



# ØRIGIN

## Product Brief

### The Sharing Economy without Intermediaries

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# Executive Summary

Origin is a sharing economy marketplace that enables 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 community are decentralized, allowing for the creation and booking of services and goods without traditional intermediaries.

We are specifically building 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 network, 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, the Origin platform is being launched with incentives from the outset to encourage other technologists, businesses, and consumers to build, contribute, 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. Together, we will create the Internet economy of tomorrow.

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This Product Brief will explore:

- Why a new form of decentralized commerce for the sharing economy needs to exist
- The main benefits of the Origin platform
- Our product strategy, key features, and technical overview
- Community building and aligning incentives for growth and trust
- Challenges that we face and how we will overcome them

For the complete technical deep dive, please see our Whitepaper.

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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 numbers of 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<sup>1</sup> 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.



U B E R



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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.

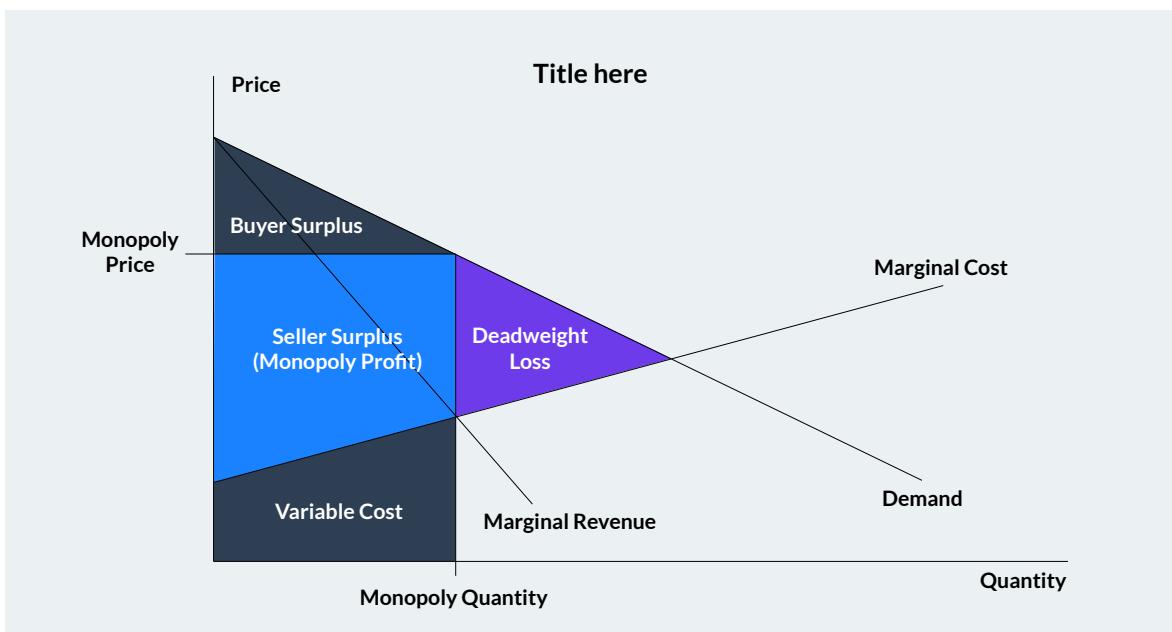
Most sharing economy businesses have several things in common.

<sup>1</sup> 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, the collection of 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.

Secondly, 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 often-times 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<sup>2</sup>, 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<sup>3</sup> 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.



<sup>2</sup> 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 →

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Finally, while there are very significant differences in user experience, business mechanics, and vertical-specific features amongst Internet marketplace companies, they all share many pieces that have been built and rebuilt many times. Lyft, Postmates, and DoorDash have each all 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 re-invent 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	 U B E R	 Getaround	 fiverr®
Listings (Browse, search, filtering)	✓		✓	✓
Identity (Profiles, ratings, reviews)	✓	✓	✓	✓
Payment (Escrow, payments, refunds)	✓	✓	✓	✓
Calendaring (Scheduling 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.

<sup>3</sup> 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 →

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*"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 does not yet exist.

We share in the vision for addressing the shortcomings of existing marketplace companies and are excited to introduce 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 \$31 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. Today the company boasts 4M short-term rental listings<sup>4</sup>. 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<sup>5</sup>.

