

# k u d c s

The Blockchain Protocol for Trusted Ratings  
and Performance Driven Rewards



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## I. Abstract

The smartphone revolution has led to a dramatic rise in the number of mobile platforms that directly connect users to workers. Smartphone apps give us the power to stay in other people's homes, buy clothing, hail taxi rides, order food delivery and hire house cleaners right from our fingertips. Yet, these businesses are broken. As the service economy has boomed, the majority of the resulting wealth has remained centralized in the hands of a select few: platform owners, developers and their investors. Contractors and workers still struggle to make ends meet. Key incentives (e.g., tips and rewards) that motivate optimal user and worker behavior are misaligned or non-existent. Across platforms, tipping and rewarding workers remain inconsistent experiences and are often arbitrary and discriminatory.

Blockchain technology gives us the opportunity to build better businesses and marketplaces that reward users and workers for their engagement and performance in a programmatic and equitable manner.

The Kudos protocol and Kudos token solve this problem by giving businesses across all service-based industries the ability to incentivize optimal behavior/engagement for users and workers. The protocol will be designed for simple implementation and will layer directly on top of existing payment processing and POS systems. Kudos will become an essential infrastructure for real businesses across all service economies today—from ridesharing to coffee shops to restaurants—and become the backbone of web 3.0 and the blockchain-based businesses of tomorrow.

On a macro level, Kudos will also power a global system of verified ratings that will replace legacy review sites that run on closed-source platforms and are often subject to manipulation. Rankings will no longer be controlled by ads, algorithms, or falsified accounts; the Kudos protocol will hash each transaction to a user-generated rating, allowing transparency and verification to rule.

Igniting a fairer and more equitable world, the Kudos token and protocol will be the foundational currency and ecosystem of global service businesses and economies.



## II. Background

At Skedaddle, our vision is to build a global, on-demand and flexible, long-distance transit network to replace fixed bus, train and car services. We launched Skedaddle in 2015 with the goal of revolutionizing transportation in and out of cities by connecting people to any destination of their choosing on comfortable and affordable vehicles.

Our platform is currently used by tens of thousands of riders each month in major metropolitan areas across the United States and Canada. We have built a rapidly growing network of riders by serving routes to events and popular weekend destinations, as well as offering comfortable and convenient rides for commuters. Our flexible route solution competes with current fixed-route mass transit solutions offered by Greyhound, Megabus and Boltbus; Skedaddle routes are often less expensive than renting a car. Our goal is for Skedaddle to become a utility as reliable as mass transit or personal vehicles. We are experimenting with daily commuter services, and initial results from two pilots are promising.

Affordable and flexible long distance travel helps to foster economic development by providing people with an easy way to travel and to get to work. Mass transit is vital to efficient and productive cities<sup>1</sup>. Our network relies on thousands of high-capacity vehicle operators (vans, shuttles and buses) in order to serve this need.

High capacity vehicles spend most of their lives in parking lots. We unlock this latent capacity with every ride, which keeps our business efficient and flexible. Unlike traditional ridesharing companies, we maintain a massive advantage in global supply-side scale. We estimate the long-haul and mass-transit industry to be a \$90B market opportunity globally.<sup>2</sup>

Over the past two years, we have realized how we can increase the value of our business when we treat our drivers fairly through equitable rewards. In particular, within the past six months, we have begun rewarding drivers with direct programmatic payments based on completion of a set of actions core to the success of every route (i.e. turning GPS on, checking in riders, etc.). This kind of accountability is good for our riders: by connecting rewards directly to performance, we have seen a 16.4% increase in rider happiness.

As we began to design a performance-based rewards structure, we realized that the underlying protocol we built could also be used by other businesses to power rewards and payments.

1) <http://www.worldbank.org/en/topic/transport/overview>

2) <http://www.eyefortravel.com/mobile-and-technology/5-trends-bus-travel-eu70bn-global-market-speeding-ahead>



### III. Kudos: A Rewards and Performance Driven Currency

#### What is Kudos?

Kudos is the protocol and cryptocurrency for service-oriented businesses. Kudos is the fastest and easiest way to rate and equitably reward both users and workers. By leveraging the blockchain to achieve complete transparency, Kudos will also restore trust in ratings through cryptographically verified transactions that cannot be manipulated by ads or algorithms.

Kudos tokens will be implemented on the public Ethereum blockchain as an ERC20 token. The ERC20 token standard allows Kudos to immediately integrate with existing wallets and developer tools. Kudos tokens will be transferable and fungible inside and outside of the Kudos ecosystem.

Skedaddle will be the first of many future businesses to adopt the Kudos protocol, with plans to launch Kudos in our own app by April 2018. Skedaddle riders will earn tokens for various actions on the platform like signing up, starting and sharing routes, repeat riding and inviting friends. Riders will also be able to use Kudos to promote routes and unlock ride discounts and upgrades. At the end of the route, the rider app will require users to submit a rating. Drivers and operators will then automatically receive Kudos based on the quality of their performance.

The Kudos tokens can be used on the platform, saved for future use or transferred using the Kudos app or an ERC20-compatible wallet. Platform functionality will use industry-agnostic smart contract function calls for generalized application to all service-based businesses.



#### IV. Current Problems and the Kudos Future

Online and offline service-oriented businesses have exploded over the last decade. They now represent a \$15 trillion global market opportunity.<sup>3,4,5,6</sup> Over the next three decades, economists predict that on-demand and business services will provide hundreds of millions of people access to transportation, housing, food, goods, and more. The rapid expansion of these services creates an opportunity for us to create a plug-and-play solution for rewards and ratings on the blockchain and develop a global ratings system that users can trust. Here is a sample of problems we can solve with Kudos:

##### Inequitable Rewards

For years, rewards and tipping programs have essentially been identical. A few have designed sophisticated rewards programs for users, encouraging repeat usage over time. Some have even tried to even the playing field by using supply-side rewards, but those attempts have been mostly ineffective. Still, a few platform creators and business owners have amassed the majority of the wealth.

Users don't reap the true value of making early contributions; this issue grows as the business matures.

