

# **balehu**

Powering Commerce

White Paper  
May 2018

## Vision

Shifting the spending behaviors of consumers back to their local communities would help create a world that [citizens want](#). In the United States alone, consumers spend \$47.5 trillion annually<sup>1</sup>. Yet for every \$3 generated in the economy, only \$1 is invested in infrastructure.<sup>2</sup> Imagine if the taxes paid on those consumer dollars were effectively put to work in their local communities! If towns and cities retained more of the money that consumers spend every year those dollars would mean: better infrastructure, more jobs, better-funded community programs, and more resources for education. Those dollars are not only good for communities, either: they also benefit Balehu. Our network thrives on transactions, and better local [infrastructure translates to more commerce](#)<sup>3</sup>. In 2017, we saw \$2.4 trillion leave the U.S. economy simply because of decades of falling investment infrastructure<sup>4</sup>.

We believe that small businesses are the key to shifting consumer spending back into their local communities. To achieve this, however, merchants must properly incentivize consumers in their communities. By adding utility to the currency, we can use shared interests to align consumers' purchasing behaviors with small businesses, empower the businesses that should not be failing, provide resources to the community programs that nourish our fellow citizens, and much more. By creating a protocol that aligns economic incentives for all stakeholders without demanding major changes to their current tools or behavior, we can impact the portion of the economy where the greatest benefits can be realized: your local community.

## Abstract

Over the last 20 years, big box and online retailers have reshaped the landscape of local commerce, creating unprecedented challenges for small businesses. Despite the abundance of services and technology solutions available to help them find new customers and streamline their operations, 50% of businesses fail in their first five years<sup>5</sup>. Nevertheless, small businesses remain the driving force behind our economy<sup>6</sup>, and the health of local communities worldwide depends on them. Small businesses need to cost-effectively attract new customers, drive repeat business, and manage their reputations in their communities. While tools that help address these challenges already exist, most merchants, consumers and skilled professionals are unwilling to invest in learning and adopting new systems, and lack the shared economic incentives to promote and nurture their hyper-local economies.

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## **Introduction**

Unlike any other platform or protocol before it, Balehu aligns the incentives of consumers and merchants in hyper-local markets to realize shared benefits. This requires no new behavior on the part of businesses or consumers, no new apps or systems. Rather, our protocol integrates with existing technology and unifies their interests to create a new engine for local commerce. Small businesses have access to the tools they need, but lack the time and often the skill set to leverage them for business growth. By aligning incentives between consumers and merchants we can create value for everyone in a local ecosystem.

Nearly half of all dollars consumers spend with local merchants remain within the local economy<sup>7</sup>. By contrast, \$99 out of every \$100 spent online in the U.S. leave the community<sup>8</sup>. It's no wonder, then, that the infrastructure intended to make small businesses thrive doesn't work<sup>9</sup>. For example, what good is a consumer loyalty rewards program when 55% of the nation's 27 million small businesses do not accept credit cards<sup>10</sup>? That amounts to more than \$100 billion in lost sales for small businesses<sup>11</sup>.

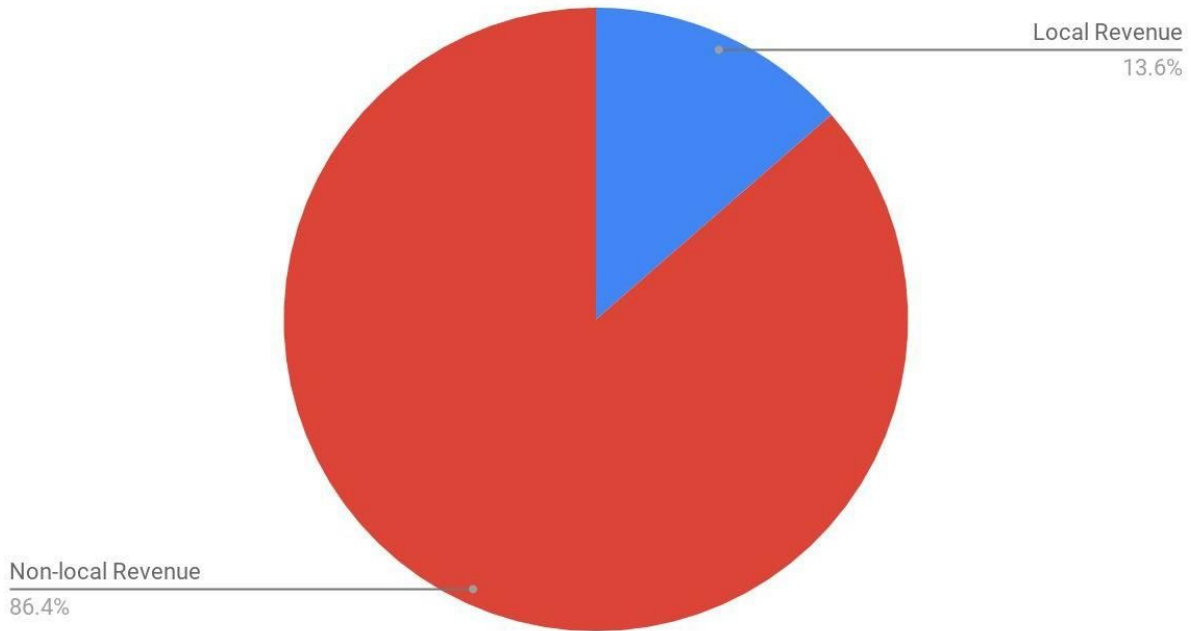
## **Balehu Foundation**

The Balehu Foundation is a Singapore based non profit organization established to oversee the honest and fruitful growth of the Balehu Ecosystem. The goal of the Balehu Foundation is to give back to the communities in which we serve, further incentivizing and promoting local growth. The Balehu Foundation will oversee the distribution of Balehu Coin and will provide support and tools for digital services to operate within the ecosystem.