<sup>4</sup> 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) →

<sup>5</sup> Locations in popular tourist destinations such as New York, London, and Paris will also have higher commission rates than less known 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 →

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Host in Chicago wants to offer a room for \$200 night...



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 the event of an IPO or acquisition. 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 educated decisions about who they transact with. 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 thrived for over 20 years despite having an outdated user experience,

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lacking a dependable and trustworthy reputation system, and even failing to provide a native way to pay for transactions safely and easily.<sup>6</sup>

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.

The screenshot shows the Craigslist Los Angeles homepage. The top navigation bar includes links for 'post to classifieds', 'my account', 'search craigslist', and a date selector from 11 to 27. Below the navigation are sections for 'community' (activities, artists, childcare, etc.), 'housing' (apts / housing, housing swap, housing wanted), and 'jobs'. A sidebar on the left contains links for 'event calendar', 'help, faq, abuse, leg', 'personal safety tips', 'terms of use', 'privacy policy', 'system status', 'about craigslist', 'craigslist is hiring in', 'craigslist open source', 'craig connects', and 'open house date'. The main search area has a search bar for 'apts/housing for rent' and a map view. The search results show four apartment listings: 1. \$1400 - Los Angeles Spacious Apartment Available Now! (image, details). 2. \$1850 - \*\*\*WEST SIDE BRIGHT UNIT 2/2 APT \$1,850 (image, details). 3. \$1950 - French Normandie...Gorgeous 1BR/IBA in Larchmont Village, Live/Work, Brand New (image, details). 4. \$2825 - 1BR/IBA in Larchmont Village, Live/Work, Brand New (image, details).



**"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?"**

<sup>6</sup> ...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 →

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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<sup>7</sup>, and drivers have no ability to impact these decisions. Many early Uber drivers now feel that they have been taken advantage of as the ridesharing giant has scaled its operations.

Airbnb recently kicked guests out of rented properties and canceled their accounts after discovering those guests were planning to attend a Ku Klux Klan (KKK) rally<sup>8</sup>. 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 political leanings of a marketplace's founders, no matter how mainstream, should not be forcefully shoved down the throats 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 and many other popular marketplaces. Sellers complain of course, but few realistic alternatives exist.

<sup>7</sup> We...found the median ‘real commission’ over the course of 37 rides in San Francisco was 39.01%. - The Rideshare Guy →

<sup>8</sup> Airbnb has canceled a number of accounts and bookings associated with the Unite the Right Free Speech Rally - The New York Times →

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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<sup>9</sup>. The new regulations are so restrictive that thousands of rental properties in San Francisco are expected to disappear from the platform. Dozens of other cities around the world are now looking at San Francisco as a model for how to pass their own restrictions around home sharing. Airbnb represents a single point of failure in this case, where hotel industry lobbyists can attack a valuable industry easily and effectively.

Finally, as an oft-cited example of the importance of cryptocurrencies, WikiLeaks was able to survive the extralegal 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?"*

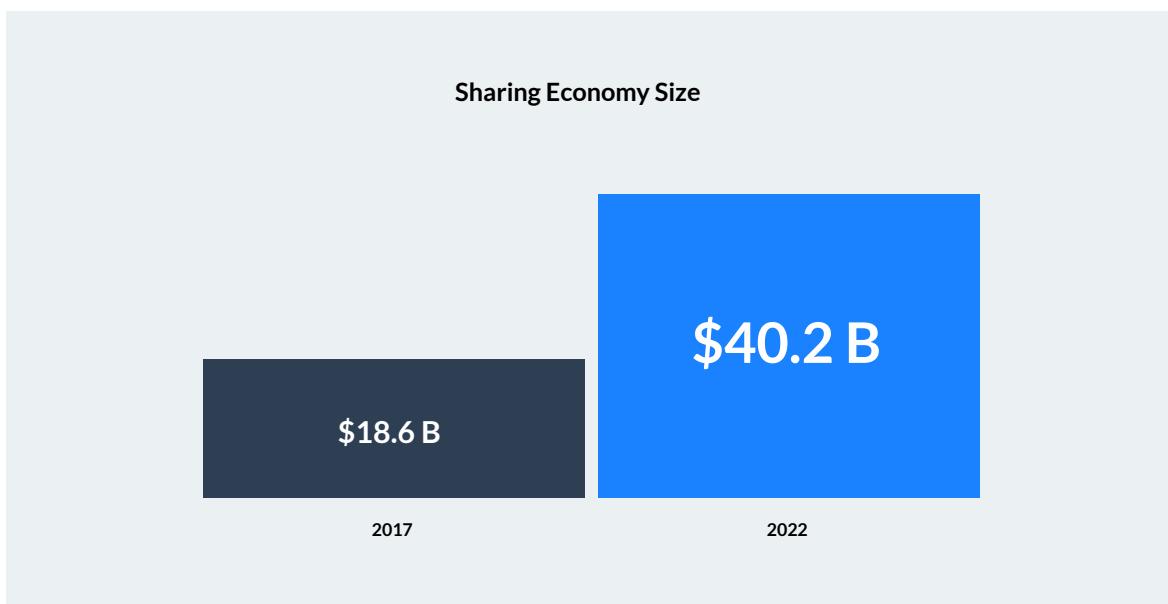
<sup>9</sup> San Francisco estimates that more than 50% of current Airbnb listings in the city aren't eligible to be registered and thus would need to stop hosting visitors unless they can comply. - USA Today →