Servers and workers rarely get proper compensation<sup>7</sup> for powering entire networks. Although some platforms and businesses have attempted to solve these problems, proper, effective and fair rewards structures often fall short. While some people have hypothesized that individual businesses will inevitably build platform-specific tokens, the technical requirements, cost and infrastructure needed to implement individual tokens will likely remain too high for most businesses. In the internet world, businesses aren't required to learn how to code from the ground up. Long gone are the days when startup companies kept their data servers in storage closets and built their websites from scratch. As Wordpress, Squarespace and others did for building websites, the Kudos protocol will make building rewards simple and affordable using one unified token.

3) <https://www.plunkettresearch.com/statistics/Industry-Statistics-Restaurant-Hospitality-Industry-Statistics-and-Market-Size-Overview/>  
4) <http://www.restaurant.org/News-Research/Research/Facts-at-a-Glance>  
5) <https://www.ers.usda.gov/topics/international-markets-trade/global-food-markets/global-food-industry/>  
6) <https://www.plunkettresearch.com/statistics/Industry-Statistics-Transportation-Industry-Statistics-and-Market-Size-Overview/>  
7) "Annette Bernhart, Ruth Milkman, et. al.," Broken Laws, Unprotected Workers." UCLA Labor Laws, 2009, pg.3.



## IV. Current Problems and the Kudos Future

### Tipping Discrimination

Creators, makers and owners of service businesses have accrued tremendous wealth, while many workers within the gig economy struggle to make ends meet.<sup>8</sup> This inequity is exacerbated by discrimination in tipping and rewards. Consequently, minority workers whose primary income is derived from work in labor intensive jobs in the gig economy (e.g., TaskRabbit, Postmates, etc.) earn significantly less than their White counterparts who tend to work for supplemental income.<sup>9</sup>

In most countries, tipping started as a practice to lower wages and reward workers in the service industry for providing high quality service. Over time, tipping has become clunky, arbitrary, and discriminatory. Customers often choose tip amounts based on assessments of the worth of the server and cultural norms.<sup>10</sup>

For example, tipping discrimination has had a disproportionately negative impact on wages for people of color. One study showed that people of color were tipped less than their white coworkers.<sup>11</sup> Another study found that African-American cab drivers were tipped, on average, a third less than their white colleagues. Similarly, African-American drivers were also 80 percent more likely to receive no tip at all when compared to white drivers.<sup>12</sup> Given that the minimum wage for tipped-workers is only \$2.13/hour, service workers are highly dependent on tips.

The arbitrary power dynamic between customers and tipped workers is also associated with sexual harassment and mistreatment. One study showed that tipped workers experienced twice the rate of sexual harassment as fully paid or performance-based workers. As customers may perceive control over the livelihoods of their server, this dominance breeds exploitation.<sup>13</sup>

8) [www.thenation.com/article/what-sharing-economy-takes/](http://www.thenation.com/article/what-sharing-economy-takes/)

9) Smith, Aaron. Gig Work, Online Selling, and Home Sharing. pp. 1–34, Gig Work, Online Selling, and Home Sharing, assets.pewresearch.org/wp-content/uploads/sites/14/2016/11/17161707/PI\_2016.11.17\_Gig-Workers\_FINAL.pdf.

10) Brewster, Zachary W., and Michael Lynn. "Black-White Earnings Gap among Restaurant Servers: A Replication, Extension, and Exploration of Consumer Racial Discrimination in Tipping." *Sociological Inquiry*, 2014, p. 14., doi:10.1111/soin.12056.

11) Lynn, M., Sturman, M., Ganley, C., Adams, E., Douglas, M. and McNeil, J. (2008), Consumer Racial Discrimination in Tipping: A Replication and Extension. *Journal of Applied Social Psychology*, 38: 1045–1060. doi:10.1111/j.1559-1816.2008.00338.x

12) Ayres, Ian and Vars, Fredrick E. and Zakariya, Nasser, To Insure Prejudice: Racial Disparities in Taxicab Tipping. Yale Law School, Public Law Working Paper No. 50; Yale Law Journal, Vol. 114, p. 1613, 2005; Yale Law & Economics Research Paper No. 276.

13) <https://medium.com/@laughtercrystal/the-trouble-with-tipping-hint-its-inequality-b0f58494fa17>



## IV. Current Problems and the Kudos Future

### Supply-Side Challenges

The bias runs both ways. Perceived bias in the tipping potential of customers can also lead to ‘tiering’ in service quality: workers are likely to provide better service to wealthier customers.<sup>14</sup> Tiering not only leads to inconsistencies in service time and quality, but also leads to discrimination toward potential customers in lower income brackets.

One study found that African-American passengers experienced significantly longer Uber wait times than did white passengers, and the cancellation rate from drivers for passengers with African-American sounding names was more than double the cancellation rate from drivers for passengers with white sounding names.<sup>15</sup> By creating a system that solely aligns financial incentives with performance, we can mitigate situations where a service worker might deprioritize service quality because of prejudice or cultural biases about a user’s tipping propensity.

### Ownership of Data and Portability

As workers enter the gig economy, they increasingly rely on ratings for feedback and respond to low ratings by improving service quality. Businesses like Uber and Airbnb use proprietary rating systems to remove service providers who do not meet set standards. These ratings systems are managed by the host company with little to no transparency. As more workers participate in the service economy, valuable data remains locked within these closed platforms. The labor market would be more efficient if employers had transparent and objective information about an employee’s service quality. Employees also deserve the right to harness their good reputations by carrying scores across the service economy.

We view Kudos as part of a larger conversation about portable benefits in the new service economy. App-based labor businesses have the potential to dramatically increase fluidity in the labor market by allowing workers to rapidly move between labor platforms as they see fit. This is not the current reality in large part because worker’s benefits, insurance, data, etc. are siloed within specific platforms. Enabling workers to build reputations that are transferrable across labor platforms is a first step towards unlocking the potential of the new service economy.

14) <https://medium.com/@laughtercrystal/the-trouble-with-tipping-hint-its-inequality-b0f58494fa17>

15) <https://economics.stanford.edu/sites/default/files/zoepf.pdf>



## IV. Current Problems and the Kudos Future

### Flaws in Centralized Review Systems

Over the past decade, a few platforms for user-generated reviews like Yelp, Google, Facebook and TripAdvisor have secured a strong influence in shaping how we understand the quality of a business. These services promise to provide us valuable information when we are making purchase decisions but they are flawed.