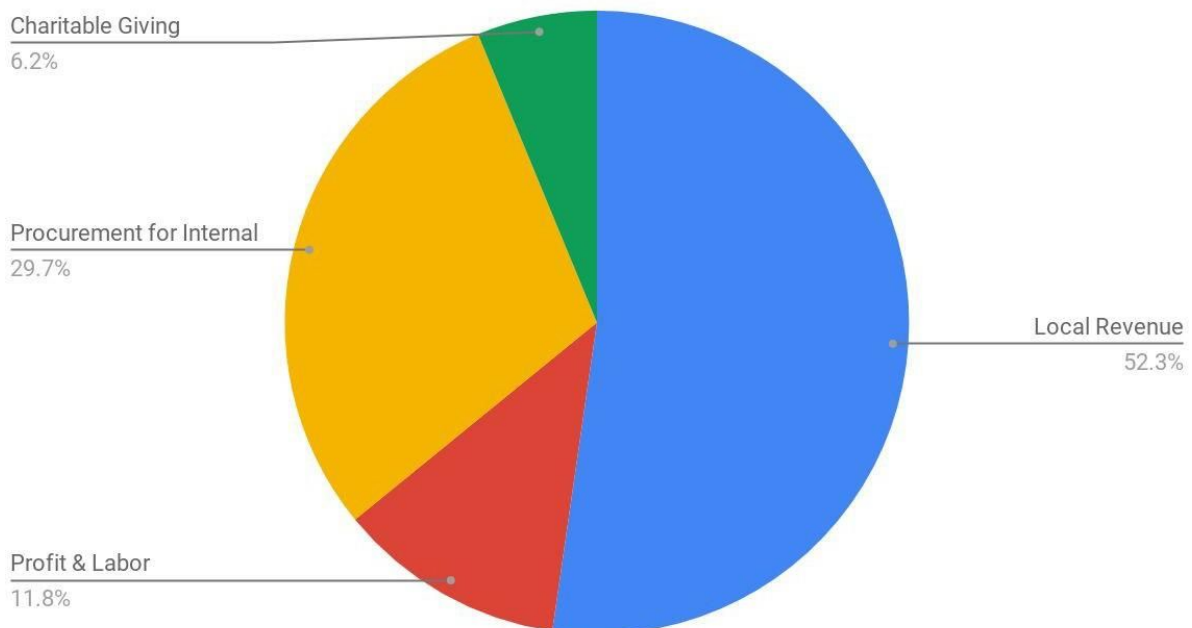
Ultimately, the Balehu Foundation will facilitate the entire ecosystem's transition to a fully decentralized and autonomous network. The foundation will help promote other Balehu digital services while demonstrating the power and promise of a decentralization strategy, while providing a path to transition from a competitive model to a cooperative one. The Balehu Foundation will onboard participating merchants along with developing and augmenting digital services with integrated transaction economies. The Foundation will oversee development of important fundamental components shared across the entire ecosystem, such as educational programs, strategic partnerships, and merchant grants.

Clearly, supporting independent local merchants has a huge impact on the local economy:

