ORIGIN

Whitepaper

The sharing economy without intermediaries

Version 19

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This document was first published in September 2017, before the Origin Platform was built and deployed on the Ethereum Mainnet in October of 2018. For the most up to date information on our product development and business strategy, please refer to our website at originprotocol.com. For the latest technical information, please reference our Github account at github.com/OriginProtocol. To use our flagship application, please download our mobile apps (www.originprotocol.com/mobile) or visit our DApp (www.shoporigin.com) with a web3-enabled DApp browser.

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Executive Summary

Origin is an open-source platform that enables the creation of decentralized, peer-to-peer market-places. The Origin Platform initially targets the global sharing economy, allowing buyers and sellers of fractional use goods and services (car-sharing, service-based tasks, home-sharing, etc.) to transact on the distributed, open web. Using the Ethereum blockchain and Interplanetary File System (IPFS), the platform and its community participants are decentralized, allowing for the creation and booking of services and goods without traditional intermediaries.

We intend to enable a large-scale commerce network that:

- Transfers direct financial value (listing, transaction, and service fees) from large corporations like Airbnb, Craigslist, Postmates, etc. to individual buyers and sellers
- Transfers indirect financial and strategic value (privately aggregated silos of customer and transaction data) from those same corporations to the entire ecosystem
- Creates new financial value for marketplace participants that contribute to the growth of the network (e.g. building new technology for the Origin Platform, bootstrapping new product verticals, and referring new users and businesses)
- Is built on an open, distributed, and shared data layer to promote transparency and collaboration
- Immediately allows buyers and sellers across the world to do business with each other without difficult currency conversions or tariffs
- Promotes personal liberty by not allowing a central corporation or government to impose arbitrary and oftentimes onerous rules on how to do business

To accomplish these ambitious goals, we have created the Origin Platform with incentives that encourage other technologists, businesses, and consumers to build, contribute to, and extend the ecosystem with us. We imagine a broad collection of vertical use cases (e.g short-term vacation rentals, freelance software engineering, tutoring for hire) that are built on top of Origin standards and shared data.

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As of this writing, the Origin Platform is currently in Mainnet Beta. We anticipate a 1.0 platform launch in Q4 of 2020. While much of the engineering work has thus far been shouldered by our core engineering team, we anticipate that a significant amount of future development after 1.0 launch will come from our growing open-source community.

Together, we will create the Internet economy of tomorrow.

This Whitepaper details:

- Why a new form of decentralized commerce for the sharing economy needs to exist
- The proposed benefits of the Origin Platform
- Our product strategy, key features, and technical overview
- An overview of the Origin team and community

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Why

BACKGROUND

Since the advent of the Internet, digital marketplaces have paired buyers and sellers of goods and services to enable transactions that were never before possible. Craigslist launched in 1995 and for years dominated in local and neighborhood commerce. That same year, eBay was started and created an entirely new category of auction-based sales, creating a more market-efficient way to do business.

Fast forward 20 years, and countless Internet marketplace businesses in both the B2C and B2B categories have flourished.

In recent times, sharing economy marketplaces like Airbnb, Uber, Getaround, WeWork, Fiverr, and TaskRabbit have paired buyers and sellers of the sharing economy[1] with great success. Fractional usage of assets can now be "sold" just as easily as atomic items, and people all over the world are exchanging their excess inventory, time, and skills for financial gain.

These new marketplaces that focus on gigs, services, and fractional asset use are particularly well-suited for disruption by decentralized systems built on the blockchain.

Most sharing economy businesses have several things in common.

[1] Ridesharing, apartment/home lending, peer-to-peer lending, reselling, coworking, talent-sharing… The sharing economy, sometimes also called the collaboration economy, is taking off in all sorts of niches. - Forbes

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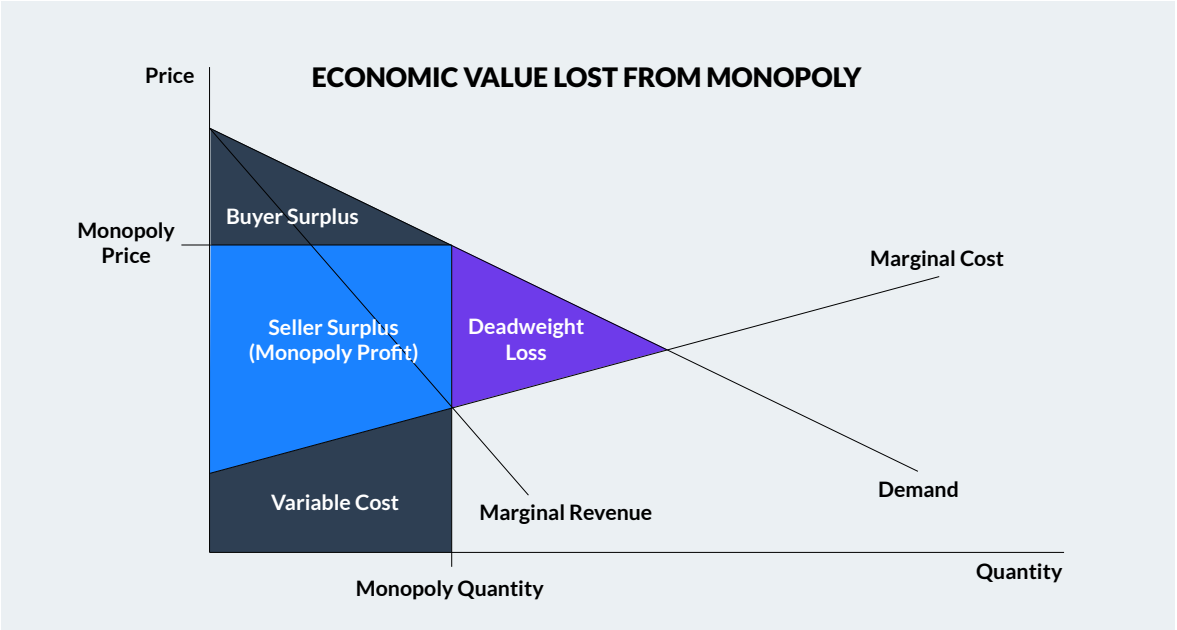
First, as a collection, these companies have created tremendous impact to the world. Consumers of marketplaces have been able to improve their lives with access to products and services that were not available previously. Suppliers have used these platforms to reach customers at greater scale and ease than before. Each marketplace creates a "home" for buyer and supplier to come together and transact, creating liquidity for that market.

Second, most sharing economy businesses follow the same growth lifecycle. Save for a few exceptions, these marketplaces are notoriously difficult to start and grow. Marketplace businesses oftentimes require millions of dollars to just get off the ground and, in the case of Uber and Airbnb, billions to scale. It's the norm for these businesses to run at a deep loss in the early days. In effect, the corporation is subsidizing the usage of the marketplace for the participants. However, because of highly positive cross-side network effects[2], successful marketplace businesses are able to grow revenue exponentially over time, usually by charging a service fee for every transaction that happens on network. Network effect businesses, like sharing economy marketplaces, are usually winner-takes-all businesses[3] and at mature stages extract a disproportionate amount of value from the network for the managing corporations and their shareholders. In many ways, they begin looking like monopolies once they reach scale.



[2] Buyers prefer a large number of sellers, and, meanwhile, sellers prefer a large number of buyers, such that the members in one group can easily find their trading partners from the other group. Therefore, the cross-side network effect is positive. - Wikipedia

Finally, while there are very significant differences in user experience, business mechanics, and vertical-specific features among Internet marketplace companies, they all share many pieces that have been built and rebuilt many times. Lyft, Postmates, and DoorDash have each individually engineered their own solutions to user and supplier profiles, purchase experiences, matching algorithms, and reviews and ratings. This is valuable proprietary technology on the one hand. On the other, it is a wasteful use of time and effort to reinvent the wheel each time to create a new marketplace vertical. Consumers are also left creating and managing dozens of accounts on these marketplace companies, each of which owns their personal data and transaction history.

COMMONALITIES BETWEEN SHARING ECONOMY BUSINESSES

	airbnb	UBER	Getaround	fiverr®
Listings (Browse, search, filtering)	✓	✓	✓	✓
Identity (Profiles, ratings, reviews)	✓	✓	✓	✓
Payment (Escrow, payments, refunds)	✓	✓	✓	✓
Scheduling (Allocating fractional usage of assets)	✓	✓	✓	✓

For several years now, blockchain innovators and investors have called for teams to build decentralized versions of existing sharing economy businesses and create an even more efficient way to conduct Internet commerce.

[3] Most competition in Silicon Valley now heads toward there being one monopolistic winner. And that is why it is hard not to see that, right now, the only competition that matters in ride-sharing is between the two largest companies: Uber and Lyft. - Om Malik

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> *"P2P lodging sites like Airbnb have already begun to transform the lodging industry by making a public market in private housing. However, adoption may be limited by concerns about safety and security (guests) and property damage (hosts). By enabling a secure, tamper-proof system for managing digital credentials and reputation, we believe blockchain could help accelerate the adoption of P2P lodging."*
>
> - Goldman Sachs Research (Blockchain: Putting Theory into Practice)

Don Tapscott, author of "Blockchain Revolution," says that the technology underlying Bitcoin could be used to disrupt the likes of Uber and Airbnb. - Wall Street Journal

> *"It will be very difficult for intermediaries to have sustainable business cases," [Fritz Joussen] he said. "These platforms [travel intermediaries] build reach by spending billions on advertising, and then they create monopolistic margins on top of what they have as sales and marketing. They do offer great sales and marketing. Booking.com is a great brand, but they create superior margins because they have monopolistic structures. Blockchain destroys this."*
>
> - Skift

However, much of the infrastructure and plumbing to build distributed marketplace apps did not exist prior to Origin.

We aim to address the shortcomings of existing marketplace companies and are excited that we have launched the Origin Platform as the way to usher in decentralized commerce for the sharing economy at scale.

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SHORTCOMINGS OF EXISTING MARKETPLACES

Unfair value capture

Value taken by today's trusted intermediaries is oftentimes not commensurate with the value they create. In addition, value capture is concentrated to the network operators and not to the network participants.