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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<sup>10</sup>. 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<sup>11</sup>. 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<sup>12</sup>.



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

<sup>10</sup> 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 →

<sup>11</sup> The sharing economy is estimated to grow from \$14 billion in 2014 to \$335 billion by 2025 - Brookings Institution →

<sup>12</sup>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 →

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passenger would not be able to ride on the Didi ChuXing ridesharing 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 open distributed marketplace, a customer will be able to purchase services from suppliers without the need for creating 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) is gaining traction as a distributed data repository for the open, persistent web. Important infrastructure projects like uPort and attempts to tokenize offline assets like Digix are using IPFS to serve both their application data and content<sup>13</sup>. With the launch of FileCoin and their Proof-of-Replication (PoR) and Proof-of-Spacetime (PoSt), large amounts of data can be stored in a distributed and trustless fashion with the right incentive model to make it work.

<sup>13</sup> Projects built on IPFS - IPFS github →

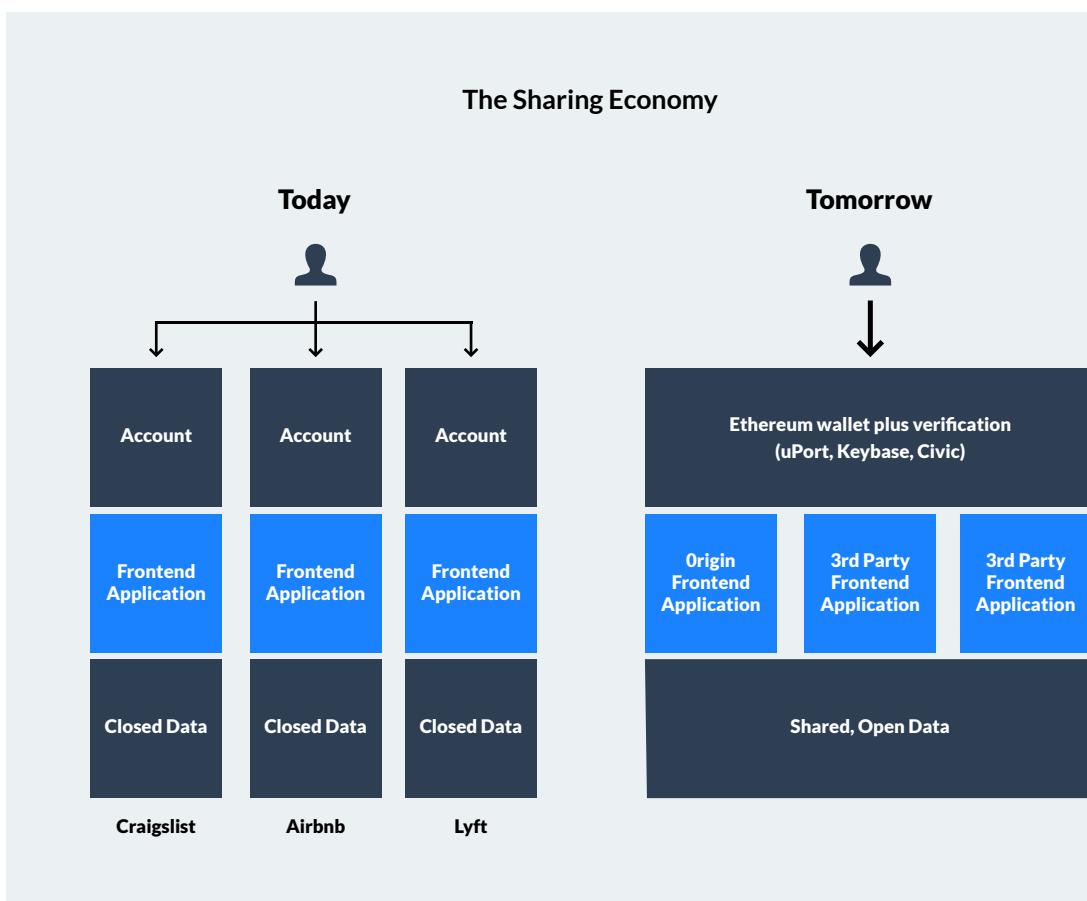
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We believe that now is the perfect time to push forward with decentralized sharing economy market-places to take advantage of the growing market need and promising technology innovations.