### Chain Retailers: Local Revenue Recirculation: 13.6%



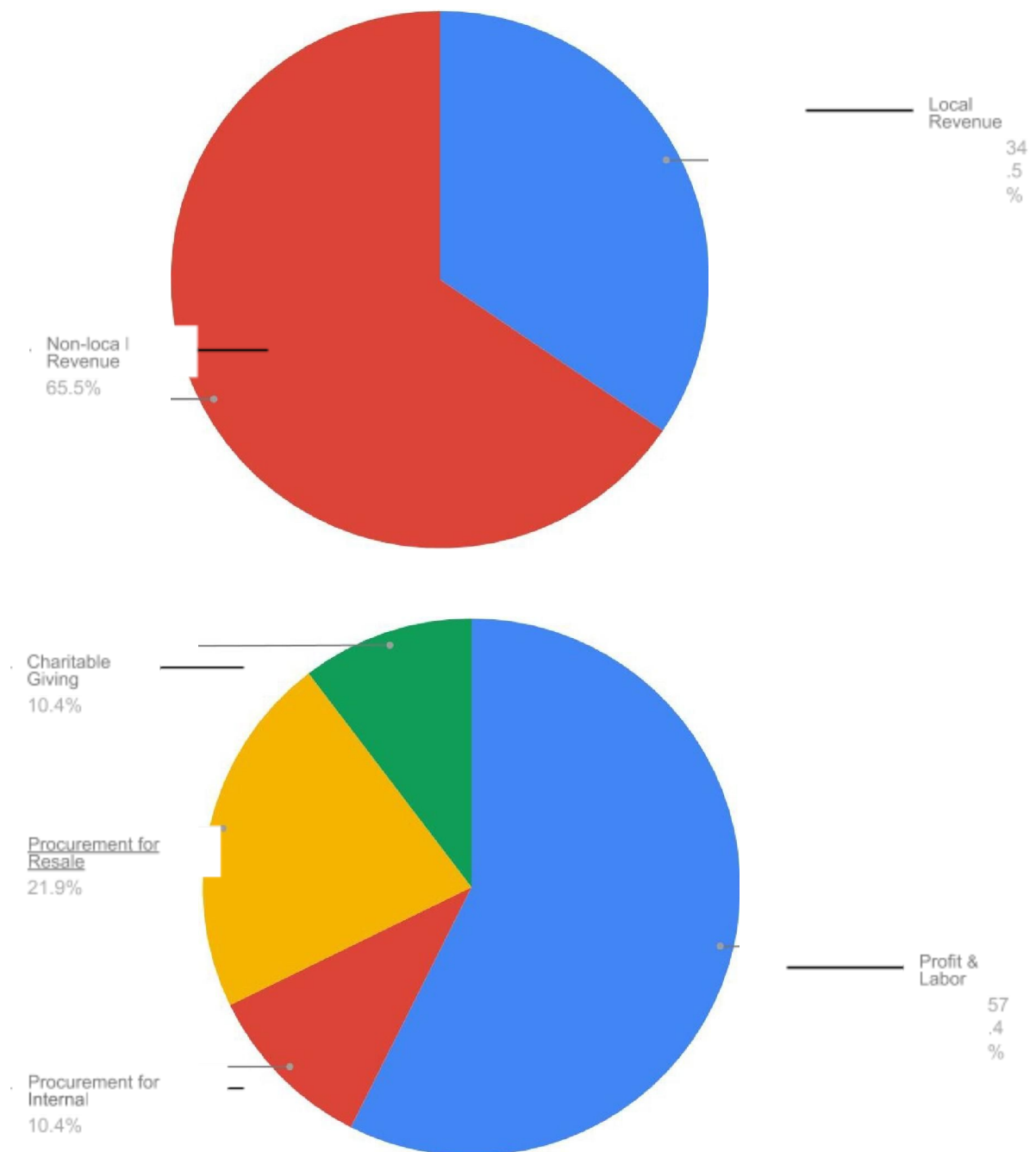
### Independents: Local Revenue Recirculation: 48%



## Local Benefit of Independent versus Chain Restaurants<sup>14</sup>

<sup>14</sup> Compiled results from nine studies by Civic Economics 2012 & American Independent Business Alliance

### Chain Restaurants: Local Revenue Recirculation: 34.5%



### Independents: Local Revenue Recirculation: 64.5%

# Balehu Protocol

The Balehu Protocol enables frictionless commerce at a hyper-local level. Most protocols rely primarily on decentralization to provide benefits like transparency and availability to their networks, but they miss opportunities for shared transactions based on location. The ultimate goal is to create new scalable infrastructure, using mobile devices as the hardware wallet and method of transaction validation within a local geographic region of token holders. While we design and build the necessary infrastructure for our protocol we will initially launch using existing infrastructure, including an ERC20 token on the Ethereum blockchain.

The following components of the protocol play a role in leveraging proof of stake consensus, on our protocol once available:

1. Location based validation
2. Reputation as a proxy for stake

The transactions themselves will be validated on mobile devices by a member in your local community. Where edge cases appear (for example, the set size of a given geographical location is not large enough to meet the transaction volume), the set of validators will be modified to include the nearest region with the capacity to validate the transaction. In our ecosystem, we incentivize members to invite and activate new members from their friends, family and community. Aligning incentives among actors in the network requires trust. To that end, all actors can build a reputation in our network. Reputation will be driven by transaction history and reviews that live in the blockchain. Reputation can be grown over time for any actor in the network.

## **Consumers**

The consumer is the party in a transaction that is trading currency for goods and services - representing the demand side of the market.

## **Merchants**

Merchants are small businesses providing goods and services to consumers, whether digital or traditional, retail or otherwise. Merchants represent the supply side of the market.

## **Validators**

Validators are trusted third parties responsible for validating new transactions and creating the block in the blockchain. Anyone participating in the Balehu community can act as a validator. Having a higher reputation score along with holding more BAL tokens will increase the likelihood of being selected as the next validator.

## **Witnesses**

Witnesses are trusted third parties responsible for auditing the work of the validator. Validators and witnesses are chosen from the same geographic region of the Balehu community in a deterministic way.

## **Use Cases**

### ***Currency for Daily Use***

Token holders may redeem tokens for goods and services at participating Balehu merchants. Balehu will be onboarding all verified merchants to make for a quick and easy expansion of the network functionality. Additionally, token holders will be able to trade BAL externally on cryptocurrency exchanges.

### ***Reduced Transaction Fees***

With the flexibility to pay for a purchase in part or whole with Balehu tokens, merchants enjoy a reduction in credit card processing fees. Merchants are encouraged to recommend the use of Balehu tokens as the exclusive method of payment.

### ***Transition from Cash-only***

Nearly 55% of the 27 million small business owners in the U.S. do not accept credit cards as a form of payment<sup>18</sup>. For merchants that do not accept digital currencies as a form of payment, Balehu provides a significant growth opportunity.