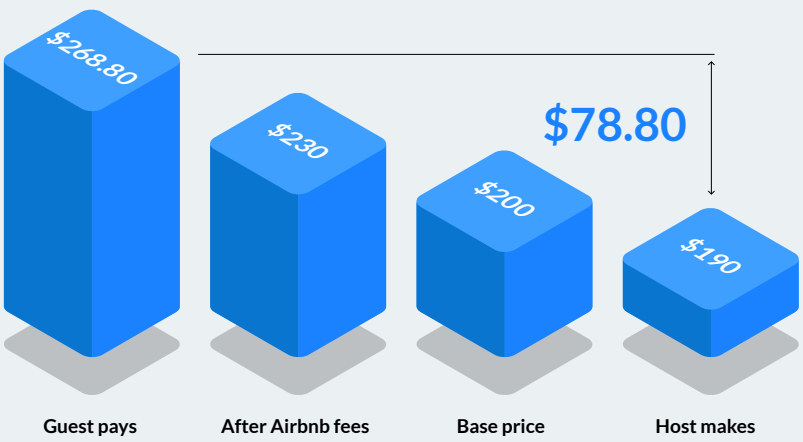
As an example, we can examine Airbnb, which has built a business currently valued at a reported $38 billion. Airbnb has built an impressive technology platform that facilitates online bookings and reviews, as well as launched local operations teams to bootstrap and cultivate local markets. Even in 2017, the company boasted 4M short-term rental listings[4]. There's no denying that Airbnb has added immense value to the ecosystem by supplying both bits and blocks to the ecosystem. The short-term home rental market would not exist without Airbnb having created it.

Today, the technology platform has been built and the marketplace grows organically with new hosts and users both proactively seeking out Airbnb's website and mobile app. Airbnb charges guests 5-15% and hosts 3-5% of every booking. This means Airbnb will capture as much as 20% of the value of every transaction regardless of whether additional work is being done by the company. Airbnb also automatically withholds local taxes as well, which can be significant. For example, the hotel taxes in Chicago, Atlanta, and Seattle are 16%.

It's worth noting that Airbnb is not alone in charging egregious fees for its matching service. Online travel agencies like Booking.com and Expedia charge affiliate hotels 15-30% of transaction value[5].

[4] Years — and over 4 million listings — later, Airbnb doesn't need to meet hosts in person anymore; the flywheel is officially spinning. - Jonathan Golden (Airbnb's first product manager)

[5] Locations in popular tourist destinations such as New York, London, and Paris will also have higher commission rates than less know areas due to greater competition, and upscale properties with higher profit margins on average will have a higher commission rate than properties such as hostels, motels, etc. that have thinner margins. - Quora



In this case, while buyer and seller are both better off than they would be without Airbnb, they are leaving money on the table since both sides would be willing to meet at a price somewhere in the middle. A more efficient market would exist if the transaction fees were removed or even decreased. Buyer and seller will both be better off economically as Airbnb is disintermediated.

> ***"What if efficient marketplaces could be built that do not charge expensive transaction fees?"***

Further, as Airbnb has thrived, it is the company's shareholders that will reap the handsome rewards. The company's founders, venture capitalists, and employees will make an immense amount of money in an IPO that is anticipated in 2020. But what about Airbnb's earliest hosts that supplied liquidity to the market? Sure, they benefited by making revenue on the platform, but they are not getting outsized rewards for their integral contributions in the early days of the marketplace like employees and investors are. In a somewhat exaggerated analogy, the company is running a feudal system where its hosts act as serfs to overfill the network owner's coffers.

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> *"How do we allow early contributors to important networks capture value more fairly?"*

Data is siloed by private corporations

Each marketplace operator controls a valuable, but closed store of user and transaction data. We believe users should be able to own and control their own data. We also believe that transparency is critical for trust. Too often corporations control access to their users' own data for their own benefit. When guests set up a methamphetamine lab in an early Airbnb apartment, Airbnb's team of lawyers immediately descended with non-disclosure agreements and hush money to stop the negative press from getting out. That might have been the right decision for Airbnb, but the company's customers deserve to know the truth so they can make informed decisions with whom to transact business. With the blockchain, everything is public and immutable, so transparency is a default feature.

Open, shared data also has the positive externality of encouraging competition and ever-improving updates to the community.

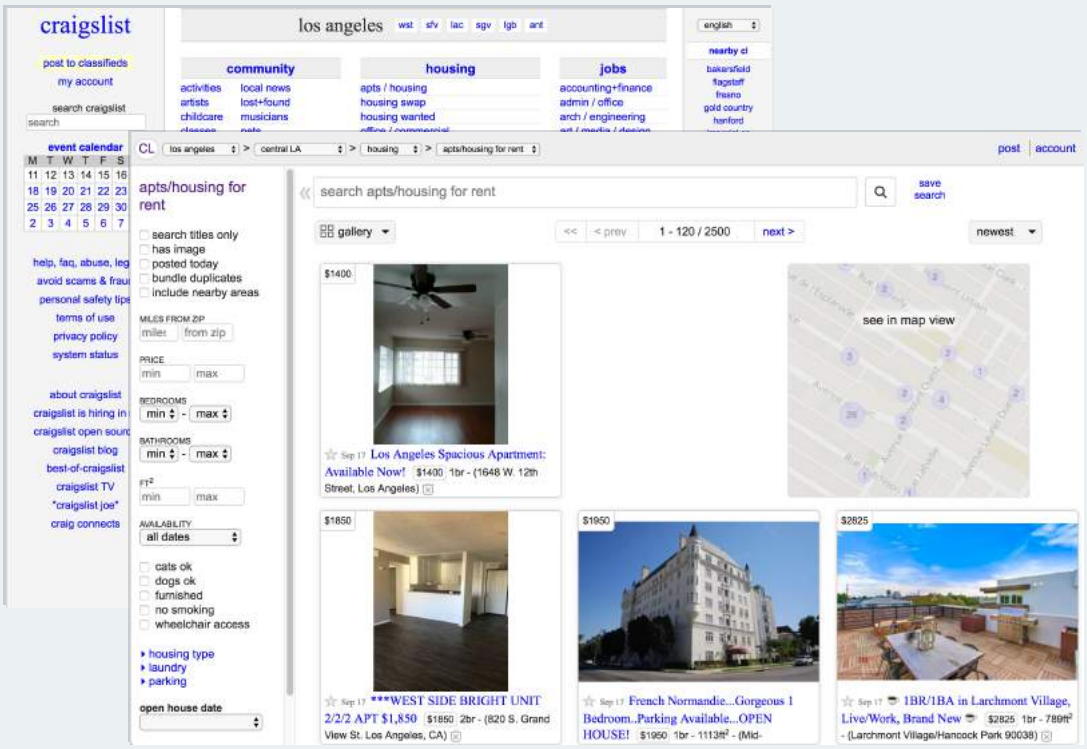
> *"What if network data was owned by the community and not a private operator?"*

Potential lack of innovation

Once a category winner has been defined in marketplace verticals, that company is usually able to maintain a (mostly) monopolistic position. Having more buyers and sellers means more capital to further grow the business. Having invaluable troves of data, marketing dollars, and brand recognition are all powerful moats that prevent competitors from entering the market, thereby stifling innovation. The most salient example is probably Craigslist, the first mainstream services and goods marketplace on the Internet, which has thrived for over 20 years despite having an outdated user experience,

lacking a dependable and trustworthy reputation system, and even failing to provide a native way to pay for transactions safely and easily[6]

There have been a countless number of Craigslist competitors that fell flat despite offering buyers and sellers a safer, easier buying experience simply because Craigslist had first mover advantage and ingrained network effects. The buyers go where the sellers are, and sellers go where the buyers are.



> ***"What if buyers and sellers met on an open, decentralized network that created incentives for everyone to work together and innovate for the community interest?"***

[6] ...conventional wisdom suggests Craigslist should have vanished long ago. Launched by Craig Newmark in 1995, the website, which has kept roughly the same design through the years and now has some 55 million visitors a month, has not only survived but also thrived...Craigslist's effectiveness cannot be understated...Last year, it took in upwards of $690 million in revenue, according to an estimate by the AIM Group, a research firm in Altamonte Springs, Florida. - Forbes

We envision a future where innovations are constantly made to underlying infrastructure, product features, and business mechanics to the benefit of the entire network of buyers and sellers.

Arbitrary rule changes and censorship

When marketplaces are governed by individual corporations, these corporations can and will change policies and rules on a whim. In many cases, they have the best intentions of the community in mind. In others, they have much more selfish interests. There are countless examples of marketplace operators spiting the very members that have created great value for them.

As sharing economy marketplaces grow, suppliers and buyers increasingly become abstracted away into the numbers, and some are left feeling like they are "cogs in the wheel". Uber has increased their take from drivers from 15% all the way to 30% over the years[7], and drivers have no ability to impact these decisions. Many early Uber drivers now feel that they have been taken advantage of as the ride-sharing giant has scaled its operations.

In 2017, Airbnb made the news for kicking guests out of rented properties and canceled their accounts after discovering those guests were planning to attend a Ku Klux Klan (KKK) rally[8]. While few people sympathize with klan members that promote racist and violent ideology, it's a slippery slope for Airbnb to start taking an opinionated stance on who is allowed to use their service. What about members of controversial political and religious groups? The personal leanings of a marketplace's founders, no matter how mainstream, should not interfere with the decisions of marketplace buyers and sellers.

Many Etsy sellers live in constant fear of their stores being shut down for copyright violations or breaking arbitrary rules like having duplicate listings or failing to disclose team members. There are many stories of store owners having their livelihoods extinguished with little to no recourse. Similar stories of platforms shutting down accounts or seizing funds are all too common on eBay, Amazon,

[7] We...found the median 'real commission' over the course of 37 rides in San Francisco was 39.01%. - The Rideshare Guy

[8] Airbnb has canceled a number of accounts and bookings associated with the Unite the Right Free Speech Rally - The New York Times

and many other popular marketplaces. Sellers complain of course, but few realistic alternatives exist.

Tampering of rules is not reserved only for private corporations that manage the marketplace. Airbnb's home city of San Francisco has passed local ordinances forbidding the home-rental company from taking bookings from hosts who have not properly registered their homes[9]. The new regulations are so restrictive that thousands of rental properties in San Francisco have now been banned from the platform. Dozens of other cities followed San Francisco's actions and used them as a model for how to pass their own restrictions concerning home-sharing. Airbnb represents a single point of failure in this case, and hotel industry lobbyists can attack this valuable industry easily and effectively.

