

HireGo

B L O C K C H A I N P 2 P C A R H I R E

White paper

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HireGo

HireGo; Peer-to-Peer Vehicle Rental

In a rapidly-decentralising world there is a strong motivation to upset incumbent, centralised services and to create user-oriented alternatives. This paper presents a novel solution to peer-to-peer vehicle rental that leverages smart contracts to ensure user security and transparency.

1.0 Introduction

With the advent of the sharing economy, there has been a sudden and dramatic rise in the popularity of private rental. The Airbnb and Uber platforms, the two most-cited examples of this economic shift, allow millions of users to lease their property or services to others in exchange for a fee.

The private rental industry, a subset of the sharing economy concerned solely with the lease of property, is a fast-growing sector. Private vehicle rental alone is estimated to reach a worth of \$90B by the year 2020¹. This growth has spawned the creation of platforms that facilitate the lease of tools, cars, drones, photographic equipment and construction plant, to name but a few.

Vehicle rental makes up a large proportion of the private rental sector and is mostly dominated by a small number of platforms. Turo is a market-leading application that boasts a user base of over 2 million². This platform, not unusually, charges an enormous 25% fee for transactions - with some platforms raising this as high as 35%. There is a distinct lack of choice and competition within this arena.

¹ <https://globenewswire.com/news-release/2016/03/17/820761/0/en/Global-Car-Rental-Market-Set-for-Explosive-Growth-to-Reach-Around-USD-90-Billion-by-2020-MarketResearchStore-Com.html>

² <https://www.forbes.com/sites/andrewcave/2016/12/15/can-turo-do-for-automobiles-what-airbnb-has-done-for-apartments/>



"It's an interesting move — and highlights that despite the buzz around the 'sharing economy' some of the most successful start-ups in the space end up looking a lot like the traditional businesses they are trying to disrupt" - Business Insider³

Given the increase in user-control that the sharing economy offers, the lack of decentralisation is surprising: incumbent industry capitalises on data ownership and the monopolisation of its users. Transactional data is created and stored by the platform and is inaccessible to the users it concerns. This information, invisible as it is to users, may contain sensitive or valuable information and becomes a target for theft.

"Everything that can be decentralized, will be decentralized." - David A. Johnston

By leveraging the blockchain to create a trustless, decentralised rental platform, HireGo aims to overcome the shortcomings of existing solutions. Using blockchain-based identity solutions ensures that users can manage their own data, granting access as and when they see fit, and provides additional assurances that users of the platform are genuine and trustworthy. The use of smart contracts, contractual code running on the Ethereum network, removes the necessity for a middleman and allows users to conduct trustless rental transactions.

The mass-adoption of decentralised products and the blockchain are changing user-expectations, prompting a change in existing industries that has already begun. Digital currency exchanges, online games and identity-management applications conduct millions of dollars of business every day, all using decentralised technologies, and some estimates even suggest that 5% of trading could be involved with or conducted using cryptocurrency by 2020.

HireGo will position itself as the first private car rental application in the emerging decentralised sector. It is our goal to set the technological and usability standards for the car hire industry, providing a professional, secure platform to connect like-minded individuals, and to lead the way for others to follow.

³ <http://uk.businessinsider.com/turo-car-rental-airbnb-sharing-economy-business-model-uk-launch-2016-12>



2.0 Application

HireGo is building a decentralised, peer-to-peer marketplace that allows its users to lease their vehicles in a trustless and secure environment. The marketplace leverages the Ethereum blockchain as both a public ledger for lease transactions, and for conducting the transactions themselves, using a smart contract framework.

The HireGo marketplace provides a directory of vehicles available for hire. Users are able to select an appropriate vehicle, secure it for their desired period and settle the payment, in-app, using the HGO token - an ERC20-compatible cryptocurrency built for the purpose (see HGO Token). Vehicles listed on the marketplace are crowdsourced from HireGo users and can be easily added in-app; additional tools are available for "power-users" making larger numbers of vehicles available.