Centralized review platforms can be manipulated to highlight sponsored reviews and can be manually curated to promote particular points of view.<sup>16</sup> Many review platforms (e.g., Yelp, Facebook, TripAdvisor) are ad-driven and depend on business customers, in effect, to pay their way to the top. Hidden back-end adjustments are made on these closed-source platforms in order to accomplish this.<sup>17</sup> On centralized review platforms, ratings aren't directly tied to customer transactions but are influenced by advertiser dollars, algorithms, and human control.

### The Solution: Kudos

By using blockchain-based technology, we can build a protocol that will solve all of the problems outlined above. The solution relies on hashing transactions to ratings and then publishing and storing each value using the blockchain to ensure that data cannot be manipulated by anyone, even by blockchain developers on the Kudos team. In doing so, each rating will translate to a fair and proportional Kudos reward for both the worker and the business. With this function, Kudos will act as the operating protocol for rewarding workers and users in service-based businesses.

The protocol will provide flexibility for every business to customize the amount (percentage) of Kudos that will go toward rewarding workers for good performance and users for loyalty. The Kudos protocol libraries will be open source and easily plugged into existing payment processing infrastructure so that any transaction can be verified and associated with a worker, user and Kudos business on the Ethereum blockchain.

16) <https://www.forbes.com/sites/jimhandy/2012/08/16/think-yelp-is-unbiased-think-again/#5082a4f711d1>

17) <https://www.bloomberg.com/news/articles/2013-09-09/yelps-newest-weapon-against-fake-reviews-lawsuits>



#### IV. Current Problems and the Kudos Future

The protocol obviates the need for a business to create a traditional tipping program as Kudos are distributed automatically based on a 1-5 performance rating — originally from the Growth Pool to incentivize adoption and then as a proportion of the transaction value. Once the protocol has been adopted by many service platforms, workers will own a transferable rating that they can use across the labor market. This mechanism will act as the default reputation mechanism across businesses old and new. Companies who join the protocol will gain access to a transparent performance score for employees and contractors.

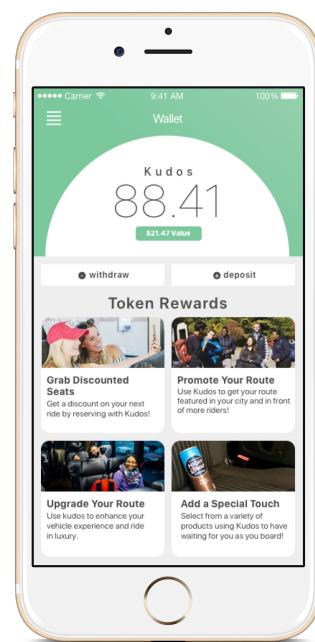
The protocol will be initially brought to market within Skedaddle's rider and driver apps, but we will deploy the protocol as a beta to Ethereum's public blockchain along with developer guides and resources, allowing businesses to easily integrate the protocol into their platforms. Management of Kudos will be led by the Kudos Foundation, an independent non-profit organization that will provide resources and outreach efforts to businesses to help them recognize the benefits of replacing antiquated and discriminatory tipping systems with performance-based systems.

By using the blockchain to restore trust in ratings and reviews, Kudos will power the first verified, global and trustworthy ratings systems for businesses. Each individual transaction/rating value will be aggregated and presented to the user in a decentralized app, or Dapp. For the first time, consumers will be able to trust that user-generated reviews have not been manipulated by ads or falsehoods.



## V. Use Cases in the Skedaddle Business

Riders will be able to earn Kudos for a variety of actions described below:



### Kudos Wallet

The Kudos wallet will be an integral feature of every rider account in our consumer-facing app. Riders will be able to transfer Kudos and connect US bank accounts for real-time liquidity conversions from token to fiat using a third party like Coinbase ([www.coinbase.com](http://www.coinbase.com)) or Gemini ([www.gemini.com](http://www.gemini.com)). The wallet will be simple and won't require riders to have any prior knowledge about cryptocurrencies to earn or redeem Kudos.

Riders will be able to redeem Kudos in the following ways:

- Redeeming on reservation for discount
- Redeeming for featured/sponsored route
- Redeeming for upgraded/special vehicle and/or experience

Every driver and operator will maintain a Kudos wallet and have the option to withdraw, hold, or use the token within the Skedaddle platform. In Skedaddle, Kudos will initially be used by drivers and operators to access rewards and benefits, and may be used to claim preference on routes over time.

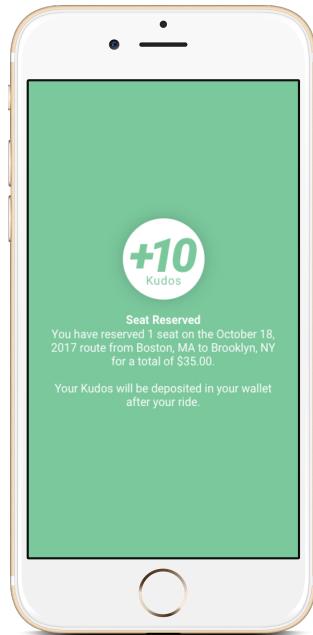
We have the important advantage of being able to test Kudos with our existing business. Naturally, we will start with our own driver base. Kudos smart contracts will be fully encapsulated and generalized; functions will not be specific to the Skedaddle platform and will apply broadly to all service industries. Kudos will be tested and improved in real environments so it will be production-ready before reaching other businesses and partners.

### Start Route — Public

To start a route, a rider selects a pick-up location, date/time, and drop-off location. Once the process is complete, a congratulatory message is displayed indicating that Kudos will be earned if the route goes live. This creates an incentive for the rider to share the route with friends directly and across social media.



## V. Use Cases in the Skedaddle Business

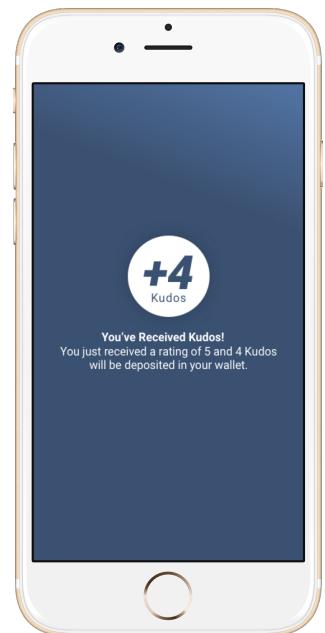


### Reserving Seats

After every successful ride, riders earn Kudos as a loyalty reward to encourage repeat use.