Finally, as an oft-cited example of the importance of cryptocurrencies, Wikileaks was able to survive the US banking blockade due to Bitcoin donations from their supporters. By building tools for people to transact with each other in a trustless, distributed fashion, we can eliminate these single points of failure in our systems that undermine our personal liberties.

> ***"What if goods and services that added value to the ecosystem could freely trade at their fair market prices and quantities without tampering from biased third parties?"***

[9] San Francisco estimates that more than 50% of current Airbnb listings in the city aren't eligible to be registered and thus would need to stop hosting visitors unless they can comply. - USA Today

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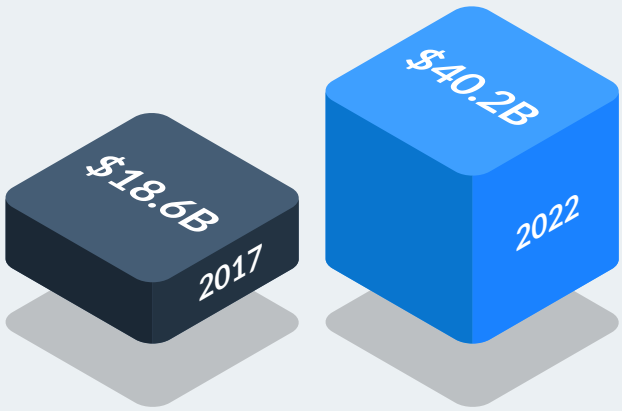
NOW IS THE TIME FOR CHANGE

The market is ready for a new decentralized form of commerce. The world is moving to a gig economy where more and more individuals provide services as their primary or supplemental way of earning income. Over 22% of US adults have become suppliers to the sharing economy as of 2016[10] and this number is expected to increase over time. These suppliers will hugely benefit from an open network that does not charge exorbitant transaction and service fees.

Gross bookings on the sharing economy are expected to exceed $335B by 2025[11]. Platform revenues (mostly fees taken by the companies) for the sharing economy are expected to more than double to $40.2B in the next five years[12].

SHARING ECONOMY: PLATFORM REVENUE GROWTH

Predicted growth by Juniper Research



While the overall market continues to boom, value capture has only shifted in favor to the regional monopolies. Recently, Airbnb dramatically increased fees for hosts in many global regions, from 3 to 5

[10] TIME's poll of 3,000 people, conducted by Penn Schoen Berland in late November, found that 22% of American adults, or 45 million people, have already offered some kind of good or service in this economy. - Time

[11] The sharing economy is estimated to grow from $14 billion in 2014 to $335 billion by 2025 - Brookings Institution

[12]The new research, Sharing Economy: Opportunities, Impacts & Disruptors 2017-2022, forecasts that the sharing economy will reach $40.2 billion in 2022, in terms of platform provider revenues, up from $18.6 billion in 2017. - Juniper Research

percent to 14 percent[13]. Similarly, Uber's advertised 25% commission rate is actually significantly higher when factoring in additional fees that are passed onto their drivers. For example, the median commission that Uber charges in San Francisco was recently estimated at 39%[14].

The world is also moving more and more to global versus local commerce. Sellers are able to provide services (and many times products and goods) to customers across the world. Currently, a Lyft passenger would not be able to ride on the Didi ChuXing ride-sharing network (China's largest ride-sharing company) save for the fact that the two companies signed a deep partnership that was months in the making and involved a mutual investor pouring hundreds of millions of dollars into both companies. In a global, but openly distributed marketplace, a customer would be able to purchase services from suppliers without a need for new accounts, complicated currency exchanges, or prerequisite negotiated deals.

Concurrently, the technology is finally starting to be in place to support large-scale decentralized commerce.

With the official launch of Ethereum in July 2015, the world was given its first widely-adopted blockchain that supported smart contracts. Ethereum has created "programmable money" and just as importantly, a community of developers, evangelists, and investors that are committed to furthering the technology stack and use cases.

On the data storage side, the Interplanetary File System (IPFS) has gained traction[15] as a distributed data repository for the open, persistent web. With the expected future launch of FileCoin and their Proof-of-Replication (PoR) and Proof-of-Spacetime (PoSt), large amounts of data will be able to be stored in a distributed and trustless fashion with the right incentive model to make it work.

Built on top of these two underlying technologies, the Origin Platform has been live in Beta for nearly a year. After getting valuable feedback from thousands of early users, we are preparing for the 1.0 launch of the Origin Platform in Q4 of 2019.

[13] property managers...will be charged a 14 percent host-only fee by default. Until now, the default was that Airbnb charged hosts a 3 to 5 percent fixed fee - Skift

[14] TNCs can take as much as 42.75% from a minimum fare ride in San Francisco - Ridester

[15] Projects built on IPFS - IPFS github

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We believe that now is the perfect time to push forward decentralized sharing economy marketplaces to take advantage of the growing market need and promising technology innovations.

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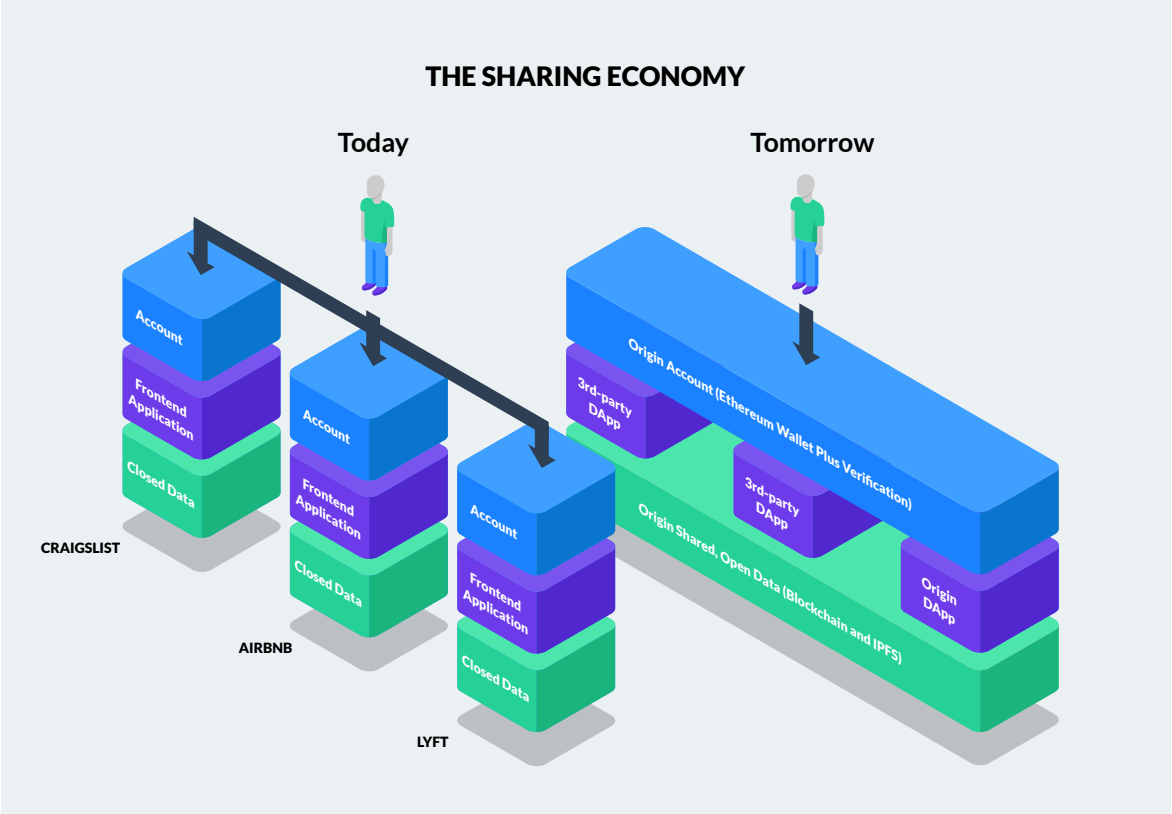
The Origin Platform