## 02 ■

# 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 need to build a platform that replicates much, if not all, of the functionality of third-party intermediaries on the blockchain and other distributed systems. This is a technically difficult and ambitious product and engineering challenge.

We also need to build a rich ecosystem of marketplace buyers and suppliers from the ground up, competing with the network effects of established businesses in a safe, scalable way. This is an intimidating business, marketing, and operations challenge.

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The platform will launch with three major components to address these respective challenges:

- Origin decentralized app
- Origin shared data layer and standards
- Origin Foundation

### **Origin decentralized app**

The Origin decentralized app (DApp) is our consumer marketplace product that allows buyers and sellers on the network to do business.

Users will be able to use the Origin DApp provided they have an Ethereum wallet and have verified their identity (e.g. view uPort, Keybase, Civic, or other means).

Sellers will be able to create listings, set availability of their offerings, and accept payment. Buyers will be able to browse and search a full index of all services offered on the Origin marketplace and most importantly, purchase services with Origin token (default), other cryptocurrency, and even fiat currency.

The Origin DApp will be robust and full-featured, but ultimately serve as a lightweight client on the Origin shared data layer. The frontend code will be hosted and distributed on the open IPFS network.

Of particular note is that the Origin DApp will not, and should not, be the only way to access user and transaction data. Our code, protocols and specifications will all be open-source, and we expect and hope that others will extend and fork the code to create their own frontend experiences.

In this way, we see the Origin DApp as the first (and currently best) way to consume Origin data, but we expect many other sites, mobile apps, and even APIs to be built to transact on the network.

For example, the Origin DApp will largely focus on allowing users to create listings, and then indexing and searching the global corpus of data. An aspirational goal of the Origin DApp is to be the “Google search” of the Origin network, minus the centralization and Google of course.

To that end, we expect new and better user experiences that focus on specific verticals (e.g.

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home-sharing vs. tasks) or regions (e.g. Brazil vs. Switzerland) to be created that can drill deeper on custom features and localization. These cousin DApps of the Origin DApp will filter for specific parts of the shared data that are relevant to those specific markets. Note that the same user accounts (Ethereum wallets with identity verification) are used to access these third-party DApps. Gone are a long list of user logins and passwords for all marketplace services.

Another analogy of our proposed interface to the Origin data layer is the preponderance of multiple Twitter clients in the early days of that ecosystem (Tweetdeck as an alternative browsing experience, Summize as a focus on searching). Unlike Twitter which later shut down many useful third-party applications on its platform, Origin will have no means to stop other developers from building competing clients that innovate and create better user experiences. In fact, we very much encourage this behavior as we believe it will expand the overall value of the network for everyone.

### — **Origin shared data layer and standards**

The Origin shared data layer is designed to be accessible by all. User and transaction data will be stored on the Ethereum blockchain and IPFS (we explain our specific design choices in our Whitepaper). This means that any interested party 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, but ultimately creating greater value for the platform.

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

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fees<sup>14</sup>. 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.

Origin will publish a proposed set of open standards to define how services are listed and indexed, and how users transact and develop reputation. For example, we are using the open source JSON Schema<sup>15</sup> to define and validate our data models for accounts, listings, and transactions. We intend to make it extremely easy for third parties to create their own product categories, additional data attributes, etc. in order to extend these standards.