### ***Marketing***

Consumers in the Balehu network can be surveyed to provide information merchants can use in targeting and personalization for activities like advertising campaigns. Consumer reviews, demographic information, purchase history, etc. can be purchased directly by the merchant, rather than a third party. Consumers are more likely to trust local brands with personal information that improves their experiences.

### ***Consumer Rewards***

Balehu is uniquely positioned to provide the purchase experiences millennials expect. Research conducted over a three-year period shows that 80% of millennials participate in loyalty reward programs. Among millennials, 45% will utilize coupons and loyalty points when available, which represents a meaningful growth opportunity for Balehu merchants. Furthermore, nearly 52% of millennials prefer to use their mobile devices to take advantage of loyalty rewards applications<sup>22</sup>. Millennials represent the largest generation in U.S. history at 92 million, and they are in their peak purchasing years. The total estimated spend by U.S. merchants on customer loyalty rewards as of 2015 stands at \$16.1 billion<sup>23</sup>, but those programs have failed to deliver for small businesses. In fact, the average



consumer today joins up to 30 loyalty programs on average, yet 76% of them do not use their incentives<sup>24</sup>.

### ***Impulse Spending***

Seeing as people will want to spend the free tokens they've earned, Balehu tokens effectively encourage impulse purchases, which account for 30-70% of sales<sup>19</sup>. With 2017 consumer spending in the U.S. at over \$47.5 trillion, and using the conservative figure of 30%, approximately \$14.2 trillion was spent on impulse purchases in 2017<sup>20</sup>. 90% of consumers will purchase an item they did not initially plan to purchase. In the case of Balehu merchants, a customer who has Balehu tokens has a 40-70% chance of using their available tokens to make a purchase<sup>21</sup>.

### ***Crowdfunding***

Smart contracts may be used to raise funds from "a crowd" of consumers. Unlike traditional financing, the terms of the fundraising can be based on templates that are provided via the Marketplace app, without an intermediary. Each participating token holder would be charged a transaction fee to contribute to fundraising, and the recipient of the proceeds would be charged a transaction fee based on the terms of the smart contract.

Example fundraising scenarios include:

- Small business loans
- Charities and nonprofits
- Community projects

## **Why Blockchain?**

We know that small businesses are the foundation of our economies; yet up until this point, we have had no means to support them because there has been no way to align economic incentives between small businesses and local consumers. As a result, there has been no consumer loyalty program, new marketing process or technology, or social awareness campaign that could create the change we feel is necessary.

Blockchain technology allows us to create a network with incentives that require no change in an actor's behavior. Instead, a blockchain and token will shift current actor behavior into outcomes that are sustainable. Early adopters will receive higher reputation scores (lower transaction fees) and will be rewarded with tokens to participate in our network.

Blockchain technology has allowed for the creation of native tokens. The creation of a single token for local commerce (BAL) will enable us to economically incentivize actors toward actions that sustain and grow the network. By creating incentives that support small businesses (merchants), we can positively impact our communities in numerous ways, all of which grow the network and add value for its members.

# Protocol Functionality

## Mobile Devices

Now is the time to leverage the accessibility and capability of mobile devices as the foundation for a shift in commerce. Today, most smartphones are equipped with personalized security, cryptographic technologies,<sup>2526</sup> and enough processing power to rival laptop computers. Balehu will be available on smartphones and will take advantage of features like Face ID and thumbprints (available on Apple's iOS) to help secure a network member's wallet.

## Wallet

The wallet will initially focus on two currencies: Balehu Coin and the local fiat currency. All Balehu token holders will have a unique wallet that is created during onboarding. Only the token holder has access to their wallet, which is stored on the users mobile device. Network users will login with a password and/or perform identification verification through our partner Civic, a leading blockchain based secure identity ecosystem in order to access their wallet. All personal user data, including passwords, emails, and wallet IDs, is encrypted. This protects token holders from security issues.

## Reputation

The more active a network member is in the network, the higher their reputation score will become. The higher a network members reputation score is the more likely they are to be chosen as a validator.

## Voting

The role of voting in the protocol is used to prioritize functionality improvements to the platform. The weight of a token holder's votes is determined by a network members reputation score as well as number of tokens held in a wallet.

## Privacy

Balehu respects privacy, and does not sell any information to third parties (including advertising companies). In an effort to protect user accounts, Balehu strongly encourages the use of two-factor authentication for account access. Along with the hardware that our target consumers already have in their wallets will be methods of backup, e.g. offline codes that can be documented on paper. A Balehu token holder may wish to keep their tokens in their Balehu Wallet, or store them off-chain and manage their public and private keys.

Network members may choose to share information in their profile in order to improve the experience and the protocol. Balehu cannot sell any information to third parties because there is no individually identifiable information

# Decentralized Applications

Balehu has been helping small businesses in multiple US markets since 2015. Hundreds of small businesses have trusted Balehu as a way to reach and engage with local customers. The following decentralized apps utilizes blockchain technology to create powerful local ecosystems

## **Balehu Growth**

Balehu Growth is an existing digital marketing solution currently being used in multiple US markets. It allows merchants to market to consumers and analyze their business growth.

The Growth app focuses on several aspects of revenue generation for small businesses:

### **Marketing**

- Brand Awareness
- Customer Acquisition
- Consumer Education
- Customer Loyalty (Repeat Purchases)
- Social Media
- Word of Mouth Referral

Key Features:

### ***Campaigns***

Campaigns are targeted marketing activities that can be manually or automatically performed on behalf of a merchant to drive growth. Campaigns can be performed on the web using email, SMS, push notifications, social media, and display advertising.