HireGo has been designed with simplicity and security as a first priority. Payment is made, in advance, and held in an escrow contract on the Ethereum blockchain; in the event of a dispute between users, a trusted party, such as the dedicated HireGo resolutions team, will be able to make the final judgement. Reviews and comments made by users will also be stored on the blockchain, creating an indisputable, trustworthy record of a user's conduct. These technologies are handled natively by the HireGo application and all technical complexity is hidden from the user.

To provide additional peace-of-mind, the marketplace will also offer various insurance options for users. These insurance packages, provided by a trusted industrial partner, will ensure that vehicle owners are protected from unexpected collision or damage.

As with payment and review, the rental transactions and vehicle listings are conducted via the Ethereum blockchain. The HireGo applications provide a gateway for accessing this data in an intuitive manner and will create and send the necessary transactions, eliminating any potential friction for the user - no knowledge of the blockchain is needed to use the marketplace. When a user enters into a rental contract the application will interact with the appropriate smart contract on the user's behalf, parsing responses and interacting with the system using a pre-defined and public protocol. Importantly, users retain control of their private keys and, at no time, is this broadcast to HireGo or any third-parties.



There is an intrinsic fee when transacting via the Ethereum blockchain, known as the “gas cost”, used to incentivise miners and to secure the network. When using the HireGo applications, any gas costs incurred will be covered automatically, without the user’s knowledge. This results in a smooth user experience and removes the need to manage multiple currencies, a drawback in some existing decentralised systems. The slight cost to HireGo will be included in the transaction fees, taken in HGO tokens.

A gateway will be provided for the exchange of fiat to tokens and vice versa, further eliminating friction for users new to cryptocurrency. This will allow profits to be easily withdrawn to a bank account. Deposited currency will be automatically converted to HGO tokens and transferred to the user's wallet, visible as a balance on the marketplace.

Incentive schemes will be employed, via social media and in-app, to reward users for creating helpful content (such as well-written reviews) and for growing the community. It is important that positive use of the marketplace is encouraged and HireGo believes that exceptional users, from those providing consistently great feedback to those receiving it, should be encouraged. HireGo will employ various gamification techniques, including virtual trophies, and will provide financial incentives to foster a pleasant and professional community.

3.0 Smart Contracts

The HireGo marketplace will deploy three smart contracts to the Ethereum network: the HGO token, a Vehicle non-fungible token and a Rental contract. An additional storage contract will be deployed for use in a hub-and-spoke model, ensuring that any updates or bugfixes may be released in a timely manner, without loss of data.

3.1 HGO Token

The in-app currency is the HGO token, a cryptocurrency conforming to the ERC20 standard. There will be a total of 100,000,000 tokens created, of which 60% are being allocated for an initial coin offering. Each token will be divisible by 18 decimal places. Any value exchange on the HireGo marketplace will be conducted using the HGO tokens.

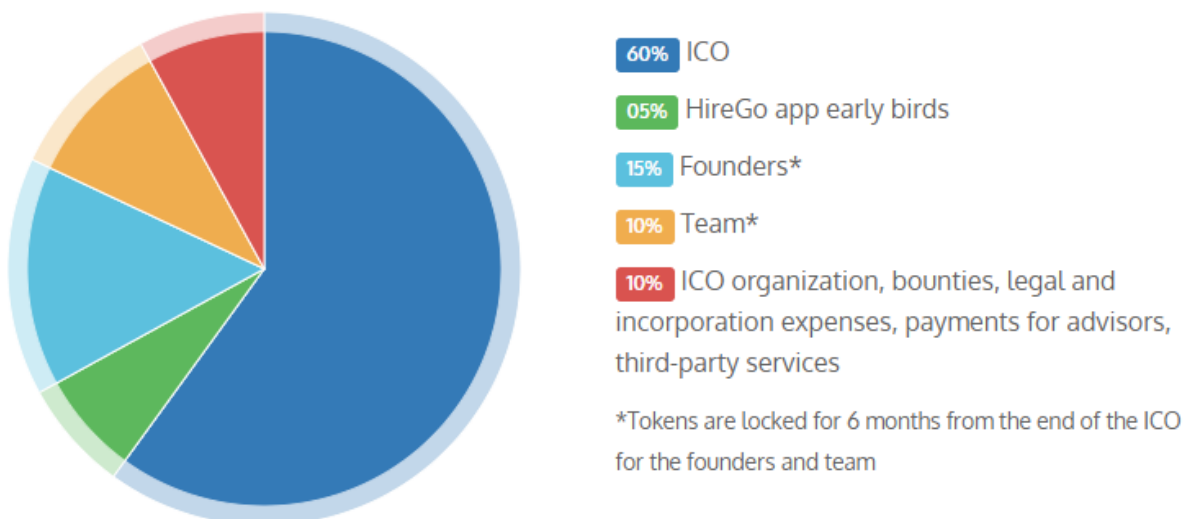
Gas costs incurred by transactions made using the HireGo app will be covered, ensuring that users do not need an Ether (ETH) balance to place transactions. There will be protection mechanisms in place to ensure bad-actors cannot abuse this system. When a transaction is selected the gas cost is transferred to the user's address and, once this has been confirmed, the rental transaction is issued by the application.

