HereYouGo White Paper

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Abstract.

The blockchain industry is rapidly developing. It transforms many areas, like legal, notarial and even public administration. The biggest transformation is seen in financial application of this exponential technology: nowadays we witness value increase of cryptocurrencies and the creation by the largest finance companies of funds that manage assets connected with cryptocurrency. Moreover, the largest car manufacturers announced about foundation of consortium to apply the blockchain technology.

At the same time, self-driving car technology is developing rapidly. The first successful experiments were hold 10 years ago. During the recent years development of this technology has accelerated because of the following reasons: development of computer power, GPS infrastructure creation, prerequisites for creation of connected cars and smart cities. Besides, the market is developing actively due to finance reason: billion-dollars deals in self-driving cars startups took place several times during the last years, for example, Cruise company. General Motors, Ford and other huge car manufacturers are actively investing into self-driving technologies.

The idea and the product.

Draper University, which is located in Silicon Valley and founded by venture investor Tim Draper, the investor of Tesla, Space X, Skype and other world-famous technological companies. Today the university community has more than 500 alumni, several unicorn companies which were founded by alumni and several successfully sold businesses. Every year, on its summer program for entrepreneurs the university organizes the hackathon of ideas where entrepreneurs from all over the world investigate business models and use advanced technologies for the analysis of business projects with 10 year development prospect. Tim Draper personally evaluates the projects of his students and gives recommendations for business development.

One of the ideas presented on the hackathon was the idea of of a transportation platform for self-driving cars. The idea of the project was significantly changed from the original student project, the current focus of the company is blockchain implementation into transportation, but the basic prerequisites and ideas of student project in Draper University formed the basis for our business. Our product is financial platform for self-driving transport. Using blockchain technology, the platform provides the service of public transportation with self-driving cars by uniting the owners of automotive vehicles and the clients. Our big idea is to open self-driving technology for everyone, because it would have already saved thousands of lives, but unfortunately, the structure of corporations, developing the technology, slow down the introduction, testing and community development around the autonomous driving technology. Inside the corporations, we see more incentives for deceleration in development of self-driving technologies rather than for its acceleration. In our opinion, blockchain will be the technology which allows to manage the responsibility and, first of all, financial responsibility, and this will allow to occupy the transport market quickly for self-driving technology. So, our product will solve the following problems:

- to share the risks for owners of the technology, owners of vehicle and transport services:
- to create the financial motivation for self-driving cars owners;

- to create the opportunity to use cryptocurrencies in the real world;
- to solve the problem of drivers' unemployment, because we will create a new role for them the administrator of the vehicle: they will manage the processes associated with the transport economic issues, car wash and technical services;
- to unite of all members of the market and to decrease their risks.

Marketing plan.

The geography of project development related to regulation and location of self-driving technology development. Thus, we plan to launch our service in Silicon Valley, then the US market, as the next priority we consider the emerging markets where regulation will be adapted for self-driving transport development. We create the product for the B2C market, our users consist of three groups: passengers, owners of self-driving cars and administrators. One person can be in a several groups at once. Part of the marketing, such as prototype creation and community organization, we plan to do together with partners in Silicon Valley. We plan to use video and social media as the main marketing channels.

Technology.

Our vision of the product includes several levels related to business processes: financial, transport and user. At the first stage of product development - until 2019, we plan to concentrate on financial and user levels. Our vision about decentralization is that it is necessary only if it is really needed – first of all, in financial area. Other applications of blockchain technology in the product will depend on the appropriateness and the IT level of infrastructure development.

It is planned to release its own app token of ERC20 standard on Ethereum platform. According to market situation it is possible to release a token on other platforms (for example, 80% on Etherium and 20% on Waves). The token will be used for work of application.

The use of tokens and smart contracts will allow to attract not only owners of cars, but also ordinary users as administrators or cars' owners and to expand the fleet of vehicles by equity crowdfunding.

The financial component of the project will provide the reliable and secure service for vehicle owners and their clients. The use of smart contracts and blockchain technology will allow to perform all transactions transparent and secure. All financial transactions will pass through Ethereum smart contracts, which guarantees transparency and security of transactions. Confidential data will be transmitted in encrypted form and originals and transactions details will be stored in a secure SQL storage. The authenticity of the stored data will be guaranteed by hashes publication in Ethereum smart contracts. In addition, the use of smart contracts will allow to realize vehicle co-ownership and to receive dividends according to its investments.

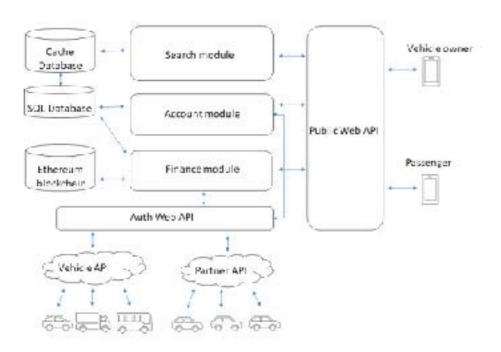
At the user level we provide a simple and convenient taxi service and at the vehicle owners level we provide a platform for safe and flexible leasing. The functional module of transport selection is the most heavily loaded part of the system and supports flexible scaling by deploying additional instances for speed. Besides, data caching and intelligent search

system that consider the future system status (analysis of the road situation and the destination of current orders) as well as the accumulated statistical data, are widely used.