Merchants can use Templates to determine which outcome they desire from a campaign. Campaign targeting can be performed with numerous consumer behavior criteria including, but not limited to:

- Location (current, past, predicted, proximity to a point of interest)
- Reputation
- Purchase History
- Preferences
- Demographics

Using campaigns, merchants can incentivize consumers to transact using a variety of tactics. For example:

- Sending tokens (similar to gift cards) to prospective consumers, which can only be collected at point of sale or with other restrictions (e.g. reputation score);
- Offering discounts for a limited time;
- Personalizing pricing for consumers based on specific criteria like purchase history;
- Using web advertising to drive brand awareness within a specific demographic or other target criteria;
- Geo-fencing offers to create scarcity;
- Limiting the number of token holders that can claim an offer;
- Referring a token holder's social graph network;
- Dynamically lowering pricing when groups of consumers purchase within a given time window;
- Surveying token holders for (anonymized) demographic information (used to improve relevance offers).

### ***Insights***

Business reporting and analysis are exactly what merchants need to understand the drivers of growth. Balehu will work with merchants interested in converting insights into action. The reports available will vary by industry, and include marketing, sales, supply chain, and employee performance.

### ***Reporting***

Merchants will be able to utilize our marketing campaigns to review, analyze, and export a sales history to generate insights about consumer purchase behavior for their business.

Example:

Anna, a merchant, has been experimenting with some Growth campaigns for her restaurant. The advertising report helps her understand (anonymously) where her customers live and what their demographics are. Based on this information, the report suggests tactics for incentivizing customers to return, surveying past customers for more personal information to improve her offers, and attracting new customers.

## **Balehu Marketplace**

The Balehu marketplace app is an existing mobile app that allows consumers to discover, transact and support local merchants. Consumers will enjoy personalized incentives and experiences from local merchants.

### ***Discover***

- Consumers can use a map and current location, or perform a criteria-based search to identify new merchants, special offers, etc.
- Consumers can follow friends and businesses to further personalize their experience. Based on behavior and any data a consumer is willing to share, the app will make recommendations about offers and experiences they may enjoy.
- To further personalize a member's experience and grow economic incentives, the Marketplace will suggest fellow consumers you may know who are not yet activated.

Example:

Marie, a consumer, makes several purchases in her neighborhood. The following week, Marketplace sends a push notification suggesting various relevant experiences another consumer, Karen, has enjoyed.

Marketplace then personalizes an offer for Marie. After Marie purchases the recommended offer, her social graph is notified about her review of the experience.

### ***Account Management***

Consumers can manage which personal data from their profile is shared with merchants during point of sale or in order to take advantage of promotional offers.

Example(s):

A merchant may incentivize past customers to share their purchase history in order for the merchant to make special offers to drive repeat business.

A merchant may incentivize consumers to share their reviews, so that merchants can better understand personal preferences and tailor offers for the consumers.

### ***Promotions***

Consumers can discover special offers using the promotions feature. Merchants may take advantage of email, push notifications, or text messages in order to reach a consumer on their preferred medium. Various programs and offers are available for merchants to choose from using the Growth app.

Example:

A merchant may choose to implement a referral program. Consumers can share an offer

with their social graph and earn a transaction (referral) fee when their friends purchase.

### ***Group Shopping***

The combination of delivery from local merchants and the ability to order using a group of friends is a novel experience not otherwise available to consumers.

Example:

Joe's Grill, a merchant, can offer a special discount to token holders within a square kilometer of their restaurant if and only if more than twenty consumers claim the offer and patronize the restaurant by a certain time of day. This group purchase would fill the Joe's restaurant, with each token holder placing their respective order and receiving the promised discount.

### ***Customer Service***

Merchants can engage customer questions and, optionally, enable an artificial intelligence-powered customer service bot to provide recommendation and transaction support if the merchant has the relevant integrations. Consumers can interact with bots using Facebook Messenger, SMS, and other apps they already use.

Example:

Late one night, Ryan, a consumer, wants to know whether his local convenience store has cereal in stock. He opens Marketplace, selects the nearest convenience store, and is able to initiate an

on-demand chat with a customer service bot, which has access to inventory. He then purchases the cereal in advance. Later, bot confirms that the cereal is in stock, and when Ryan is walking by the store, a push notification reminds him to pick up his order.

### ***Cart Abandonment***

For supported merchant services platforms, Growth can create personalized offers for items that were browsed, but not purchased.

Example:

A consumer visits a merchant website or their Marketplace store. Items that were saved for later or added to cart can become the subject of a personalized promotion. In the near future, the consumer receives a personalized offer in the Marketplace app which drives the consumer to transact at point of sale or have the item delivered to their home.

### ***Offline-to-Online Buying***

To grow cash flow and offer convenience to consumers, merchants can offer to ship previously purchased items to consumers.

Example:

Similar to subscriptions, a consumer can take one step short of this commitment and simply add convenience to shopping for items they already enjoy. Using Marketplace, past purchases spanning multiple merchants are available for purchase and scheduled delivery.