Again, the 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.

### — Origin Foundation

Where the Origin DApp and data layer represent a proposed improvement on the foundational product and engineering pieces of sharing economy marketplaces, the Origin Foundation is poised to solve business, marketing, and operations challenges.

To start, the Origin Foundation will focus on two daunting areas, bootstrapping the network with buyers and sellers and providing the requisite insurance/arbitration systems to build buyer and seller trust.

Both initiatives will be discussed in greater detail in the ‘Market dynamics’ section of this paper.

<sup>14</sup> ...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 →

<sup>15</sup> JSON Schema is a vocabulary that allows you to annotate and validate JSON documents. - JSON Schema →

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## KEY PRODUCT FEATURES & BENEFITS

To recap, at a high-level, the Origin DApp has several 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 token<sup>16</sup>, and less on the application developer. Our incentives are to build a rich ecosystem of buyers and sellers, so the Origin DApp will not charge standard transaction fees. When a booking happens, the cost of doing business will be the Ethereum network gas fee and nominal insurance fees that will be allocated to an insurance and arbitration pool (to provide funds in the case of damages to supplier property and/or disputes).

Note that we will allow for the concept of a transaction fee charged by a third-party DApp developer in our code. We want to provide the ability for other teams to charge fees (hopefully significantly lower than existing centralized incumbents) as an incentive for them to build feature-rich dedicated experiences on top of the Origin data layer. We turn again to examples of highly verticalized sites (e.g. dog sitting) and regional players (e.g. bikesharing in Boulder, CO) as use cases that would benefit from a more specialized experience than what the default Origin DApp will offer.

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, Origin will be immediately available in every country in the world at launch. We view this as a significant advantage.

Other high-level benefits include having a built-in mechanism to incentivize early ecosystem participants who hold and transact Origin token to use and promote the network. From the outset, we are thinking about the right incentives (in the form of Origin tokens) to offer buyers and sellers for

<sup>16</sup> 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 

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otherwise normal user actions like listing, transacting, and writing reviews. We especially want to reward behavior that encourages new referrals to the platform and builds marketing, operational, and trust/safety infrastructure for the platform. We expound on this further in our section on the Origin token and foundation.

Once launched, the Origin platform can never be taken down or censored. Data will be fully transparent, open, and shared for all ecosystem participants to take advantage of.

At a lower-level, Origin will build and improve 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
- Ability to convert fiat currency on the fly to Origin token for use on the network
- 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
- Identity by leveraging Keybase, uPort or Civic
- P2P messaging (perhaps via Status or Keybase)
- Promotions and discount codes
- Referral incentives

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## ORIGIN TOKEN

The Origin cryptographic token will be introduced as the unit of account to assess, value, and power different types of buyer and supplier interactions (e.g. reviews, messaging) on the Origin platform.

As an ERC20 token, it will take full advantage of the Ethereum network's built-in wallets, developer tools, and resulting ease of use. It will be an exchange tradable, fungible asset for marketplace participants that want to buy/sell the token for use on the platform.

The Origin token serves multiple functions on the Origin platform.

### **Currency exchange intermediary**

One of the main uses of Origin token is to serve as the intermediary that can be used for conversions between different currency types. Buyers and sellers will want a stable unit of account to describe the value of a good or service, and to that end we plan to allow listings in fiat denominations. It is easier to describe a one hour bikeshare as costing \$1 USD than it is in Origin units or even Bitcoin and Ethereum given the high volatility of all these assets. We plan to allow buyers to use Ethereum and other tokens, and will build and/or partner with other projects to create the proper solutions to allow for on-the-fly conversions. It is our goal to even support the ability to convert select fiat currencies to Origin token through our DApp at some point in the future. In this way, we are borrowing some principles from the well-known enterprise banking intermediary cryptocurrency Ripple (as used by Ripple the company) and the recently launched Ox project that promises easy token-to-token exchange.

### **Socioeconomic incentives for buyers, sellers, and third-party DApps/organizations**

The Origin network is starting years after incumbents like Craigslist and Etsy. To compete, Origin will have a better than free<sup>17</sup> model for non-transactional (actual buying and selling) interactions. We believe the Origin token will provide promising socioeconomic incentives that spur the engagement, promotion, and development of the network.