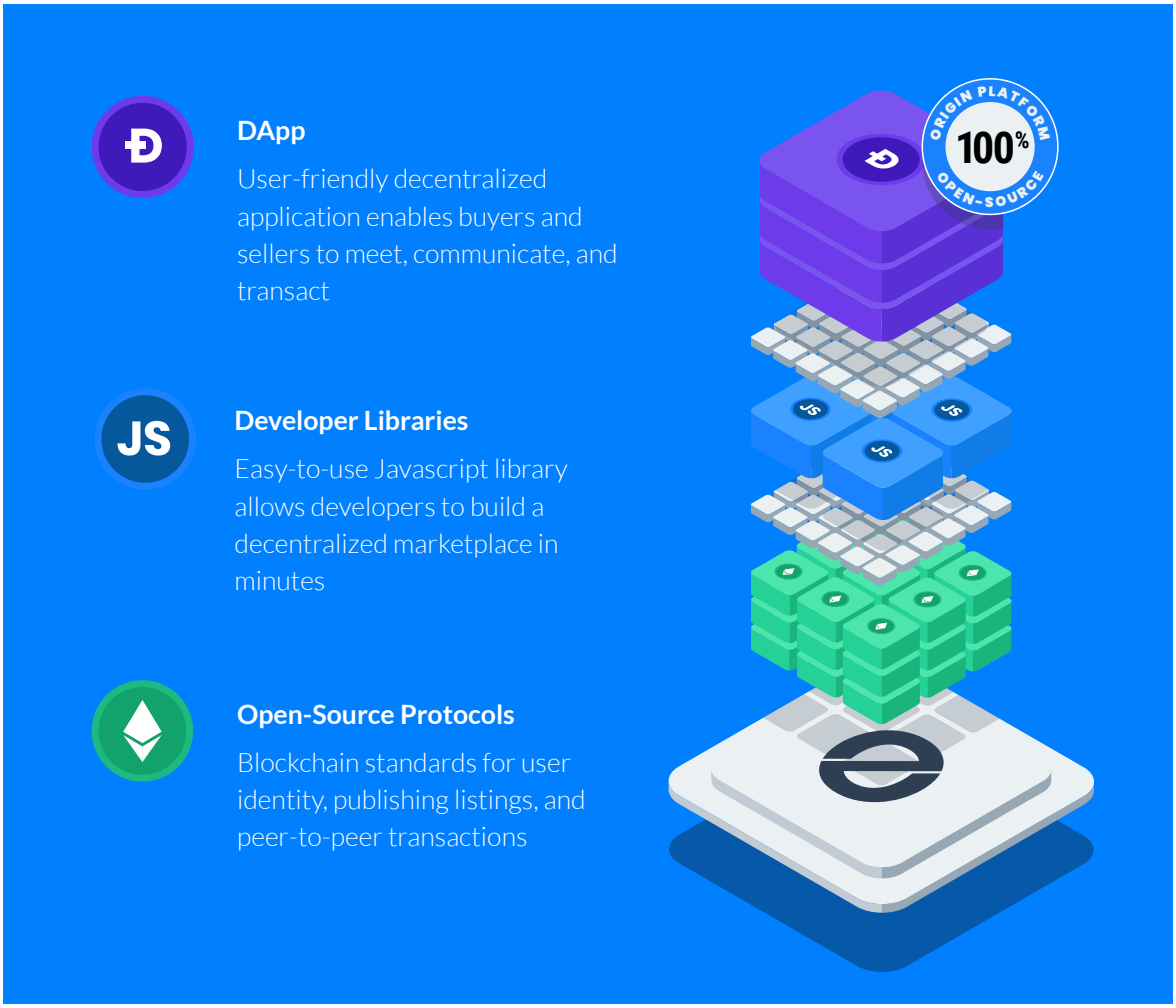


ENABLING DECENTRALIZED MARKETPLACES

Our vision is to promote the open and free exchange of services on the decentralized web. To do this, we have built a platform that replicates much, if not all, of the functionality of third-party intermediaries on the blockchain and other distributed systems. This is an ambitious goal and a technically difficult engineering challenge, but we have already hit early milestones to prove out our technology and early use cases.

The Origin Platform has three major components that are all open-source:

- Origin-enabled decentralized applications
- Origin developer infrastructure
- Origin protocols



Origin-enabled decentralized applications

The Origin flagship decentralized app (DApp) is our consumer marketplace product that allows buyers and sellers on the network to do business. It is available today on the web at shoporigin.com and on both iOS and Android mobile devices at originprotocol.com/mobile.

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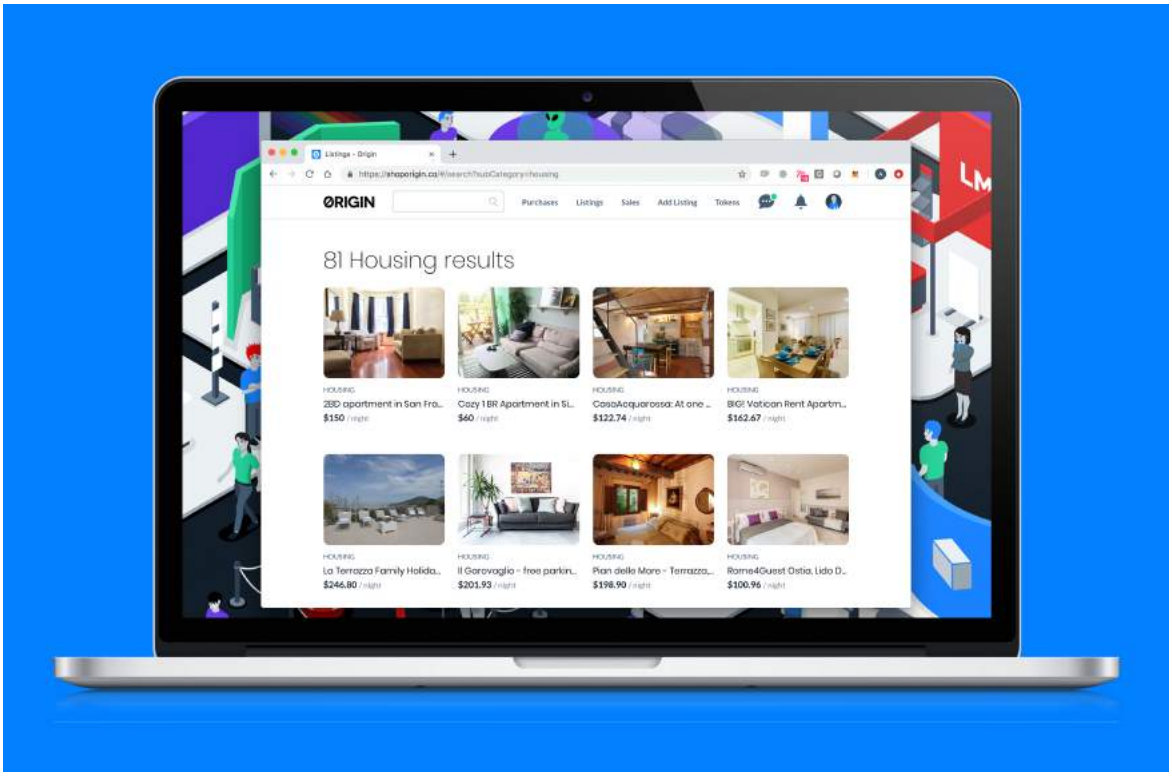

Today, there is one primary Origin marketplace DApp, though there are multiple vertical-specific DApps (e.g. in the home-sharing or services verticals) that are currently being actively developed.

Users can use the Origin DApp provided they have the Origin Mobile app or an Ethereum wallet and a web3-enabled browser like Coinbase Wallet, imToken, Trust Wallet, or Metamask.

Sellers can create listings, set availability of their offerings, and accept payment. Buyers can browse and search a full index of all goods and services offered on the Origin marketplace DApp, and most importantly, make purchases.

The Origin DApp serves as a lightweight client on the Origin Platform. The frontend code can even be hosted and distributed on the open IPFS network.

Of particular note is that we don't intend for the Origin DApp to be the only way to access user and transaction data. Our code, protocols, and specifications are all 100% open-source, and we expect and hope that others will extend and fork the code to create their own frontend experiences. Already, we have had over 150 open-source contributors participate in improving our core libraries and initial marketplace DApp. There are multiple third-party DApps running on the Origin Platform across numerous verticals such as home-sharing, luxury ecommerce, and fine art.

We see the Origin DApp as just the first way to interact with the Origin protocols and data on the blockchain. In the coming months and years after our 1.0 launch, we expect hundreds of third-party websites, mobile apps, and even new APIs to be built on top of the network.

To that end, we expect new and better user experiences that focus on specific verticals (e.g. home-sharing vs. tasks) or regions (e.g. Brazil vs. Switzerland) to be created that can drill deeper on custom features and localization. These third-party developer DApps may filter for specific parts of the shared data on the blockchain that are relevant to those specific markets.

Origin developer infrastructure

We intend to build a robust developer ecosystem that results in many successful third-party DApps. As blockchain and distributed technologies are still nascent and challenging to work with for most developers, Origin intends to release easy-to-use developer libraries that simplify the development process for third-parties. By implementing an easy-to-use abstraction layer, we hope to attract many more developers that have experience in traditional web and mobile technologies, but may not be familiar with Solidity programming.

The first of these libraries will be a Javascript GraphQL library that web developers can use in their web applications. Future libraries may include mobile libraries for popular mobile operating systems like Apple's iOS and Google's Android.

In addition, we expect that some marketplace operators will want to get started without spending as

much time and effort engineering fully-customized apps. As such, we've also launched an early version of our Marketplace Creator (creator.originprotocol.com) that enables marketplace operators to launch marketplaces with little or no programming required.

Origin protocols

Origin protocols encompass our open-source standards for many marketplace features, including user identity, publishing listings, and peer-to-peer transactions. The Protocols also include an open and shared data layer of users, listings, and other data on our Marketplace contract.

A full list of our Ethereum smart contracts is below:

- Origin Token (OGN) Contract - http://etherscan.io/address/origintoken.eth
- Origin Marketplace Contract - http://etherscan.io/address/originmarketplace.eth
- Origin Identity Contract - http://etherscan.io/address/originid.eth

User and transaction data is stored on the Ethereum blockchain and IPFS. This means that third-parties can query the public Ethereum blockchain and IPFS network for currently available listings, a history of previous transactions, and the reputations of various ecosystem buyers and sellers.

This creates several benefits. First, the corpus of data is open and immutable, which means it can be trusted without requiring the traditional third-party intermediary that imposes its "trust tax". Second, it levels the competitive playing field and allows for new teams of developers, entrepreneurs, and organizations to compete with each other off of this shared data, and ultimately creates greater value for the platform. After our 1.0 launch, we anticipate that much of the development of the Origin Platform will come from third-party developers that make use of this open data layer.

The best precedent of this is Bitcoin itself. An open, immutable transaction history allowed many Bitcoin exchanges to pop up worldwide. They now compete for customers and trading volume with no single party having the luxury of benefiting off of private data. Far from giving away the keys to the kingdom, this has encouraged exchanges to compete on security, user experience, marketing, and

fees[16]. The aggregate efforts have pushed Bitcoin and cryptocurrency immeasurably further than if a single company had tried to pioneer a private digital currency and exchange.

Again, the intended goal is to have many minds collectively tackle the problem of building the right infrastructure, data models, information architecture, etc. to organize and consume data for the decentralized sharing economy.

[16] ...consider how easy it is to switch from Poloniex to GDAX, or to any of the dozens of cryptocurrency exchanges out there, and vice-versa in large part because they all have equal and free access to the underlying data, blockchain transactions. Here you have several competing, non-cooperating services which are interoperable with each other by virtue of building their services on top of the same open protocols. This forces the market to find ways to reduce costs, build better products, and invent radical new ones to succeed. - Union Square Ventures

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KEY PRODUCT FEATURES & BENEFITS

To recap, at a high-level, the Origin Platform and third-party DApps built on top of it have several intended advantages when compared to existing sharing economy marketplaces.

Of paramount importance is the ability to cut out almost all of the transaction fees associated from bookings between buyers and suppliers. Because of the Fat Protocol phenomenon, the value of the network lies mostly in the value of the protocol layer[15], and less on the applications layer (in this case, websites that would otherwise charge fees). Our incentives are to build a rich ecosystem of buyers and sellers, so we do not intend to charge onerous transaction fees on the protocol level.