### ***Subscriptions***

To generate predictable cash flow and convenience for the consumer, merchants can offer to subscribe consumers to goods and services (powered by smart contracts). Consumers can manage their subscriptions in the marketplace app. Consumers may choose to collect their goods or have the merchant ship them.

Example:

In a single transaction, the consumer can pay both the farmer and the delivery person, or the farmer can hire the delivery person and directly offer a subscription to consumers.

### ***Upsell / Cross-sell***

Special offers can be made in real-time or in the future to consumers based on recent purchase history. Merchants can create bundles that enable personalized recommendations of related goods and services consumers should buy based on past purchases.

Example:

Andy, a consumer, buys toothpaste every three weeks for a nearby convenience store powered by Balehu. After six months, Marketplace suggests 20% off of a selection of toothbrushes and an alternative organic toothpaste that is slightly more expensive than the brand Andy normally buys.

## **Balehu Exchange**

A decentralized exchange is necessary to create liquidity for the BAL token. With the exchange, network members may trade fiat for tokens and vice versa, at point of sale or otherwise. Usage of the exchange requires token holders to comply with local tax laws. Relevant documentation will be provided on demand. The Balehu Exchange will only feature BAL trading pairs. (BAL/USD, BAL/BTC, BAL,ETH).

# Balehu Coin

BAL is a new cryptographic token initially being developed on the Ethereum blockchain following the ERC20 token standard.

We focus our accountability on the number of merchants who have joined the network, slowly inflating the currency as more merchants benefit from functionality of the protocol. Given our thesis, the number of activated merchants metric is the best index for network growth. We are comfortable with this assumption because merchants that add value will remain in business over time (generating transactions all the while). Furthermore, the use of a single token for the entire network, rather than dynamically creating tokens on a per-merchant or per-initiative basis, simplifies the interaction model for all use cases.

## Utility Use Cases:

- Consumers purchase tokens with fiat currency
- Marketing campaigns
- Validating transactions
- Crowdfunding
- Gifting
- Inviting members of one's social graph to the network
- Third party applications

## Token Distribution

### Balehu ICO

- Total Supply: 10,000,000,000 BAL
- Available for Sale: 4,000,000,000 BAL
- Exchange Rate: 1 BAL = \$0.01
- Accepted Currencies: Ethereum, Bitcoin, or fiat currencies
- Token information at <https://balehu.io>

### ***Total Distribution:***

**Private Sale:** 1,750,000,000 (17.5%)

**Pre-Sale:** 1,500,000,000 (15%)

**Public Sale:** 750,000,000 (7.5%)

**Team /Advisor-** 2,000,000,000 (20%)

**Balehu Foundation:** 1,500,000,000 (15%)

**Balehu Growth Escrow-** 2,500,000,000 (25%)



### ***Balehu Team/Advisor Token Distribution (20%)***

Balehu team members and advisors are subject to a long-term vesting schedule. In exchange, these tokens will provide startup resources, technology, and a covenant to integrate with the Balehu cryptocurrency and brand.

### ***Balehu Foundation (15%)***

Balehu Foundation is responsible for the expansion of the Balehu ecosystem. The foundation will use these tokens to establish grants, meaningful partnerships, and facilitate educational programs.

### ***Balehu Growth Escrow (25%)***

The Balehu Growth Escrow will be used to incentivize community members over the course of the entirety of the project. This reserve will be used to facilitate future bounty programs and to stimulate market growth throughout the development of the projects. Within the Balehu application, these tokens will be used as the primary liquidity pool for USD to BAL purchases.

## **Fund Allocation**

The funds collected during the token sale will be allocated as follows:

Operations: 73%

Sales and Marketing: 12%

Overhead Expenses: 10%

Early Partners: 5%

***Operations*** - Funding will be used to hire full-time engineers, sales teams, legal representatives, and community advocates in markets where Balehu is actively marketed and used. In addition, the Balehu Inc. executive team will be compensated with these funds.

***Sales and Marketing*** - The sales and marketing budget is used to bring awareness to Balehu brand of products. This includes social media marketing, email marketing, video and animated production, digital advertising, print advertising, and ongoing design. Balehu will sponsor local events and work closely with participating communities.

***Overhead Expenses*** - The funds allocated for operational expense will cover any physical technology needs, such as computers and hardware as well as rent, utilities, travel and office supplies and insurance.

***Early Partners*** - Capital used to fulfill early contracts created before raising any fiat funds from outside investors.

# Go to Market Strategy

## ***Small Business Partners***

We are actively building strategic partners to help expedite the onboard process for small businesses. By partnering with other businesses and organizations that are already communicating with our customers we can scale our business at a rapid rate. Current partners include access to the food and beverage and jewelry industries. If you are interested in finding out about the benefits of being a small business partner please reach out directly to [mike@balehu.com](mailto:mike@balehu.com)

## ***Balehu Onboarding***

By targeting specific industries in key markets, we can begin to grow the value of the network in a manner consistent with Metcalfe's law<sup>27</sup>. Initially, we will be focusing on food and beverage and retail market segments. Our freemium software model drives small businesses to the network without requiring out of pocket payment. We will be incentivizing early adoption through token bonuses, airdrops, and promoting participating merchants.