### Supply-side Rewards

The reward of supply-side actors is a fundamental principle behind the purpose and design of Kudos. In the business that is already in place and active in the Skedaddle platform, drivers and operators support the network by fulfilling each ride. Kudos will use this business as a testing ground for implementing a fair and equitable system that will replace the need for tipping and reduce the bias and discrimination inherent in centralized rating systems. It is important to note that the Kudos smart contracts will be fully encapsulated and generalized so that the functions will not be specific to the Skedaddle platform, but apply more broadly to all service industries. Using this approach, Kudos will be tested and improved in real environments so it will be production-ready before reaching other businesses and partners.



### Sharing Routes

Our riders often travel with their friends or with community groups (skiers, hikers, adventurers, sports and music fans, etc.). Word-of-mouth referrals have become a key driver of our growth. A rider will be rewarded with Kudos every time another rider reserves a seat using a dedicated referral code.



## VI. The Kudos Protocol & Ecosystem

### Introduction

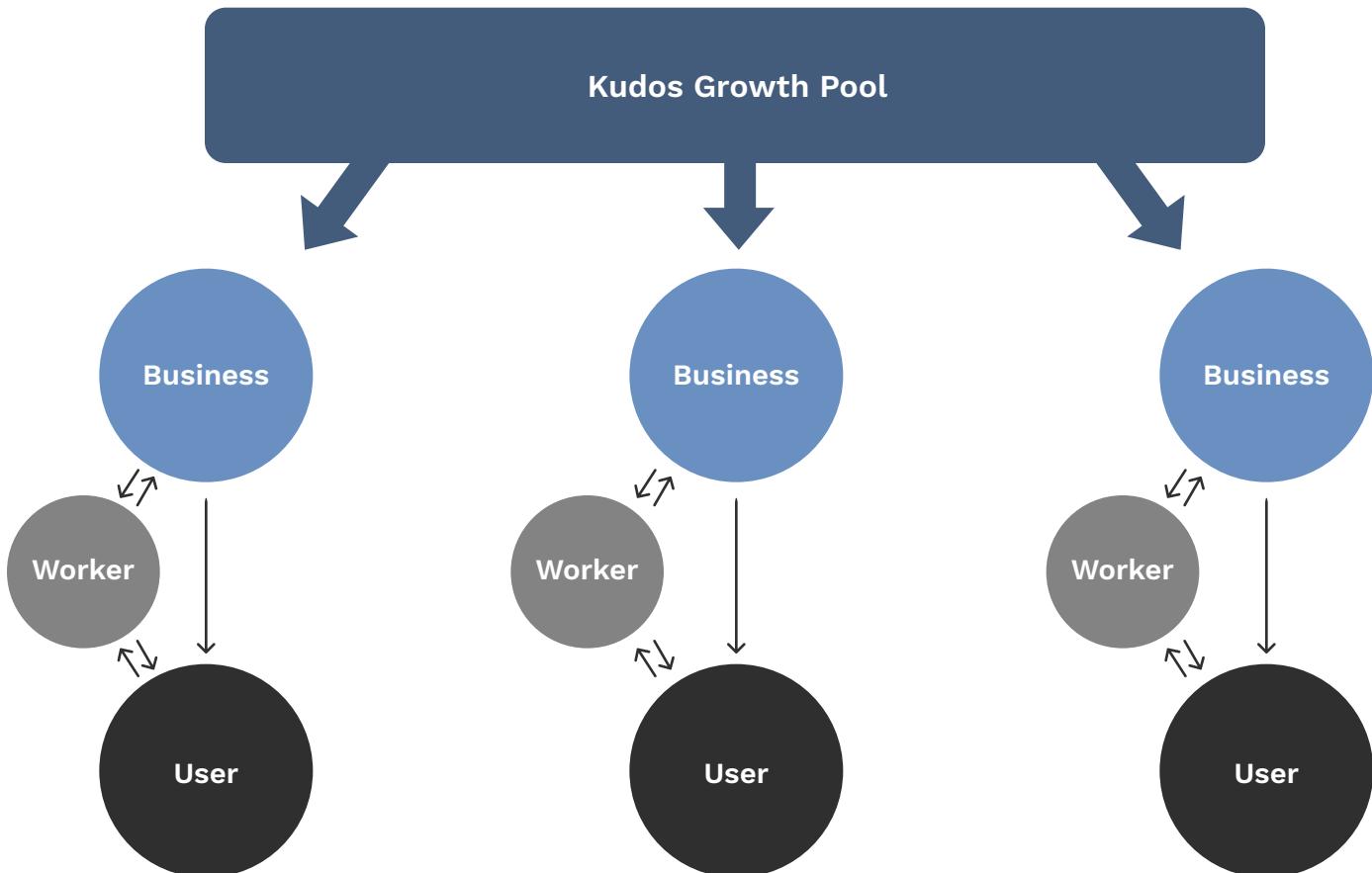
The Kudos protocol creates an environment of trust that is secured by blockchain infrastructure, so that data aggregated through transactions is not owned by anyone and cannot be manipulated or removed by a third party. The only transactions recorded and stored are those initiated by smart contract functions and verified with worker and user addresses through call and approval mechanisms. The decentralized and secure nature of transaction ratings created on Kudos will build trust in user feedback and user ratings.

The value of any online system comes from the value generated by the users within the platform. In traditional client-server architectures, platform owners subject users to unwanted advertising through the sale of personal data in order to monetize the business. With blockchain technology, we can create a community in which users are empowered to attain real value. The value created by the community will be reflected in the value of the token.



## VI. The Kudos Protocol & Ecosystem

### The Kudos Ecosystem



#### **Users can**

- Rate transactions with workers and provide feedback
- Earn rewards from businesses
- Earn Kudos from the Growth Pool for their participation

#### **Workers can**

- Earn Kudos proportional to their performance
- Earn performance-based rewards defined by the business
- Earn Kudos from the Growth Pool for their participation

#### **Businesses can**

- View worker metrics to identify highest and lowest performing workers
- Define performance-based rewards for workers
- Define rewards for users
- Earn Kudos from the Growth Pool for participation and performance



## VI. The Kudos Protocol & Ecosystem

### The Kudos Decentralized Platform

The Kudos ecosystem is powered by user interactions captured by the Kudos protocol. In other words, users are rewarded with real value for their participation on the platform. The Kudos decentralized platform consists of the following components:

- Kudos smart contracts
- Kudos Dapp
- Kudos Network API
- Kudos mobile app
- Kudos mobile libraries

### Kudos Smart Contracts

The Kudos smart contracts contain the blockchain logic for users, workers and businesses to read and store data on the blockchain. The contracts are the underlying foundation of the Kudos ecosystem. The contracts are written in Solidity and compiled into bytecode for execution in the Ethereum Virtual Machine (EVM).