<sup>17</sup> After the early kinks are worked out, the token launch model will provide a technically feasible way for tech companies (and open source projects in general) to spread the wealth and align their userbase behind their success. This is a better-than-free business model, where users make money for being early adopters. - Balaji Srinivasan →

## 02

As an example of increasing engagement, Origin platform will provide small amounts of Origin token to ecosystem participants that list their products and services, rate other users, write reviews, and verify their identities. When buyers purchase a service or usage of an asset, there will be a built in “cash-back” mechanism that the Origin foundation will manage to credit early users that purchase on the platform in an effort to increase transaction volume. This token refund as a percentage of sales volume will decline over time just as a block reward for mining Bitcoin declines over time. Of course, particular care must be given to monitor for and prevent fraudulent transactions.

Similarly, we want early buyers and suppliers to promote the platform to their peers. A similar referral program that offers gradually decreasing token award sizes as verified referrals are completed will be implemented to incentivize individuals and businesses to engage in grassroots marketing and referrals to increase the total number of network participants. Again, we will put the requisite verification and fraud prevention measures in place to make sure this is a healthy, honest rewards system.



A third major contributor to the platform will be the entrepreneurs, developers, and organizations that will contribute to the Origin product with features, code improvements, and policy creation/monitoring. As stated previously, we encourage others to develop front end interfaces to browse and consume Origin data. Users of these third-party DApps may stake their Origin token (e.g. a monthly subscription or per use fee) in order to use these alternatives to the Origin DApp that we are releasing.

## 02

We hope that third-party modules for localization and internationalization, support of many fiat currencies, and other add-ons will be built by the developer community and rewarded by the community with Origin token. In fact, Origin token holders can stake their token to vote on various proposed projects and then collectively pay for developers to undertake platform improvements.

03 ■

# Market Dynamics

## THE ORIGIN FOUNDATION

Our mission is to create the sharing economy without intermediaries, allowing people to transact directly with one another in a distributed, trust-minimized fashion.

We incorporated Origin as a for-profit business so we could make rapid decisions, move quickly and secure the funding we need to continue our work on this important mission.

However in the long run it would not be appropriate for a single for-profit company to yield this much power over the evolution of the Origin platform. We believe it is critical for us to have an independent, inclusive, non-profit body to steward the technology and vision in the interests of all community participants.

The Origin Foundation is a non-profit organization whose purpose is to promote the long-term vision and success of the Origin project. The Foundation will serve the community in the following ways:

- Project governance. This includes decision making, community voting and helping to guide the overall direction of the project.
- Evangelistic efforts such as developer outreach, organizing conferences and local meet-ups along with other marketing efforts.
- Investment committee for the Origin Fund
- Employing core developers to review open source contributions
- Regular auditing, both financial and technical.

The Foundation will also provide optional, value-add services for the community, such as:

- Arbitration services
- Management of insurance pools and processing of insurance claims
- Offline identity verification such as verifying drivers licenses or passports.

## 03 ■

These value-add services will be provided by the Foundation as a way of bootstrapping the network and handling some of the challenges that are currently unsolved with existing blockchain technology.

The initial staffing for these value-add services will be provided by the Foundation, but our goal is for them to eventually be staffed by trusted members of our community or transitioned entirely to more distributed solutions.

A portion [exact % TBD] of the funds raised during our token offering will be used to fund the creation of the Foundation and fund its operations for the first four years. Like the company, the Foundation will use a responsible disbursement schedule to convert tokens into fiat currency at a carefully reasoned and predictable rate.

### Disbursement Schedule

The initial board of directors will have five seats consisting of the two founders of the Origin project along with three independent, well-respected members of the Origin community. We believe it is important for the founders to have seats on the board as highly active participants in the community without having undue majority control.

We believe the Foundation will play a critical role in the long term success of the project as we future-proof our world against oligarchs and tyrants.

## 03

### GROWTH & SOLVING THE COLD START PROBLEM

An unfortunate number of well meaning founders create incredible products without putting the same level of thoughtfulness into planning how they will find the users, without whose support their projects will die.