Note that this does not necessarily prohibit transaction fees charged by third-party DApp developers. Today, Origin Tokens are used as an incentive mechanism that provides third-party marketplace operators with a revenue stream via Origin Commissions. Sellers can choose to promote their listings, providing an optional commission to the marketplace operator that helps connect them with a buyer. While we expect these fees to be significantly lower than existing centralized incumbents, it's important that marketplace operators have an incentive to build feature-rich dedicated experiences on top of the Origin developer libraries and protocols.

We turn again to examples of highly verticalized sites (e.g. dog sitting) and regional players (e.g. bikesharing in Boulder, CO) as potential use cases that would benefit from a more specialized experience than what the default Origin DApp currently offers.

Today, if you wanted to start a traditional company to compete in the sharing economy, you would have to set up banking arrangements one country at a time and deal with all the related financial regulations. This creates a non-trivial barrier to entry for most startups looking to expand internationally. In fact, we often see regional clones who are able to launch faster in specific regions than the company that came up with the original idea. However, cryptocurrency is a global phenomenon. Thanks to the widespread availability of the Internet, the Origin platform and flagship DApp were immediately available in nearly every country in the world when we launched on the Ethereum mainnet. We view this as a significant advantage.

[15] This relationship between protocols and applications is reversed in the blockchain application stack. Value concentrates at the shared protocol layer and only a fraction of that value is distributed along at the applications layer. It's a stack with "fat" protocols and "thin" applications. - Union Square Ventures

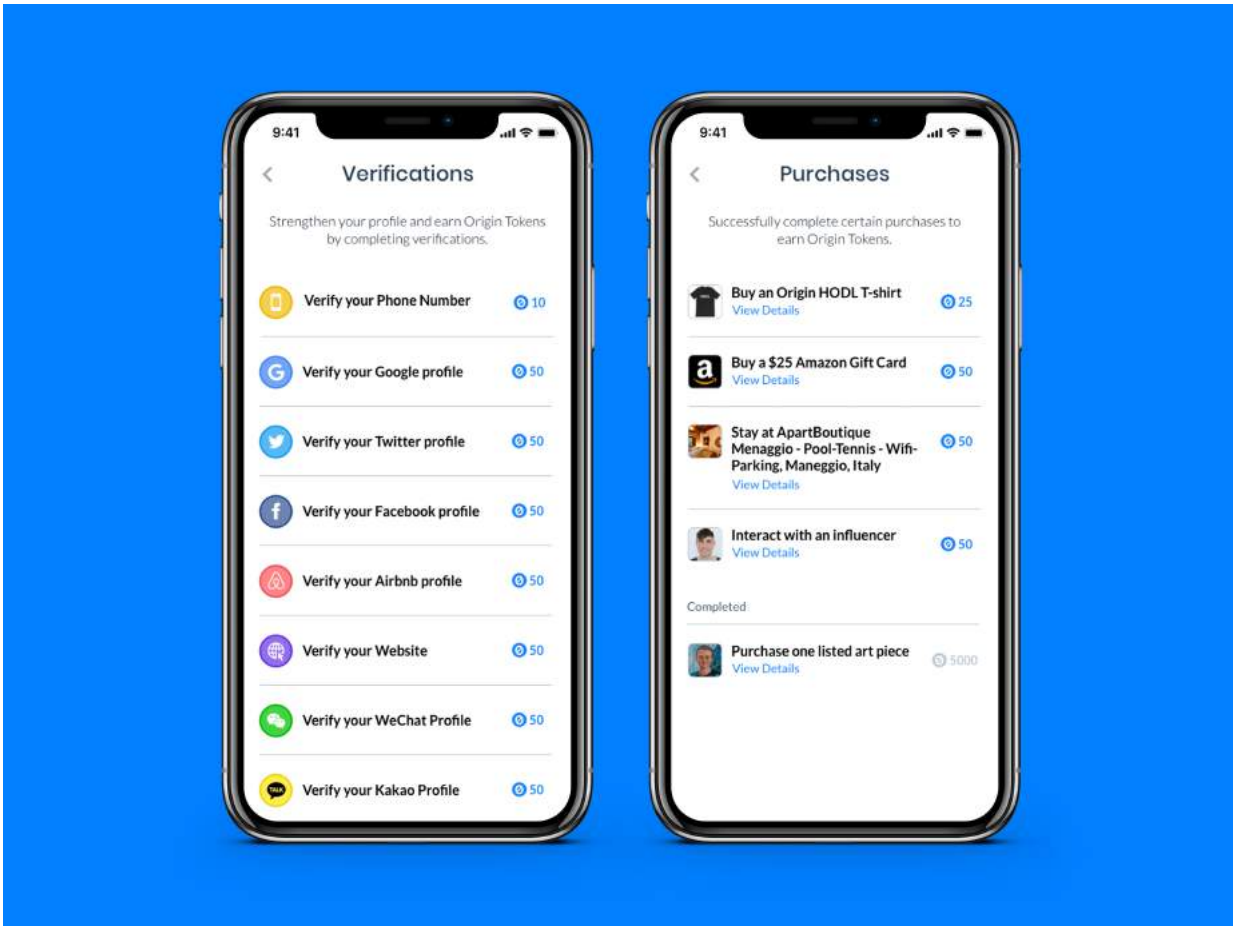
02

Other high-level benefits include having a built-in mechanism to incentivize early ecosystem participants who hold and use Origin Tokens (OGN). We are constantly thinking about the right incentives that will encourage ecosystem participants like developers, individual buyers and sellers, and others to use and promote the Platform. We intend to reward behavior that encourages new referrals to the Platform and builds marketing, operational, and trust/safety infrastructure for the Platform. You can see these economic incentives in action with our initial implementation of Origin Rewards.

At a lower-level, Origin has built upon existing product paradigms and user features. These features include:

- User profiles and data
- Listing of for sale goods and fractional use of assets and services
- Escrow of funds for deposits, with release of funds upon completion of services or exchange of goods
- Setting and browsing availability/scheduling
- Reputation in the form reviews and ratings
- Secure and encrypted messaging

02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Verifications
Strengthen your profile and earn Origin Tokens by completing verifications.
Verify your Phone Number 10
Verify your Google profile 50
Verify your Twitter profile 50
Verify your Facebook profile 50
Verify your Airbnb profile 50
Verify your Website 50
Verify your WeChat Profile 50
Verify your Kakao Profile 50
9:41
Purchases
Successfully complete certain purchases to earn Origin Tokens.
Buy an Origin HODL T-shirt
View Details
25
Buy a $25 Amazon Gift Card
View Details
50
Stay at ApartBoutique Menaggio - Pool-Tennis - Wifi-Parking, Maneggio, Italy
View Details
50
Interact with an influencer
View Details
50
Completed
Purchase one listed art piece
View Details
5000

02

ORIGIN TOKEN (OGN)

The Origin Token (also known as OGN) is a utility token that serves multiple purposes in ensuring the health and growth of the network. The ERC20 contract is live on the Ethereum network today at: 0x8207c1FfC5B6804F6024322CcF34F29c3541Ae26.

At a high-level, this native token is intended to serve several key functions on the platform. First, OGN is a multi-purpose incentive token that drives behavior for end users, developers, marketplace operators, and other ecosystem participants. In addition, OGN is a medium-of-exchange token that can be used for payments between buyers and sellers on the platform. Finally, it is intended that OGN will serve a critical piece in the future governance of the network.

Even today, Origin Tokens are used to incentivize various forms of participation from the Platform's ecosystem participants. Origin Tokens are used to reward users, developers, marketplace operators, and/or other participants to perform actions and services that are beneficial to the health and growth of the Platform.

Origin Rewards

Origin Rewards (originrewards.com) is an incentive program targeted at end users on the Platform. Buyers and sellers on the platform have been able to earn OGN since our inaugural Origin Rewards campaign in April of 2019. Origin Rewards enables everyone to have a stake in the network. We've intentionally designed the program so that even novice, non-technical users can participate.

With Origin Rewards, users can receive OGN for creating user profiles and verifying their identities.