The token will be available for purchase on existing cryptocurrency exchanges and may be used as a means of exchange and speculation beyond the HireGo application. HireGo will also provide a fiat-HGO gateway to facilitate the easy exchange from GBP, USD and other national currencies.

3.2 Token characteristics

- Symbol: HGO
- Base Value: 1 ETH = 4,000 HGO
- Type: ERC20
- Token supply: 100,000,000 HGO

3.3 Token distribution



3.4 Vehicle Non-fungible Token

Each vehicle listed on the marketplace is represented as an ERC721-compliant token. At any given time, the holder of a Vehicle token will be granted sole access to the corresponding

vehicle and, as such, the ownership indicates that a rental transaction has been entered into. The token is returned to the vehicle owner on completion of a rental transaction.

Whenever a new vehicle is added to the marketplace a new token will be minted and transferred to its owner. Initially, new vehicles will be subject to moderation by the HireGo team, however this restriction may be removed in the future to aid decentralisation. The token will contain identifying information in its metadata, linking it with the vehicle it represents. Whenever a vehicle is removed from the marketplace the token will be burnt, ensuring that a one-to-one correspondence between all Vehicle tokens and their marketplace counterpart is maintained; this prevents the fraudulent lease or trade of non-existent vehicles.

The use of a non-fungible token to represent the access to a vehicle creates space for future applications, including the use of smart locks that respond to messages signed by token holders. HireGo aims to leverage blockchain-ready, Internet-of-Things technology when it becomes available and future versions of the marketplace will allow physical access to the vehicles to be governed by ownership of the requisite tokens.

3.5 Rental Contract

Rental transactions are also made via a dedicated smart contract. This contract will act as an escrow and will mediate the transfer of the Vehicle token between the two parties.

When a rental transaction is entered into, the renting user issues a paid transaction to the Rent contract. These funds are held by the contract until the rental period has elapsed and that both users have indicated a successful transaction. This contract also allows a dispute to be flagged by either user and, in the event that a third-party judgment is needed, HireGo can choose to return the funds to the appropriate party. This model also provides the flexibility for specifying additional trusted parties and, if the contracting parties desire, it is possible to exclude HireGo altogether - furthering the trustless and decentralized ethos of the platform.

The Rental Contract also manages the transfer of the vehicle token from the vehicle owner to the renting user, and vice versa, as required. The token will be owned by the renting user during the rental transaction and then returned after its conclusion.