## ***Technology Partners Small***

Integrating with the tools currently in place in order to drive growth functions means that we do not need to recreate adopted solutions; instead, we intend to leverage data provided by those solutions to make action possible. Our approach to penetrating the market doesn't require merchants to change their operational software stack

### Existing Partnerships:

- Security - Civic
- Data Analytics - Kochava
- Social Media - Facebook & Twitter API Integration

### Ongoing Partnerships:

- CRM
- Online Advertising
- Point of Sales
- Gig Economy
- Classifieds
- Entertainment
- Inventory
- Taxes
- Accounting
- Debit Card

We have a number of partnerships we are working on and will you keep updating as we add more. If you feel that your company is able to help meet our needs in any of these areas, please reach out directly to [mike@balehu.com](mailto:mike@balehu.com)

### ***Community Driven***

The protocol, the business model, and the economic incentives of the token create viral effects that drive acquisition of all actors. Through this cycle, consumers have their needs met, and insights from consumer behavior enables the protocol to sustain those effects. Over time, consumers will realize a tangible benefit from transacting in their local communities, causing a social network effect. Our ambition is that, with the various community-oriented use cases, we can see consumers compete for the magnitude of impact they have on their community.

The protocol and its token provide numerous incentives in the network:

- Merchants desire inexpensive tools that do not require them to replace existing software stack and involve no switching costs.
- Consumers desire to activate their social graph because they are economically incentivized.

Viral aspects of the network include the following scenarios:

- Consumers may activate merchants
- Consumers may activate new consumers
- Merchants may activate consumers
- Merchants may activate new merchants
- Service providers may activate merchants
- Developers may activate consumers
- Developers may activate merchants

### ***Target Demographics***

Balehu targets local merchants, consumers, and communities.

- Merchants: The 29.6 million small businesses in U.S.
- Consumers: Those actively using a smartphone. Ideally post-college graduates, ages 21-40, who have an income of over \$55,000, primarily within professional, dense, urban settings.
- Communities: Towns and cities worldwide with a population greater than 20,000.

# Our Roadmap

## Past:

2015:

- March - Balehu founded with the mission of empowering local merchants.
- June - Launch of Balehu.com

2016:

- June - Launch v1.0 of Balehu iOS app (Balehu Marketplace)
- July - Started working with small businesses (food trucks, coffee shops, retail stores)

2017:

- June - Built digital marketing management solution for small businesses (Balehu Growth)
- September - First iteration of Balehu white paper

2018:

- January - Second iteration of Balehu white paper
  - Includes Protocol revamp (native chain ideology)
- February - Creation of blockchain solution wireframes.
  - Release of balehu.io
- March - Asia roadshow
  - Visited Hong Kong, Bangkok, Ho Chi Minh City, Singapore, Beijing, Seoul, and Tokyo
- April - Development of Decentralized Applications

## Future:

2018:

- May - Protocol design and technical implementation
- June - Balehu release (MVP) on Ethereum Testnet
  - Balehu Growth and Marketplace
- August - Balehu application released on Ethereum Mainnet
  - Balehu Coin (\$BAL) deployed
  - \$BAL airdrop program
  - iOS and Android release
  - Pre-ICO Start
- September - Onboard first 250 small businesses
  - Public Sale Start
- October - Public Sale End
  - \$BAL token distribution
  - Exchange listings
- December - New features integrated into Balehu application
  - 1000 merchants onboarded

2019:

- March - Balehu Protocol deployed on testnet
- April - 2500 merchants onboarded
- May - Balehu Protocol deployed on mainnet
  - Unique Balehu Wallet deployed (iOS and Android)

- Mobile device/Geographical validation
  - Full fledged reputation/voting
  - \$BAL mainnet migration
- July - Balehu Exchange
- 5000 merchants onboarded
- August - Balehu Debit Card Creation
- September - Balehu Debit Card Distribution
- 7500 merchants onboarded
- December - Facilitate traditional strategic partnerships
- 10000 merchants onboarded

## Revenue Model

Balehu generates revenue via network usage fees for services within our network:

- **Marketing Campaigns**

Merchants are charged transaction fees (% of spend) for impressions, or clicks, or e-commerce conversions in advertising promotions. A high level of utility exists in effective digital marketing activities; however, rather than simply following the industry standard and charge some percentage of what the ads may cost (outside of our network) in addition to a subscription fee for our technology, we will offer tiered fees for merchants for in-network advertising, as well as tiered fees above the out-of-network fees. Our costs will appear in campaign reports.

- **Payment Processing**

Traditional credit card transaction fees can be up to 3.75%<sup>31</sup>. Whether e-commerce or point of sale, the Balehu transaction fee will be as low as 0.5%.

- **API calls**

Third party developers may create innovations using the protocol and take advantage of APIs, oracles, and other services. Use of these resources carries tiered transaction fees.

- **App Usage**

Use of merchant-focused functionality in Balehu apps will carry usage-based fees that can either be purchased in bulk as a single transaction, or charged on demand.

- **Brokerage Fees**

The exchange will process trades in and out of network, bank transfers and other operations related to token custody. Each of these transactions will carry a nominal fee.