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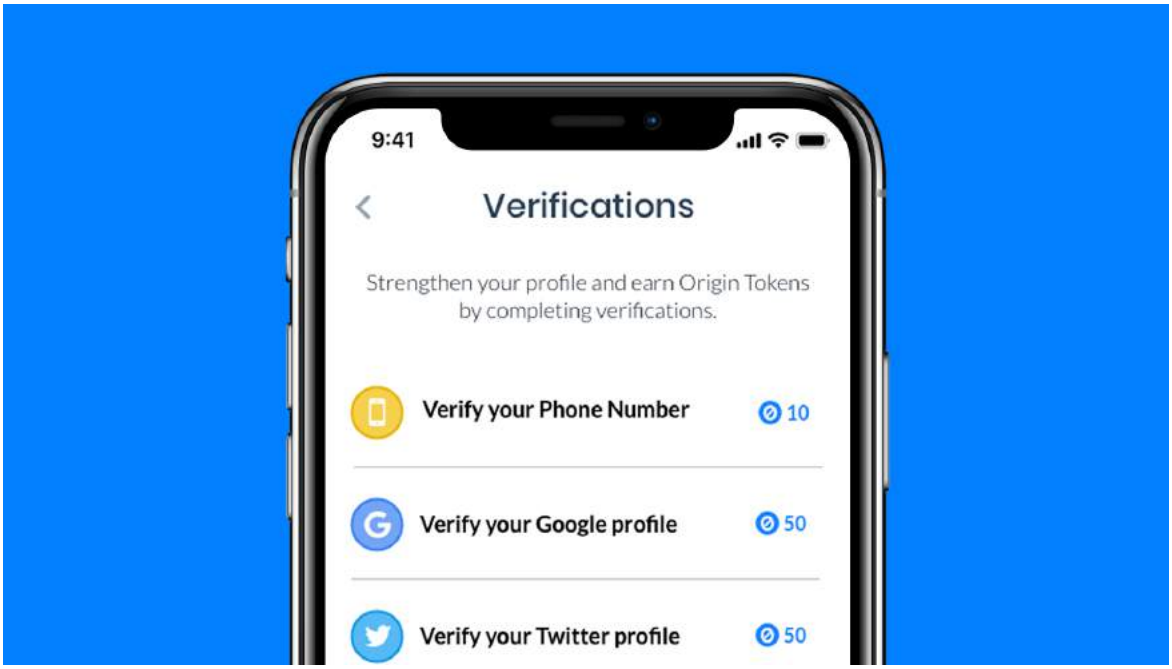
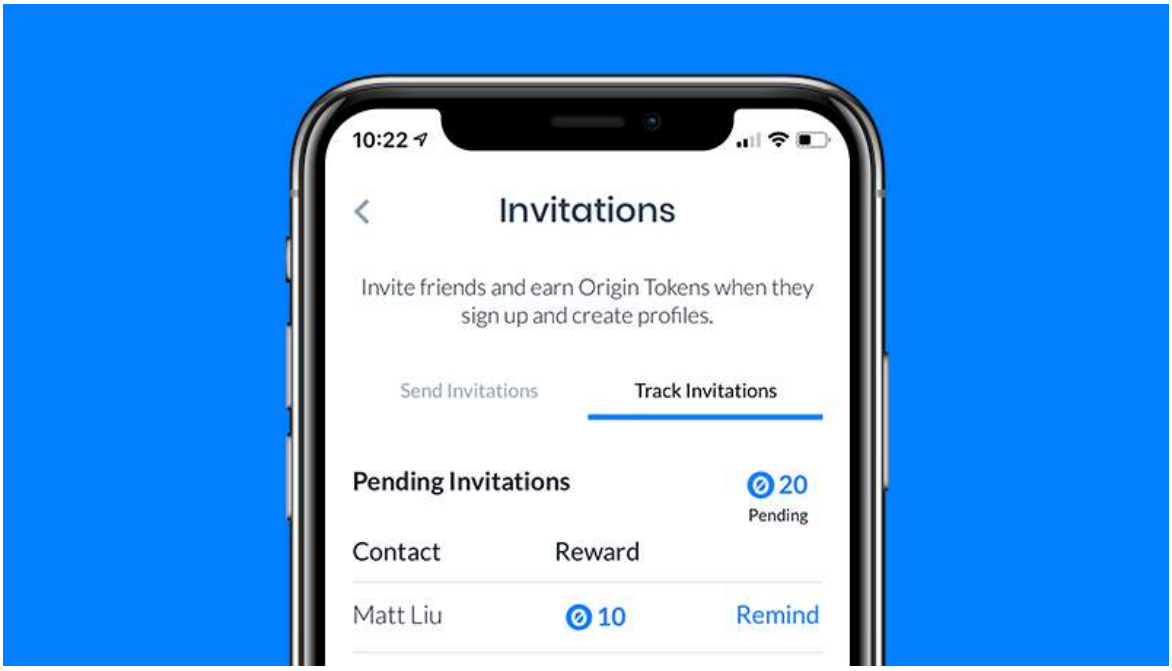


One of the best ways to grow the network is through referrals. As such, end users can also earn tokens by inviting new users to the network. This creates more trust between buyers and sellers on the network.



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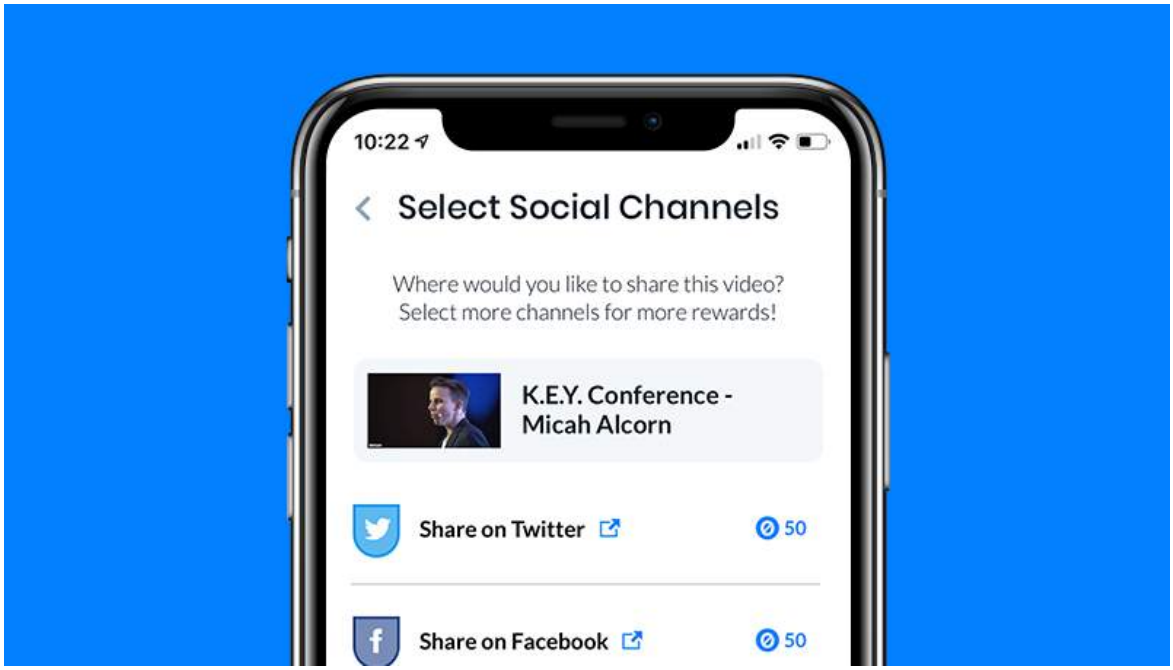
Users can also earn OGN by following Origin's social media accounts or promoting news about the project on public channels.



To encourage transaction volume on the Origin Platform, we are also offering "cashback" mechanisms to users that purchase from our trusted network of top sellers.

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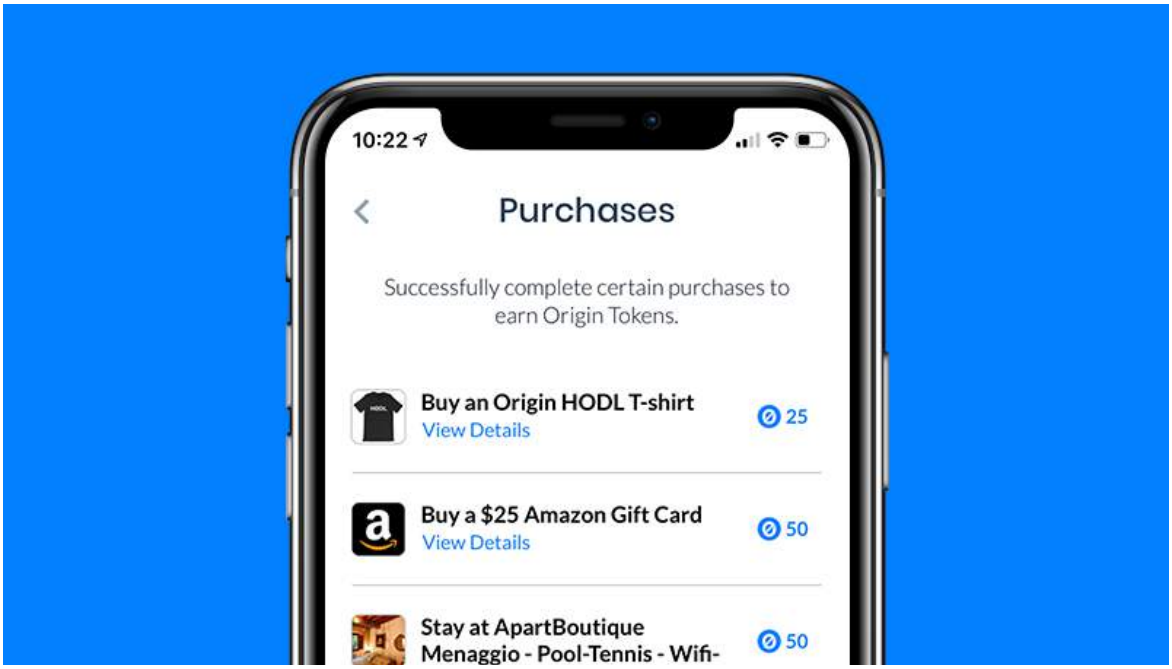

Origin Commissions

It is essential that we also incentivize developers and marketplace operators to use the Origin Platform. As such, we have launched an advertising and promotions program that creates a built-in business model for the decentralized marketplaces operating on Origin.

Sellers on Origin-enabled DApps can promote their listings with OGN to get higher visibility on the search and browse results on our flagship app and partner apps. The only way to participate in this program is to pay with OGN. When sellers create listings, they can add OGN commissions to their listings. This OGN is placed into escrow in our Marketplace Contract.