The smart contract functions provide functionality for users, workers and businesses to interact with each other as well as define the parameters of the rewards system to accommodate the use cases of a particular business. For example, the contract functions make it possible for users to rate transactions, view progress towards loyalty reward goals and manage their tokens as a fully liquid currency on a decentralized network. The smart contract functions allow employees to track their progress towards earning performance-based rewards, view their performance rating and read user feedback. Businesses join the ecosystem through an initial contract call, after which they can add and remove employees, define performance-based rewards and create customer loyalty programs for their users that are programmatically executed by the contract in response to events triggered by user actions.

The interactions between user, worker and business accounts in the ecosystem are also stimulated by the Kudos Growth Pool to encourage participation in the network by providing additional rewards and incentives on top of existing reward structures for faster growth and adoption.



## VI. The Kudos Protocol & Ecosystem

### Kudos Dapp

The Kudos decentralized application, or Dapp, provides users with direct access to the blockchain through a web3-enabled front-end built on the Meteor web framework that can be accessed using the Mist browser with Ethereum's geth client running locally. The Kudos Dapp is able to call smart contract functions and adapts UI controls depending on the state of the user account. For example, accounts that have been associated to a business account as a worker (through mutual consent) will display information related to the performance-based rewards system that the business has created for the worker as well as show transaction ratings and feedback sorted in reverse-chronological order with statistics relevant to employee performance. It is possible for a Kudos account to simultaneously be a user, worker and business and the Dapp will dynamically reflect each account state. The Dapp interface will have the available tabs visible to allow navigation to each environment designed for relevant data displays and user actions geared towards its purpose.

### Kudos Network API

The Kudos network consists of load balanced connection routes using HAProxy to servers running Ethereum full nodes. The Ethereum platform is still in its early stages of development and the light client protocol which would allow a mobile device to connect directly through the blockchain in a trustless manner is still in the alpha stage and not suitable for a production environment. This reality necessitates the creation of the Kudos Network and API in order to allow users on mobile devices to immediately participate in the ecosystem. As the Ethereum platform is developed and light client support matures, the Kudos mobile apps and libraries will connect to the blockchain without any intermediaries.

The API will be a traditional REST architecture with JSON requests and responses served by the Netty framework to provide high performance through asynchronous thread handling. The API will be completely open-source and provide clear mapping to the smart contract functions so that trust will be secured by its transparent implementation. There will be no conditional logic in the server code besides error handling, it will simply relay each call to its respective smart contract function through the Ethereum client running on the Kudos Network until mobile Dapps become available.



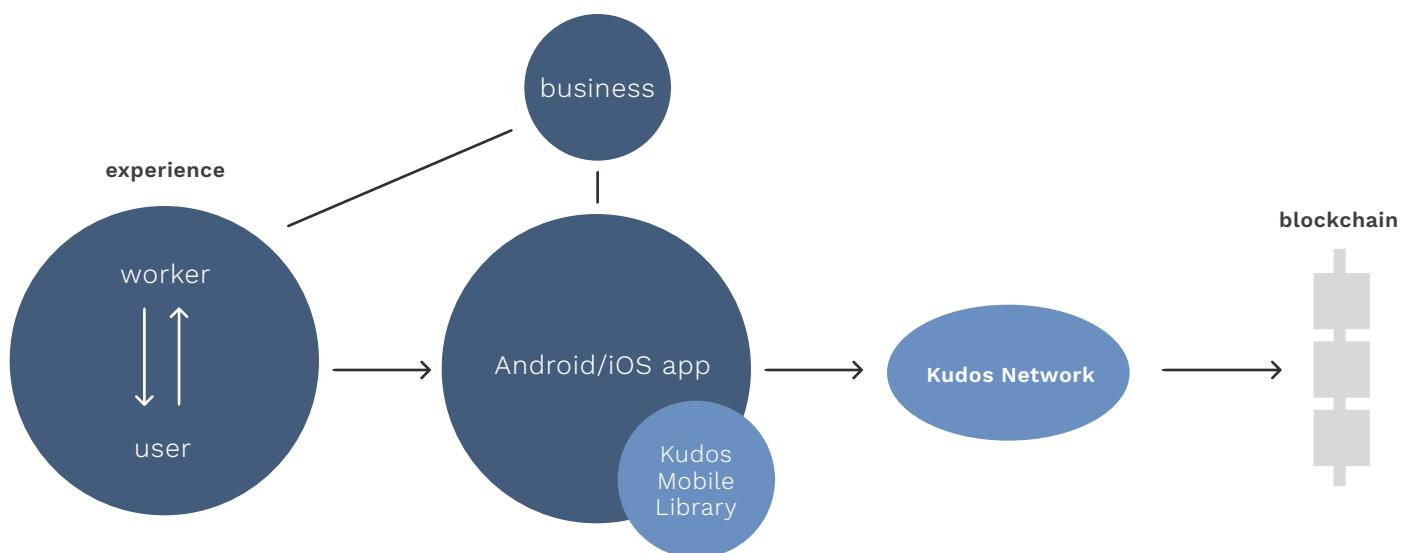
## VI. The Kudos Protocol & Ecosystem

### Kudos Mobile App

The Kudos mobile apps for Android and iOS natively connect to the Kudos Network through API calls to execute functions of the Kudos smart contracts in order to read and write data to the blockchain. The mobile app will provide all of the functionality of the Kudos Dapp in an interface optimized for mobile usage. As Ethereum light client support becomes available for mobile devices, the mobile apps will connect through the light client protocol to directly interact with the Kudos smart contracts.

### Kudos Mobile Libraries

The Kudos mobile libraries for Android and iOS will allow businesses to integrate the transaction rating and feedback experience into their own mobile applications. Mobile library integrations will be able to be easily added to Android Studio and XCode projects and embedded into existing layouts as a widget or passed to a self-contained user flow. The library will automatically handle all calls to the Kudos network and provide a consistent user experience with customizable color themes to match the host application.