There are four key ways we believe we can solve the cold start problem by finding and incentivising early users:

- Early investors in the project will be naturally incentivized to use the product and share it with their friends. The higher the demand for the token, the higher the value of their personal holdings.
- In addition to the organic rewards that come from using the platform, we also plan to create explicit referral programs that reward people who share Origin with their friends.
- The Foundation will also be issuing grants via the Origin Fund to various companies, organizations and teams that are building on top of the Origin platform and creating value for the greater community. As a community project, the more people who get involved, the greater the odds of success.
- The Foundation will be issuing a limited number of advisor tokens to valuable members of the community who go above and beyond in creating value for the project, whether through technical contributions, key introductions, or driving user adoption.

## 03

## CROSSING THE CHASM TO MAINSTREAM BUYERS & SELLERS

While the Ethereum platform and its derivative projects have seen a dramatic increase in interest, investment, and community participation in 2017, cryptocurrency, blockchain, and other decentralized technologies have yet to hit the mainstream.

We are excited about launching Origin to early adopters of the Ethereum platform. These buyers and sellers will likely already be familiar with buying/selling cryptocurrencies on exchanges and/or used cryptocurrencies for their first few purchases of goods and services.

However, our long-term mission is to make Origin and its associated projects available to, and widely used by, everyday consumers who are not at the cutting edge of new technology adoption. As founders and innovators in the space, we must be self aware and realize that while decentralized technologies create many advantages, they also impose new user frictions. For example, there are more nuanced security and account management issues that can be intimidating to mainstream users. In addition, requiring the use of cryptocurrency tokens and the management of wallets will hurt initial user adoption.

In the interest of planning for the widespread usage of Origin in the future, our team is already thinking about ways to graduate the technology and product from an early adopter platform to a mainstream one.

Some of our mid-term efforts will include:

- Abstracting the Ethereum wallet layer with more user-friendly accounts. Many users will prefer to sign up on a “traditional” website that then manages wallet private keys and other account information. We imagine either an Origin Foundation-funded project or a third-party team to build this abstraction layer for a certain portion of users. While the ensuing app will now be centralized, it will serve as a good intermediary to shepherd users from familiar paradigms to a truly decentralized marketplace environment.
- Ensuring pricing stability for goods and services listed on the Origin platform. Mainstream buyers and sellers will want to transact against stable, familiar currencies. To that end, after the initial platform launch we will seek to introduce the ability to price goods and services in fiat currencies and guarantee “locked in” prices even though the ultimate transactions on the blockchain will be in Ether and other cryptocurrencies.

## 03

## COMPARISON TO OTHER BLOCKCHAIN-BASED MARKETPLACES

While there have been some early forays in cryptocurrency-based marketplaces, these projects do not directly address the sharing economy opportunity.

### — **Openbazaar**

- No concept of allowing fractional usage of assets
- Store-centric, instead of user-centric
- Desktop software creates user friction
- No upside for earlier adopters via currency appreciation
- Launched in 2015, but has low adoption

### — **District0x**

- No concept of allowing fractional usage of assets
- Focused more on the governance of virtual organizations than defining marketplace protocols for the sharing economy
- Rely too much on smart contracts that aren't realistic to use in the current environment
- Low adoption of early projects like Ethlance

### — **Atlant**

- Focused mostly on real estate investing via securitization of properties
- Also promise to handle P2P rentals, but they appear to be managed entirely off-chain

### — **Casa / Bedkin**

- "Home sharing for friends"
- Centralized mobile app
- Planning to allow for payment via cryptocurrency

### — **Locolo**

- "Use things without owning them"
- Two-sided distributed marketplace for renting things like sporting goods or cameras
- Payment via cryptocurrency

04 ■

## Roadmap & Milestones

- White paper released (September 2017)
- Token offering smart contracts audited and released to public for review
- Pre-sale to larger, accredited investors
- Token main sale
- Token available for trading on [list of exchanges that have committed to listing our token]
- Platform launch
- Continued development of both the technology and the growth of community

## 05 ■ Team

### CORE TEAM



#### Matthew Liu

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

Liu was the third product manager/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 and personal finance spaces over the past two years.

## 05 ■

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**

Joshua Fraser is co-founder of Origin 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 leading the sale of the company to Walmart Labs.

Fraser has founded several bootstrapped businesses with Liu, all of which are profitable and still running today under hired management teams. As an Airbnb host for multiple properties the past few years, he has experienced first-hand the downsides of marketplace intermediaries (large fees, arbitrary rules, and government regulation).

## 06 ■

# 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 focused on 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, entrepreneurs and investors 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.