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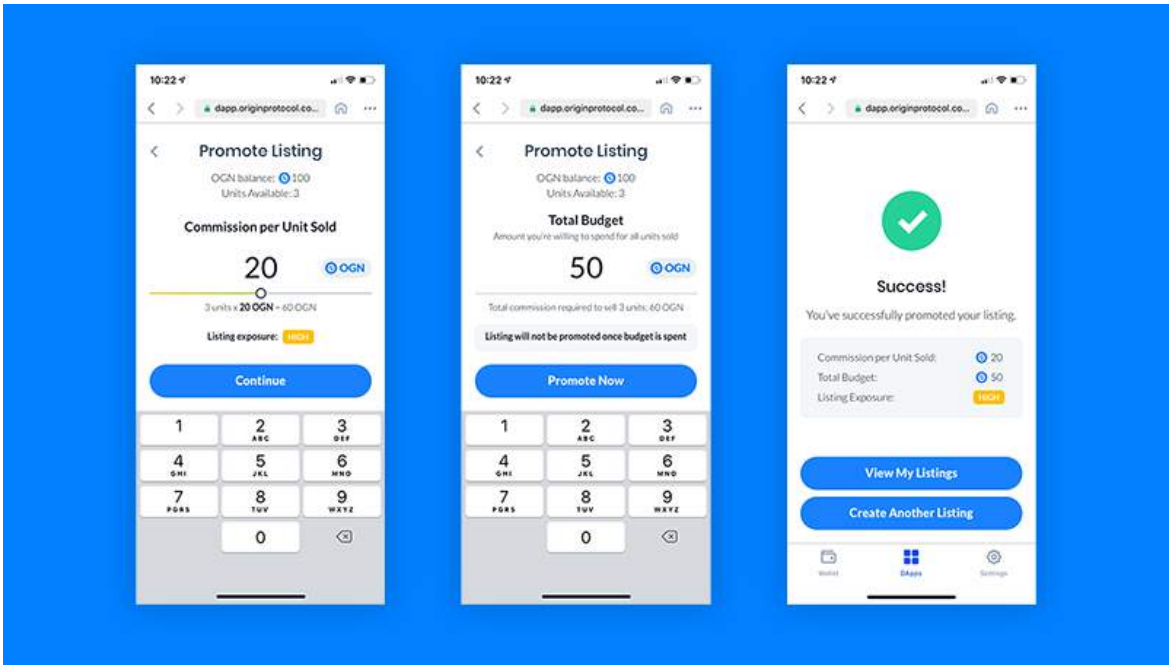
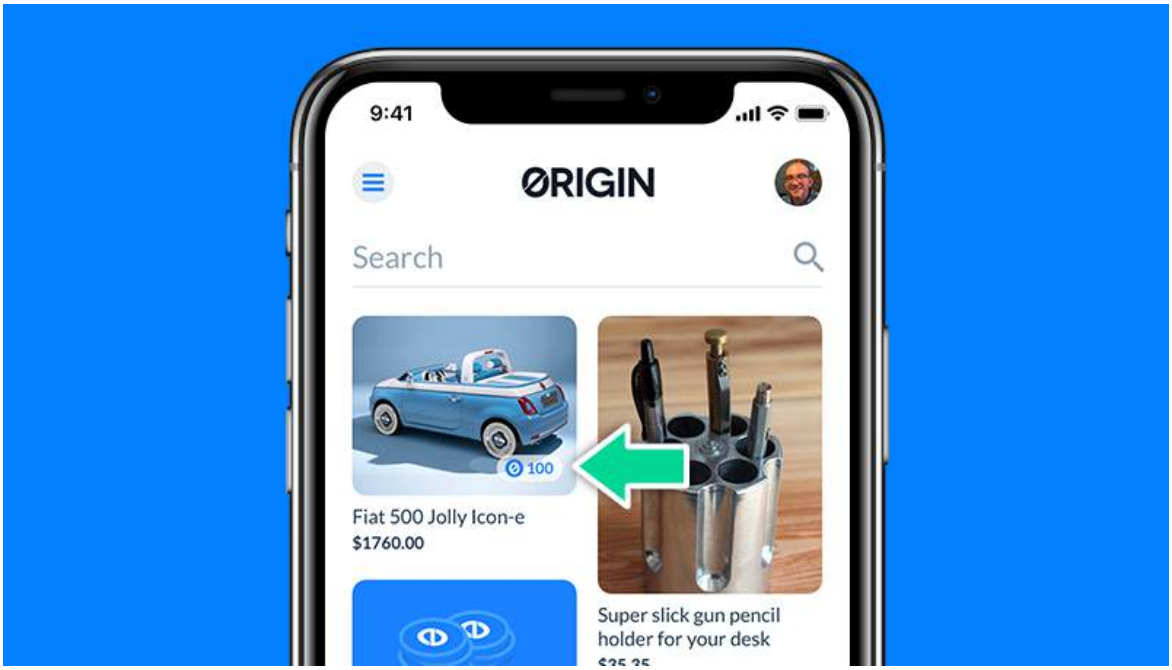


Then, when sales are finalized, OGN commissions are given to the DApps that brought counterparties (the buyers) to fulfill the sales. This gives DApp developers an incentive to promote these seller listings, as well as compete amongst themselves to drive the most sales for sellers.



To give a more specific example, let's assume that a NYC-based home owner wants to put her apartment up for home-sharing on the Origin network. She inputs that she is willing to pay a 20 OGN commission every single time her apartment is rented out for one evening. Multiple home-sharing DApps are now incentivized to feature her apartment so that they can compete for the OGN commissions. When one DApp acts as the final point of sale for apartment bookings by finding the seller a renter, the DApp is rewarded the 20 OGN that she has offered up as commission.

In the future, it is intended that other types of commission earners like bloggers, social media influencers, and other affiliates will be able to earn OGN commissions from sellers.

Origin Commissions is a new advertising and promotions model that is superior to traditional paid marketing (CPC and CPM) models. Advertisers (sellers) only pay in OGN tokens when successful sales have occurred. Similarly, the publishers (DApp creators, bloggers, other affiliates, etc.) are only paid when real transactions happen. This creates a much more efficient attribution model than the one that traditional advertising offers. Origin Commissions aligns the interests of sellers, DApp creators, and other affiliates to promote listings to buyers across the Origin network.

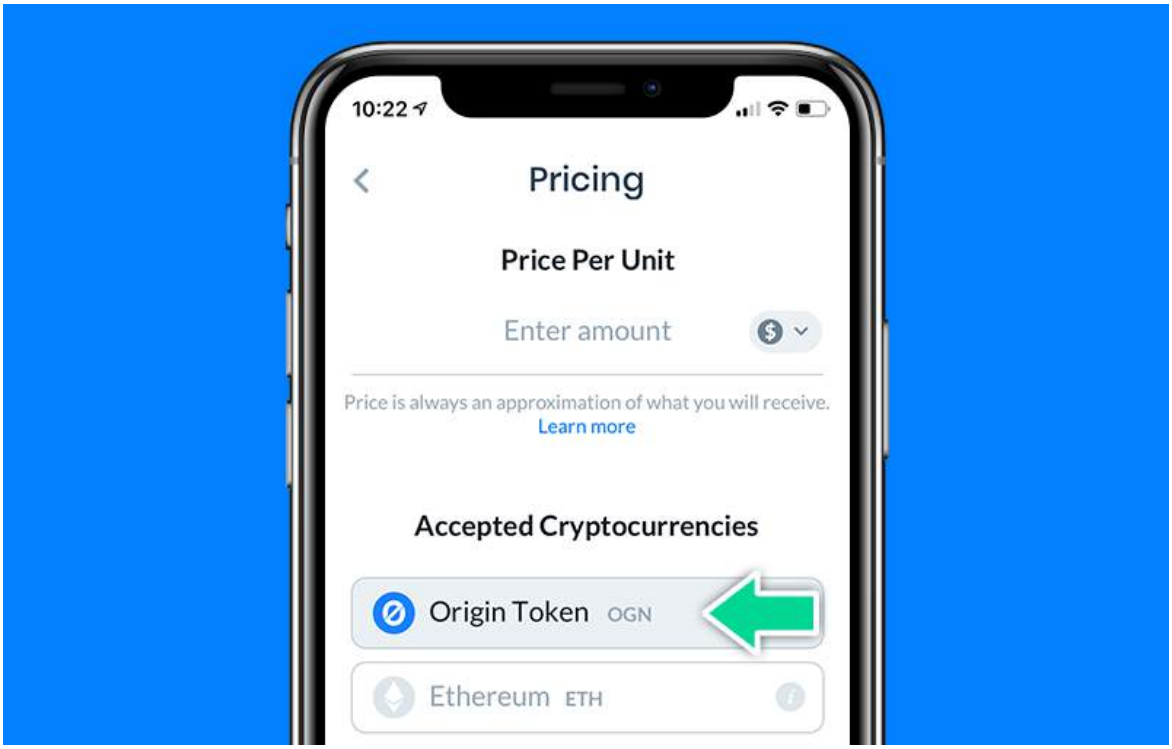
OGN as a payment token

Today, users of the platform are able to transact using ETH or DAI. After our 1.0 platform launch, OGN will be enabled as one of the preferred payment methods between buyers and sellers on the platform.

For example, users that earn OGN through Origin Rewards will be able to instantly use their tokens to purchase goods and services on our flagship app. This lowers the user friction of users having to acquire ETH or DAI outside of the platform before they are able to be viable buyers in the system.

In addition, we anticipate offering the ability for users to instantly acquire OGN via one or more decentralized exchange smart contracts to use when they do not have enough OGN in their wallets.

It is intended that this use case for OGN will be launched in Q4 of 2019.



Origin Nodes

After our 1.0 launch, we intend to collaborate with our large community on a new initiative to ensure that Origin is a highly-decentralized but scalable and performant platform. We will incentivize developers and other participants to run Origin Nodes that store, update, and validate profile, listing, and reputation metadata across the decentralized web. Node operators will be able to stake OGN for the right to "do work" validating and replicating data across the system; as they perform these operations, they will be rewarded a pro rata share of OGN rewards based on the amount of work they do in every given node operation interval.

We intend to launch this new initiative and use case for OGN because of the slower-than-expected rollout of Ethereum 2.0. We increasingly believe that we need to build highly-scalable and performant ways of writing and reading data from the blockchain that are not dependent on Ethereum throughput times or constrained by high Ethereum gas fees. Currently, having fast and reliable search within our DApp is very

difficult to pull off when listening for blockchain events. As a result, we have built our first Origin Node, a search and caching layer, that indexes the blockchain on traditional infrastructure. However, if Origin sits in the middle of every search request, then we've become the centralized intermediary that we're fighting so hard to disrupt.

This is why we need to facilitate the creation of a network of Origin Nodes that is run by independent third-parties. Once there are multiple Origin Nodes, we need to ensure data consistency and validity. The Nodes need to communicate amongst themselves and verify that all node operators are "telling the truth" and "playing by the rules". We intend to use a staking and slashing model to achieve our goals in this area. Node operators that provide value to the system will be rewarded OGN. Those that are unreliable or attempt to cheat the system will in turn be penalized and forfeit OGN.

This initiative is currently under research and development and is expected to launch in 2020.

Origin Meta Transactions Relayer Fee

With the latest launch of the Origin flagship app, we implemented Meta Transactions to lessen the user friction required to use our platform. Previously, users had to pay $0.01 whenever they wanted to write data on-chain. This created friction for users that wanted to update their profiles or create listings. With Meta Transactions, Origin and third-party developers can choose to subsidize gas costs to bootstrap the network.

We anticipate launching a system of Meta Transactions Relayers in collaboration with our developer community after 1.0 launch. Marketplace operators that want to use Meta Transactions may not want to deploy and manage their own relayers. Instead, they would be able to pay for usage of Meta Transactions relay servers with OGN; subsequently, Origin or other relay server operators would write data to the Ethereum blockchain on their behalf. Relay operators would efficiently write data to the blockchain using Ethereum gas while earning OGN. They would earn a spread between the OGN fees they charge over the Ethereum gas fees they are paying.

This area of research is still in the early stages, and we anticipate a potential launch in 2020.