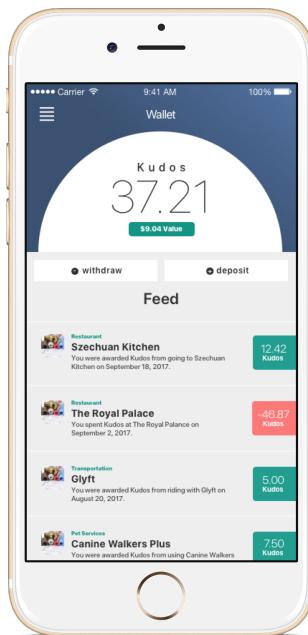
As the Ethereum platform matures over time, the Kudos Network will be replaced with light client interfaces to allow direct access to the blockchain. The Kudos mobile libraries will have the same consistent user experience but will no longer have to be routed to Ethereum full nodes through traditional API calls and instead will have immediate access to smart contract functions.



## VI. The Kudos Protocol & Ecosystem

### Kudos Application Features

The Kudos mobile apps for Android and iOS natively connect to the Kudos Network through API calls to execute functions of the Kudos smart contracts in order to read and write data to the blockchain. The mobile app will provide all functionality of the Kudos Dapp, but in an interface optimized for mobile usage. As the Ethereum light client support becomes available for mobile devices, the mobile apps will connect through the light client protocol to directly interact with the Kudos smart contracts.



### Wallet Functionality

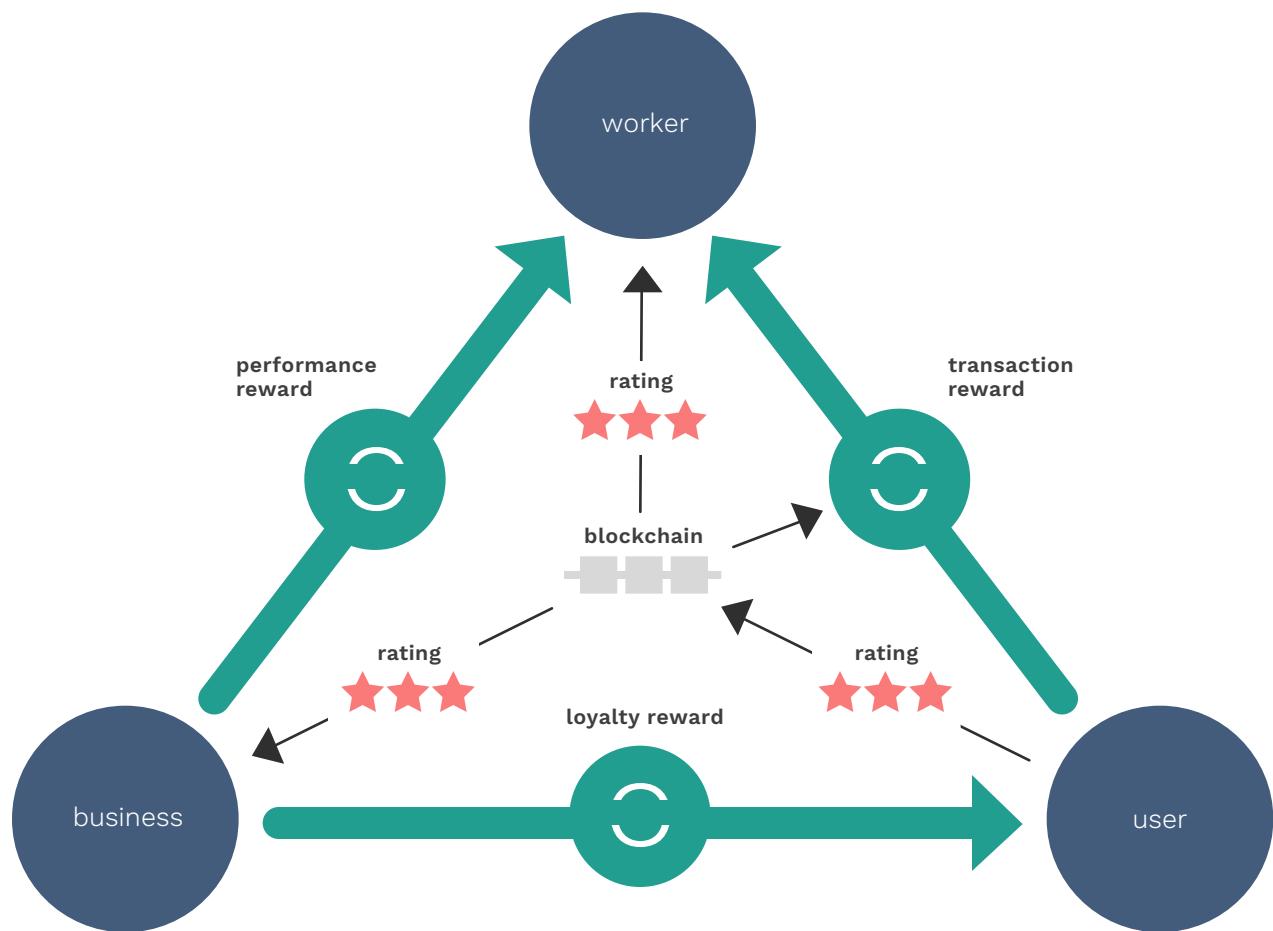
The Kudos protocol will allow users to view their balance of Kudos tokens as well as its equivalent value in USD or any other fiat currency selected by the user, with values dynamically updating based on current exchange rates made available through the use of APIs from public cryptocurrency exchanges.

It is important to note that while Kudos tokens distributed to the team will be held in lockup, Kudos tokens acquired via the crowdsale will have full and immediate liquidity and transferability. These tokens can be transferred to other accounts on the blockchain or converted back to fiat currency using a third-party API that provides exchange services such as Coinbase or Gemini.

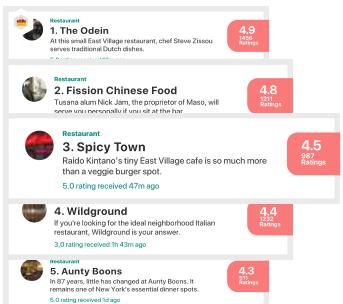


## VI. The Kudos Protocol & Ecosystem

Ratings and user feedback will be stored as data that can be verified using blockchain technology and viewed using Kudos software. Data collected during transactions will be open for inspection to all users and intuitively displayed through the Kudos Dapp. The transparent system will enable users to gain insights into business and worker performance and reputation, guiding them to maximize value within the Kudos ecosystem and obtain better experiences.



