment and reward engines of the app and the Zippie wallet and ID.

Applications can get more visibility in the Explorer by holding ZIPT. This acts also to prevent malicious content to be added to the explorer; if an application includes malicious content, it will be removed from the explorer by curators. The application provider will lose its ZIPT held which is added to the Zippie project's ecosystem token pool.

Decentralized applications, also known as dApps, with an integrated 'Sign in with Zippie' button will be automatically featured in the Zippie Explorer from the first time a user accesses them through said onboarding button. The button itself can usually be found on the website of the dApp project, among options to connect to the application with services like MetaMask.

Documentation as well as step-by-step instructions on how to integrate the 'Sign in with Zippie' button are on the Zippie website (www.zippie.org), providing any Web3 application project with an open source means to utilize the Zippie platform, access its existing users and easily onboard new users onto their application in just 10 seconds or less.

Rewarding for content curation and reviews in Explorer

The first time any user onboards to an application through the 'Sign in with Zippie' button, a shortcut to said app gets automatically created in the explorer. After some time using the application, the user can then categorize, review and rate the application in order to gain rewards paid into their Zippie wallet in ZIPT or other currency, as well as by doing so, help curate the explorer experience for other users on the platform. The option to categorize, review and rate will be presented to the user in a similar way to how applications on Android and iOS ask for users to rate their app for their respective app stores. Each user can review and/or rate each application only once. The function can be enabled again after major updates to the application, rendering past reviews and ratings outdated.

To reward the creation of reviews and ratings - which are both crucial elements in the discovery of the participating dApp on the explorer - by Zippie platform users, each application on the

Zippie explorer can purchase a budget of ZIPT or other currency to be allocated to users who provide the application with said reviews and ratings. The project can freely decide the size of this budget as well as how much it wishes to allocate as a reward for each user review and rating. The application project can also decide to forego this option completely, leaving the creation of reviews and ratings with no reward associated to them.

To illustrate how a project might utilize the “reward-for-rating”-system of the Zippie explorer, we will use an example project “Dapp X”. Dapp X wants to incentivize the creation of 500 reviews, 1000 ratings or any combination of these two, where 1 review is “worth” 2 ratings. Dapp X has decided it will allocate a budget of \$1000 for the creation of these reviews and ratings. In this case, the price of one review would come to \$2, while one rating would cost \$1 - paid to the user as 200 ZIPT for review and 100 ZIPT for rating, assuming a ZIPT token price of \$0.01. In order to allocate this value to the users, Dapp X would purchase 100,000 ZIPT tokens from the market, after which it would inject these tokens to the Zippie explorer reward engine with the command to pay any user who reviews Dapp X 200 ZIPT, any user who rates Dapp X 100 ZIPT, and any user who both reviews and rates Dapp X 300 ZIPT. The reward engine would then automatically allocate the funds to Dapp X’s users in return for the reviews and ratings, until there were no more funds left in the budget, after which Dapp X could either A: add more funds, adjust the allocations or keep them the same (200 ZIPT for review, 100 ZIPT for rating) and continue the rewards program, or B: freeze the program until more funds are added, causing no rewards to be allocated to Zippie explorer users for the reviews and ratings of Dapp X.

As the number of applications employing the ‘Sign in with Zippie’ button increases, along with the number of users on the overall Zippie platform, the Zippie explorer reward engine will then provide the ZIPT token with increasing demand as application projects purchase the tokens to incentivize users to review and rate their applications, as they compete for the top most valuable real estate in the Zippie explorer. To increase the value of reviews and ratings to the dApp projects on the Zippie explorer platform, the explorer will have reserved categories for best rated dApps, as well as a prominent placement for the reviews in the UI of individual dApp pages. This will also help the users of the explorer to easily find popular, well regarded and usable Web3 applications, increasing the user experience of the explorer overall.

While enabling rewards to be paid by the application to the user for the value created by providing the app with discoverability boosting reviews and ratings, the Zippie explorer reward engine has no connection to the actual contents of said reviews and ratings. This inhibits projects from “paying their way to the top” by buying good ratings and reviews despite having an inferior application, as they will be paying the same reward for a negative review as they would for a positive one, and a one-star rating will cost them the same as a five-star rating. The rewards paid for reviews and ratings thus become a way for good, value providing applications to spread faster in the Web3 ecosystem, while providing no real upside to projects with lesser quality apps. On the user side, to discourage the spamming of reviews and ratings without any value to the community simply to get the reward tied to these actions, users can become

banned from reviewing and rating apps if such repeated behavior is witnessed on part of the user by the Zippie explorer development team.

Token specification

Abbreviation	ZIPT
Type	ERC20
Total supply	1,000,000,000
Allocation & release	40% ecosystem (released over several years) 25% token sales (lock-ups up to until December 2019) 20% team (2-year gradual vesting) 15% company (released over several years)
Contract	0xedd7c94fd7b4971b916d15067bc454b9e1bad980
Decimals	18

6 Team

Zippie was established in 2016 and the core team consists of former team members of the Finnish mobile companies Jolla and Nokia. At Jolla, the team developed and launched several mobile devices and Sailfish OS, the only commercialized and independent alternative to Android today.

For most up to date information regarding the Zippie team, visit <https://zippie.org/>.

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