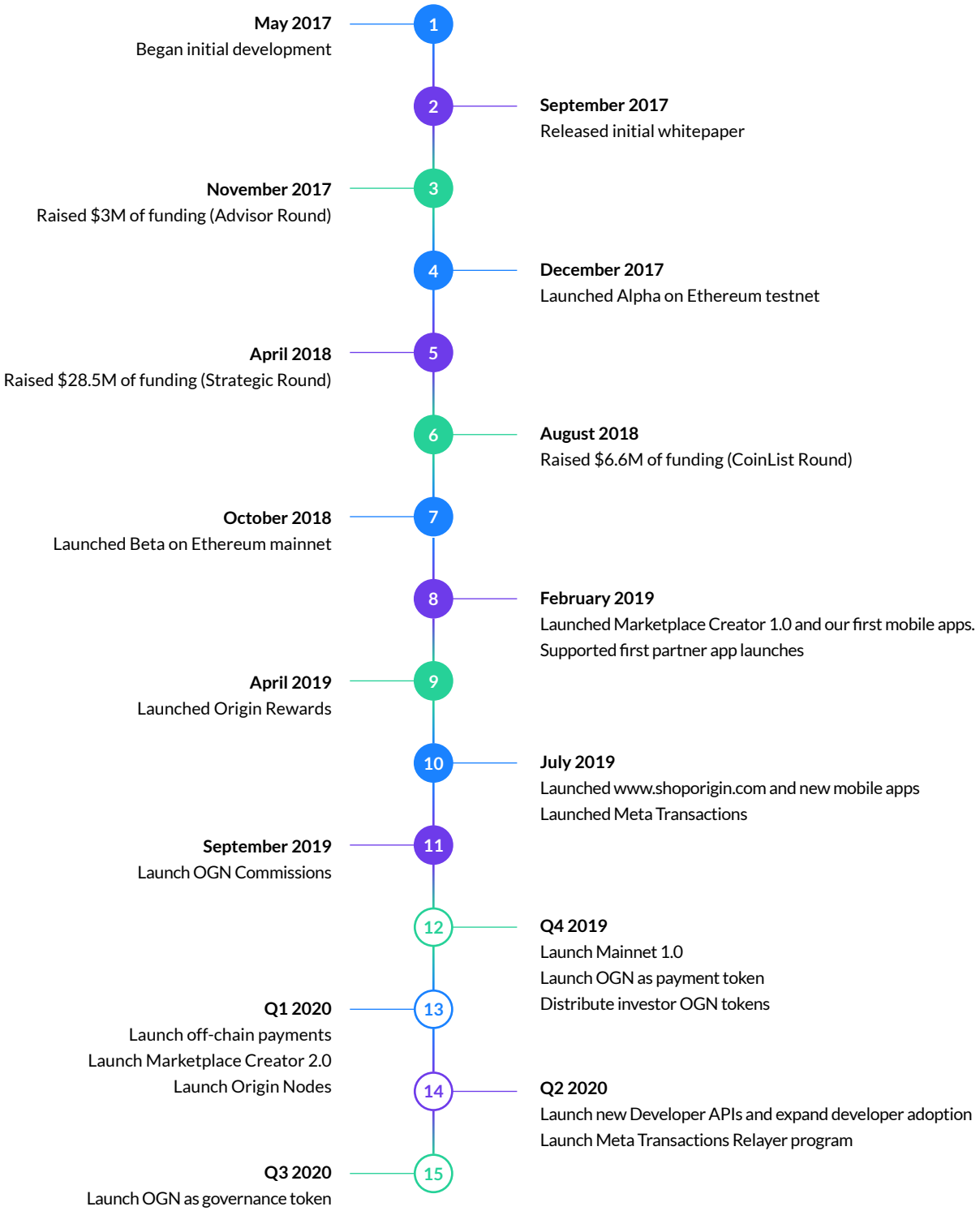
OGN as a governance token

Origin Tokens are intended to be used for governance of the Origin Platform. At a later date, it is intended that Origin Token holders will be able to influence the direction of software development and business policies on the Origin Platform.

Token holders will be able to cast votes that are proportional to their stake in the network on important community governance issues.

As decentralized governance becomes increasingly important as our token holder numbers increase, we anticipate that we will collaborate with the community on rolling out this OGN use case in late 2020.

03 Roadmap & Milestones



04 Team

FOUNDERS

Matthew Liu
Co-founder

Matthew Liu is co-founder of Origin Protocol and is an experienced product and business executive and full-stack software engineer. He became interested in cryptocurrency after investing in the Ethereum crowdsale, and has been investing in blockchain and token projects ever since.

Liu was one of the earliest product managers/25th employee at YouTube (acquired by Google), and was a founding member of YouTube's monetization team that eventually built a multi-billion dollar advertising business.

He later served as Vice President of Product at Qwiki (acquired by Yahoo) and Vice President of Product at Bonobos (acquired by Walmart). Together, Liu and Fraser have founded several profitable bootstrapped Internet businesses in the growth marketing (7-figure annual recurring revenue) and personal finance (acquired) spaces over the past three years.

In 2014, as CEO of Unicycle Labs, Liu built a real-time comparison tool for ride-sharing that was widely adopted and then promptly given a cease and desist by Uber for scraping their data and using their trademarks. This was one of his first inspirations to fight for open data, pricing transparency, and fair consumer practices in the sharing economy.

Joshua Fraser
Co-founder

Joshua Fraser is co-founder of Origin Protocol and is a serial entrepreneur and experienced technical executive. He mined his first bitcoin in 2010 and is an active member of the cryptocurrency community. He has contributed and led several open-source projects as well as innovative protocols like PubSubHubbub.

He previously served as founder and CTO of Eventvue (social networking for events) and Forage/Din (healthy gourmet meal kits). Fraser was also founder and CEO of Torbit where he developed an expertise in networking infrastructure, web performance and internet security before selling the company to Walmart Labs.

Fraser has founded several bootstrapped, profitable businesses with Liu, one of which was acquired in 2018. As a former Airbnb host, he has experienced first-hand the downsides of marketplace intermediaries (large fees, arbitrary rules, and government regulation).

04 CORE TEAM

Origin's headquarters are in San Francisco, CA, USA. However, we have team members across the globe and run an efficient and open distributed company. Our full-time staff of 16 is currently situated across 4 continents.

Yu Pan
R&D Engineer

Yu Pan was one of the founding team members of PayPal and was the 1st employee at YouTube. He is a former Google employee and co-founder of Kiwi Crate.

Franck Chastagnol
Senior Engineer

Franck has had a successful career as an early employee at numerous high-profile companies. He previously led engineering teams at Inktomi, Paypal, YouTube, Google and Dropbox.

Coleman Maher
Business Development

Coleman is an active cryptocurrency investor and real estate entrepreneur, owning and managing multiple Airbnb properties. He studied mathematics at Berkeley.

Micah Alcorn
Product Manager/Engineer

Micah was the technical co-founder of WellAttended, a bootstrapped box office management platform. He worked as a commercial real estate broker while learning to code.

Kay Yoo
Business Ops & Strategy

Kay is a Chartered Professional Accountant (CPA). She previously worked as a Senior Accountant and then as a Senior Consultant at KPMG Canada.

Aure Gimon
Product Designer

Aure creates highly functional experiences that inspire and delight users. He's worked with top brands like Nike, Sony and Disney as well as numerous Silicon Valley startups.

Mila Choi
Regional Manager Korea

Mila is leading our community efforts in South Korea. She previously organized blockhain hackathons and has degrees from Penn State and Erasmus University Rotterdam.

Tom Linton
Engineer

Before Origin, Tom had a successful career as a solo startup founder. He has two Masters degrees in Distributed Systems from the Technical University of Berlin and KTH in Stockholm.

Nick Poulden
Senior Engineer

Nick studied Computer Science at the University of Warwick. Prior to joining Origin, he worked as an engineer at Sencha, C3 Energy Network and Palo Alto Networks.

04 CORE TEAM

Anna Wang
Regional Manager China

Anna is leading our community efforts for Chinese speakers. Before Origin, Anna managed global social media at Exness, a leading forex broker. She also co-founded a non-profit in Australia.

Domen Grabec
Engineer

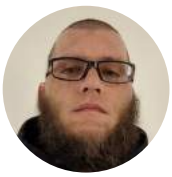
Domen co-founded and led a team developing a mobile application with 2 chess Grandmasters. He previously had a successful career at Cetra, Zemanta and Peerindex.

Shahul Hameed
Engineer

Shahul is a fullstack engineer who started programming at age of 10. He previously worked as a freelancer and then joined Zoho as a front-end developer.

Zaurbek Ivanov
Russia Community

Zaurbek Ivanov studied Economics at Kabardino-Balkaria State Agrarian University in Nalchik, Russia. He has worked in the hospitality industry in the US and Russia.



Mike Shultz
Engineer

Mike is a long-time contributor to open-source. He created a dev toolkit for creating Ethereum smart contracts with Python and previously worked with Ethereum and IPFS at Lunyr.

YouTube Google Dropbox affirm PayPal

techstars Berkeley UNIVERSITY OF CALIFORNIA Carnegie Mellon University Stanford University

For the latest updates to our team see originprotocol.com/team

04

DEVELOPER COMMUNITY

In addition to our full-time staff, Origin has a very active open-source developer community. Since the project's inception, we've had over 150 contributors to our Github repository. We anticipate the number of developers and supporters to increase dramatically after our 1.0 launch in Q4 of 2019.

05

Summary

For the past two decades, Internet marketplaces have changed the way that buyers and sellers connect, creating new opportunities for the exchange of goods and services. However, these marketplaces have always been governed by centralized companies that maintain their individual monopolies on data, transaction and other service fees, and ultimately, user choice. With blockchain and other distributed technologies beginning to hit the mainstream, the world is poised for a new wave of decentralized commerce.

Origin is bringing change and innovation to the sharing economy. We're excited by the opportunity to lower fees, increase innovation, free customer and transaction data, and decrease censorship and unnecessary regulation. Even if you are perfectly content with the centralized providers of today, what about the day when these monopolies stop being so benevolent? We hope you agree that future-proofing our world against oligarchs and tyrants is a worthwhile endeavor.

We are building a platform that invites other interested parties including developers and entrepreneurs to build this technology and community with us, altogether working to create the sharing economy of tomorrow. We hope you'll join us on this exciting journey.