Global Ratings System



Transferable Reputation



Easy-to-use Wallet





## VI. The Kudos Protocol & Ecosystem

### Business Metrics

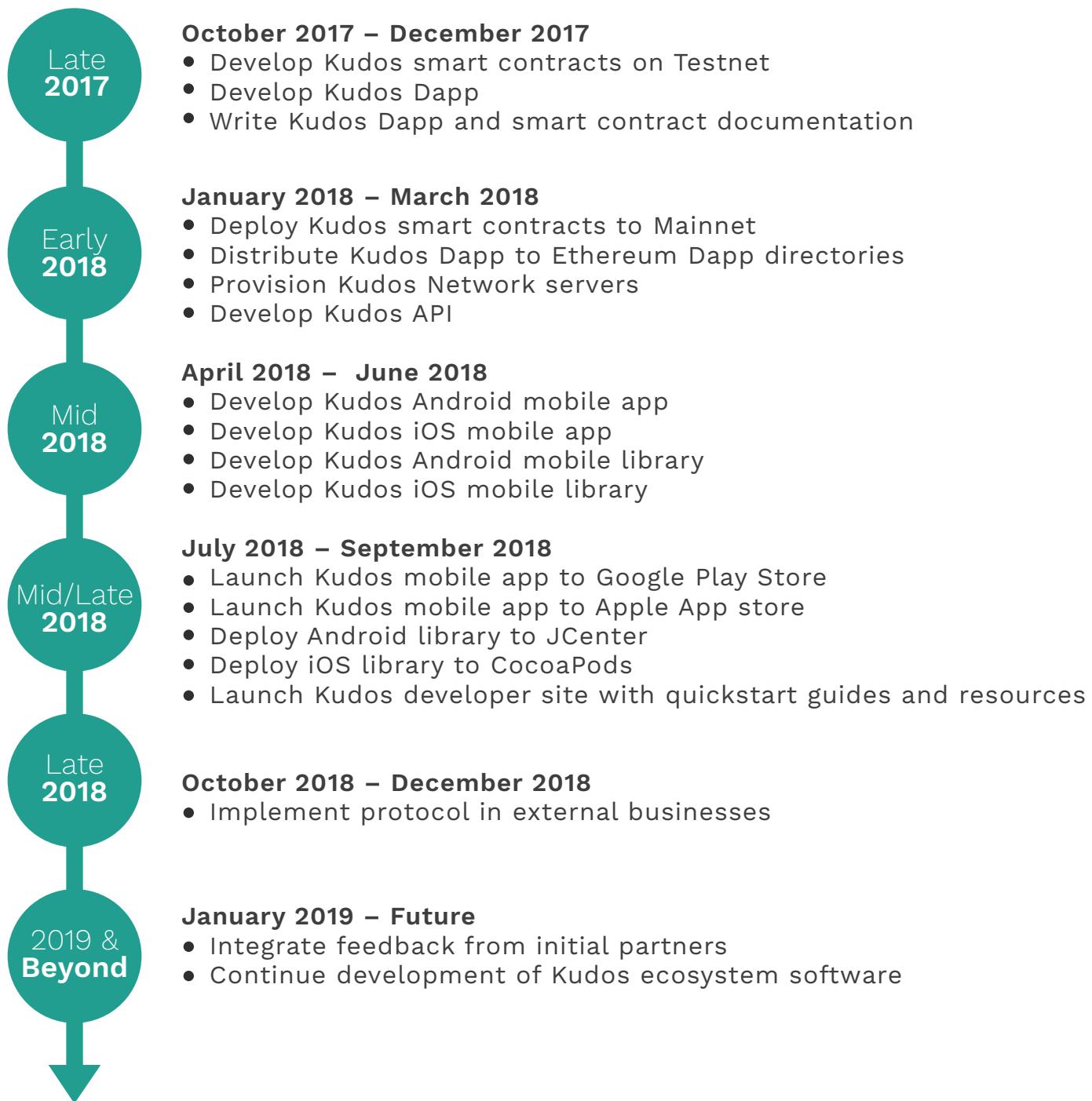
Kudos accounts that have registered a business within the Kudos ecosystem will have access to application pages with additional functionality. For example, smart contract functions that create or modify the parameters of user and worker rewards structures will only be accessible to Kudos accounts that have used the smart contract function to register their account as a business within the ecosystem.

The Kudos business accounts will also have access to additional views that display relevant business metrics that provide insight into their business to quantitatively measure worker performance and assess the efficacy of their user and worker rewards programs over time.



## VII. Development Roadmap

With Kudos, Skedaddle hopes to support a robust and equitable economy for years to come. We are committed to following the roadmap defined below and will establish the Kudos Foundation and bring Kudos to the Skedaddle platform by April 2018.



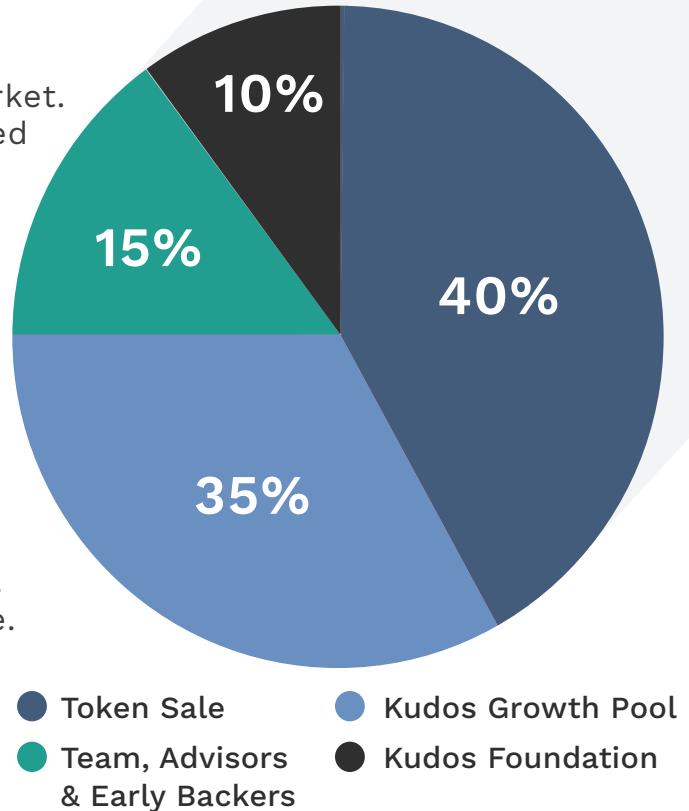


## VIII. Token Distribution

A token sale is necessary to bring Kudos to market. First, the proceeds of the token sale will be used to support the development, marketing, and operations of the protocol through its implementation within Skedaddle. Then, proceeds will be used to establish, maintain, and support the Kudos Foundation to grow the use of the protocol and token by other businesses globally.