The vehicle owners have an opportunity to set up flexible rule for the use of their cars, for example, set a schedule or specify the time when the car should be returned, the maximum distance or possible district of work and the prohibited areas.

The transport level is responsible for integration of all types of vehicles as well as for the management and control of vehicles. The architecture of the system allows to connect any type of vehicles to different protocols as separate repositories which ensure the high level of failure-resistance for the platform and maintain operational capacity in case of problems with several repositories simultaneously. We plan to collect the available telemetry and find out the data of interest such as possible transport accidents based on algorithms of intellectual analysis with use of self-learning neural networks and keep them in encrypted form in Ethereum. We are ready to share a private key to any interested party or to publish the data on request according to the current legislation.

The user will see the product as a mobile application with different roles: passenger, owner and car administrator. For the role of administrator the section of car operational management will be available: the settings of time and area of driving, the car systems management, the payment for gasoline, car wash and other services. For the role of car owner the section of permissions and settings management will be available as well as the section of assignment of the administrator. If the car is in the joint ownership the section for voting will additionally appear to take decisions and change settings which require the owners' consensus. For the role of passenger the section of searching and the car booking will be available. This section is basic and available for all roles.



Roadmap.

In our roadmap we are tied to several key points: the launch of a prototype in Silicon Valley together with a transport partner, the launch of our own mobile applications and the opening of the self-driving cars market by auto manufacturers.

- Summer 2018: the launch of prototypes.
- Autumn 2018: organization of IT infrastructure.
- Winter 2018: conclusion of partnership with auto manufacturers.

Finance plan.

According to our experience approximately equal costs will be spent for IT infrastructure creation and marketing. Most of the costs for IT will be the costs for technical and administrative team's wages and for prototypes creation. Marketing will be divided into PR, internet marketing, attraction of paid traffic, content management in social media and on website and the community creation.

The Team.

This is our greatest pride. All people in the team are not accidental and have an experience in entrepreneurship, transport IT platform establishment, marketing, finance and self-driving technologies. Most of the team are classmates from Draper University. The current team structure you can find on our website, the core team is:

Konstantin Maslennikov, CEO and founder Carlos Uranga, CTO Jonathan Frazier, Strategy Director Jin Marks, PR Director Alex Winter, Team Lead

Crowd-funding of prototypes.

We consider as an important element in company development the prototypes creation to demonstrate capabilities of our service and popularize the technologies that we use. We create two prototypes: one with an open protocol for self-driving car models educating, the second is connected with the purchase of Tesla to test the transaction part of the business. We invite you to join the crowd-funding to contribute to the development of safe and cheap transport of the future.

Summary.

We see the huge potential of blockchain technologies for self-driving cars market. In addition to the obvious size of the market, the ride sharing market is also the driver of innovation development in the field of public transport and this aspect we consider as a priority for autonomous technologies. The benefits from implementation of these technologies will experience millions of people, primarily in reducing transportation costs

and reducing the price of food. The impact of these technologies on cities will be particularly noticeable: it will result in diminution of transport infrastructure (such as parking area) and expansion of spaces for people (such as parks, pavements and public spaces).

Sources:

- 1. SHARED MOBILITY PRINCIPLES FOR LIVABLE CITIES https://www.sharedmobilityprinciples.org
- 2. Autonomous Vehicle Implementation Predictions Implications for Transport Planning by Todd Litman Victoria Transport Policy Institute https://www.vtpi.org/avip.pdf
- 3. PEAK CAR OWNERSHIP THE MARKET OPPORTUNITY OF ELECTRIC AUTOMATED MOBILITY SERVICES BY CHARLIE JOHNSON AND JONATHAN WALKER RMI https://rmi.org/insights/reports/peak-car-ownership-report/
- 4. Level 4 autonomous Renault SYMBIOZ Concept https://www.renault.co.uk/vehicles/concept-cars/symbioz-concept.html
- 5. Practical Examples Of How Blockchains Are Used In Banking And The Financial Services Sector https://www.forbes.com/sites/bernardmarr/2017/08/10/practical-examples-of-how-blockchains-are-used-in-banking-and-the-financial-services-sector/
- 6. Cost-based analysis of autonomous mobility services https://www.research-collection.ethz.ch/bitstream/handle/20.500.11850/184754/ab1225.pdf
- 7. A Next-Generation Smart Contract and Decentralized Application Platform https://github.com/ethereum/wiki/wiki/White-Paper
- 8.Disruptive trends that will transform the auto industry https://www.mckinsey.com/ industries/automotive-and-assembly/our-insights/disruptive-trends-that-will-transform-the-auto-industry
- 9. Banking Is Only The Beginning: 36 Big Industries Blockchain Could Transform https://www.cbinsights.com/research/industries-disrupted-blockchain/
- 10. Crypto currency, coins and tokens https://ethereum.org/token
- 11. How an ICO project can issue and manage dual tokens https://medium.com/digital-finance/how-an-ico-project-can-issue-and-manage-dual-tokens-ab8c72e03778
- 12. Decentralized data storage via blockchain https://habr.com/post/327836/
- 14. ERC-20 token https://forklog.com/chto-takoe-tokeny-erc-20/