3.6 IoT Ready

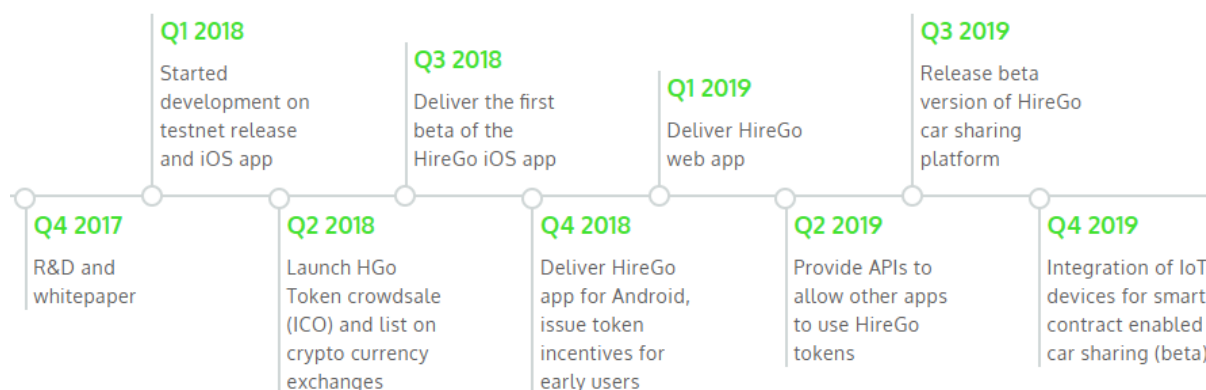
The Internet of Things is the concept of connecting almost any electrical device to the internet and to each other. It is estimated that by 2020 there will be over 26 billion connected devices.⁴

IoT and blockchain (distributed ledger technology) are often associated with one another as both technologies are distributed based.

'By 2019, 20% of all IoT deployments will have basic levels of blockchain services enabled'⁵

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4.0 Roadmap



5.0 Team / Contact

See Hirego.io for details of team and Linked In profiles as HireGo is always looking to add to and strengthen its team. Our founder and contact details are below.

Founders: Luqman Hussain and Adil Bashir

Website: www.hirego.io

Email: contact@hirego.io

Twitter: https://twitter.com/Hire_Go

⁴ <https://www.forbes.com/sites/jacobmorgan/2014/05/13/simple-explanation-internet-things-that-anyone-can-understand/#43ad8cfa1d09>

⁵ <https://www.i-scoop.eu/blockchain-distributed-ledger-technology/blockchain-iot/>

6.0 Legal

Pre-sale and ICO Legal disclaimer

By participating in the HireGo HGO Pre-sale and/or ICO Token Crowdsale or making use of any information in this whitepaper or available on the Hirego.io website, you agree to the following:

By using the services provided by HireGo, you the (User) as either an Initial Coin Offering (hereinafter – Pre-sale and/or ICO or Crowdsale) participant or (User) of HireGo products or services, fully understands and agrees with the following:

- User understands and acknowledges that HGO tokens will be provided by the Presale and/or ICO smart contract in the order that transactions are received by it and no alteration of this can be made by any party. User understands that HireGo carries no liability for the ability to take part in the Pre-sale and/or ICO for reasons beyond the control of HireGo including but not limited to the Pre-sale and/or ICO duration, transaction mining delays and node-related issues
- Pending a successful Pre-sale and/or ICO, HireGo team members will be focused on completing the company start-up and delivering on milestones. However HireGo undertakes no obligations to act on behalf and in the interests of User in the Pre-sale and/or ICO being held in the future.

HireGo specifically disclaims liability for incidental or consequential damages and assumes no responsibility or liability for any loss or damage suffered by any person as a result of the use or misuse of any of the information or content in this whitepaper or on the Hirego.io website. HireGo assumes or undertakes no liability for any loss or damage suffered as a result of the use, misuse or reliance on the information and content in this whitepaper or on the Hirego.io website. In no event shall HireGo be liable to User for any special, indirect, incidental, consequential, exemplary or punitive damages (including lost or anticipated revenues or profits and failure to realise expected savings arising from any claim relating to



the services provided by HireGo) whether such claim is based on warranty, contract, tort (including negligence or strict liability) or otherwise or likelihood of the same.

Pre-sale and/or ICO participations can be considered High-Risk Trading; purchasing financial instruments via a Pre-sale and/or ICO or utilising services offered on the website may result in significant losses or even in a total loss of all funds invested.

- No information provided on HireGo's platform or website should be interpreted as investment advice. It does not constitute an offer or invitation by HireGo to any User to buy or to sell tokens or make any investment.
- User guarantees that he is a legally capable person of a majority age and complies with legal rules and applicable laws of the jurisdiction where the User lives.
- By participating in the Pre-sale and/or ICO User confirms that he has read, understood and agree to comply with all restriction

HireGo