The Kudos supply will total ten billion tokens. The tokens will be allocated as follows:

The Skedaddle Team and Kudos Foundation will be subject to a 12 month lock up upon issuance. At 12 months, 20% of the given tokens will be released. Every 6 months thereafter, 20% will be released for 2 years.



### Growing Kudos

The Kudos Foundation will oversee the reserve of uncirculated Kudos with the goal of promoting the adoption and growth of the Kudos ecosystem. The Foundation will have a team independent from Skedaddle and will work towards a decentralized autonomous organization over time. The Kudos ecosystem is designed to foster long-term growth and encourage new businesses to participate, and this is accomplished through the Growth Pool administered by the Foundation. Thirty five percent of the total supply of Kudos will be secured in the Kudos Growth Pool. We will use that pool of tokens to reward network participation.

For businesses, rewards will provide strong economic incentives for integration of the protocol and token. At the time of the sale, sale participants will hold a majority of the circulating supply, but as the supply is distributed over time, it will reach key stakeholders—businesses, users, and workers—which will, in turn, make the whole ecosystem more valuable.



## VIII. Token Distribution

### Token Sale

The Kudos token sale will take place on January 16th, 2018. Users will be able to use ETH to purchase Kudos tokens. Those buyers who hold BTC or other cryptocurrencies must first exchange them for ETH to participate in the crowdsale.

To be notified of updates regarding the token sale, participants should provide their email addresses at <https://www.kudosproject.com>. The pre-registration process may require proof of identity and residence to ensure regulatory compliance.

## IX. Conclusion

Since 2015, Skedaddle's mission has been to create a better way for people to get in and out of cities. While initially focused on transportation, the team will expand upon its expertise managing relationships with drivers and riders to implement the foundational protocol for creating fair and equitable businesses through a rewards-and performance-driven protocol and currency.

Kudos will create and enrich a new class of service workers with resources that they can then use to support a healthier service business economy. Consumers will enjoy a higher and equitable level of service all while earning meaningful rewards from their favorite businesses.

As more businesses join Kudos, a network effect will take place: new members joining the protocol will grow the value of the currency, which will attract new businesses to join. As the Kudos ratings system becomes more popular across service industries, it will become the standard protocol for rewards and ratings. Businesses that don't initially participate will be compelled to join the network to benefit from the mutually beneficial economic incentives. Consequently, Kudos will create the first ever global, verified, and transparent rating system, powering a new labor economy that is fairer, more open and more efficient.

Kudos will be foundational infrastructure to service-based businesses and marketplaces across the world and we will support its growth to become one of the largest global currencies.



## X. Team, Advisors & Investors

### Core Team



Adam Nestler  
**Co-founder & CEO**



Brad Werntz  
**Co-founder & CSO**



Lou Harwood  
**Co-founder & CTO**



Craig Nestler  
**Co-founder & CPO**



Ben Johnson  
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Hayden Broberg  
**Director of Operations**



## X. Team, Advisors &amp; Investors

## Advisors



Brian Brown  
**CBO, Brave**



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Jeremy Epstein  
**CEO, Never Stop  
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X. Team, Advisors & Investors

**Skedaddle Investors**



**CORIGIN**  
VENTURES

ABSTRACT  
VENTURES

**Aspect**  
VENTURES

  
**STRUCK CAPITAL**

**SWING**  
VENTURES



## XI. Appendix

A tipping and rewards system that is dependent on user-generated ratings carries some risks.

### Identity Service

Key to the success of Kudos across multiple platforms will be the ease of use of the user rating experience. A well-designed UX will depend on our success in establishing and communicating a consistent identity across services and also will depend on our ability to develop an easy-to-use wallet feature. The Kudos foundation will maintain a reliable identity service and make the necessary code and APIs open source. We may also use third-party vendors of identity services, such as Civic,<sup>18</sup> BlockStack<sup>19</sup>, uPort<sup>20</sup>, or Keybase<sup>21</sup>, as part of this solution.

### Fraudulent Ratings

It has been widely observed that influential review systems (such as Yelp, TripAdvisor, Amazon Reviews, etc.) inevitably come under attack by malicious actors.<sup>22</sup> Often this activity is fueled by grey-market websites that offer ratings manipulation as-a-service, either to fraudulently promote or demote a specific target (e.g. a new restaurant that wants to bootstrap their Yelp account with five star reviews).

Kudos may come under similar attacks. We plan to leverage existing work on review fraud detection to proactively identify and nullify suspicious ratings. Examples of anomaly detection techniques include flagging users who generate too many ratings too quickly; who uniformly give positive or negative ratings; or who rate workers in disparate geographic locations within short time spans.

### Adversarial Machine Learning

Systems that rely on high-dimensional models are potentially vulnerable to adversarial machine learning, in which a bad actor reverse-engineers the parameters of a system in order to develop evasions that facilitate bad behavior. In Kudos, this could manifest as abuse of the bias or fraud detection systems. Kudos will leverage a defense-in-depth strategy that includes monitoring and retrospective analysis to identify and halt anomalous user behavior that may be indicative of attempts to probe the parameters of the system.

18) [www.civic.com](http://www.civic.com)

19) [www.blockstack.org](http://www.blockstack.org)

20) [www.uport.me](http://www.uport.me)

21) [www.keybase.io](http://www.keybase.io)

22) Johnston, Katie. "Rave Reviews, Real or Not; Credibility at Stake, Websites Try to Thwart False Customer Ratings." The Boston Globe (Boston, MA), 25 Sept. 2013.