The transaction model includes the following scenarios:

- Consumers may be incentivized by Balehu via transaction fees (savings) for activating merchants
- Consumers may be incentivized by Balehu via transaction fees (savings) for activating their local network
- Merchants may reduce transaction fees by incentivizing consumers to use their social graphs to validate transactions
- Consumers (peers) sharing a social graph are incentivized to validate each other's transactions
- Merchants are incentivized to validate orphaned transactions when a consumer's social graph fails the transaction

## Our Team

### **Mike Berson, Founder, and CEO**

Mike is an experienced entrepreneur who is passionate about helping local businesses thrive. From a young age, Mike worked for his family business, founded in 1925, where he learned firsthand the ins and outs of what it takes to operate a successful business. His passion for helping local businesses succeed has allowed him to understand the barriers local businesses face and how to leverage simple technology to effectively connect with the local community. Before founding Balehu, Mike has started and launched several businesses of his own in the fields of adventure sports, travel and tourism.

Mike graduated from Pace University - Lubin School of Business with a BBA, Bachelor of Business Administration. He has further followed his higher studies at University of Wollongong and University of Massachusetts.

### **Doug Walton, Chief Information Officer**

Doug is the former executive vice president of Healthgrades and WebMD. He improves business results through organizational design, innovative agile, asymmetrical management, and product focus with exceptional market and economic understanding. Doug has negotiated multiple large strategic technology purchases, participated and was integrator for over \$2B in M&A activity.

### **Stacy Sansone, Chief Strategy Officer**

Stacy is a well-seasoned consultant with experience in finance, banking, and healthcare management. Stacy's ability to concisely understand financials and execute on project plans

aimed at financial well-being, has enabled her to achieve successful outcomes for various clients. Stacy's strong attention to detail and organization skills have allowed her to work more effectively. Stacy has previously worked as an advisor to several companies including Optum, a leading healthcare innovation company. Stacy has a strong educational background in finance with a BS in Management & Finance from Johnson & Wales University and an MBA in Finance from Regis University.

### **Charles Kurth, Director of Blockchain Strategy**

Charles has a strong record of accomplishments in business development and sales promotion with a unique ability to create successful sales strategies for startups. Charles takes a vision and makes it a reality through sound strategy development and an ability to find, develop, and nurture meaningful strategic partnerships.

His success stems from his ability to transform innovative ideas into immediate action. He has previously worked with many reputed companies in senior management positions in sales and business development. Charles holds a Bachelors in Finance from the University of New Mexico and an MBA from the University of South Dakota.

### **Benjamin Knigge, Software Engineer**

Benjamin Fredrick Knigge of Boise Idaho, Has been a professional software developer for over 20 years focusing primarily web performance, availability and scalability issues. Benjamin was the former lead developer for Reeboks web presence and has worked for General Motors, MGM Studios and FX Networks among other clients.

### **John May, Blockchain Engineer**

John May is a software developer from Wilmington Delaware interested in designing decentralized applications and analytics. He holds a Bachelors of Science in Mathematics from the University of Delaware.

### **Kevin Meilinger, Director of Marketing**

An award-winning creative professional with more than 20 years in marketing leadership, Kevin has developed and managed successful marketing programs and teams across North America, Europe, and Asia. He has spent the last several years fine-tuning digital marketing and social networking strategies and tactics for B2B organizations-- designed to provide significant visibility, user engagement, and sustainable growth. Kevin is a recipient of the International Television Association Silver Peak and Microsoft Marketing Excellence Awards

and brings a wealth of start-up growth experience to Balehu, leveraging the latest content-driven marketing strategies and disciplines.

### **Cooper Turley, Community Manager**

Cooper brings an extensive knowledge of ICO analysis to the table. He is actively working in the space as a Community Manager and ICO Project Manager and has closely reviewed over 200 ICOs in the past year alone. This research has directly revealed a list of best practices and key indicators that influencers will be targeting when reviewing the Balehu project. Aside from crowd-sales, Cooper is well-versed in economic models, consensus mechanisms, and token standards along with actively researching the most innovative and exciting projects and developments in the blockchain industry as a whole.

### **Peter Perez, Community Manager**

Peter developed leadership experience as the coordinator for grass-roots and community activist organizations. More notably, The Zeitgeist Movement and The Venus Project.

### **Jessica Nelson, Senior Designer**

Jessica is a graduate of Iowa State University with a Bachelors in Graphic Design, Jessica spent her early career at agencies in Chicago and Boulder. With a decade of experience designing brands, print, packaging, web, and environmental projects, she is game for just about anything. From high tech to food to the ski industry to fashion and everything in between. 3 years ago, she started her own company, Rivet Designs, which specializes in branding and web design. She believes design goes hand in hand with a deep understanding of the people/company with which she is working.

## **Our Advisors**

### **Franca Ciambella, Legal Advisor**

Franca was trained in law and business in Canada, New York and in Singapore. For over 20 years she worked in the areas of corporate/commercial law, M & A's, and foreign direct investment, and in the past two years has focused on fintech, technology law, blockchain and ICO legal advisory in Singapore. She is a member of the Singapore Fintech Association, Cryptofriends and CryptoClub, is called to be a speaker at conferences and has participated in learning exchanges in Switzerland and in Canada on this very current and evolving



subject. Franca has won a number of professional awards and was recently awarded the Sovereign Medal for volunteerism and leadership by Canada's Governor General.

### **George Popescu, ICO Advisor**

George is the founder of Block X Bank, a blockchain investment bank focused on ICOs. He has 3 Masters degrees and was the founder and CEO of 9+ companies some of which had \$20mil+ in revenue.

### **Jose Vietez, Advisor**

Jose Vietez is a co-founder of Boomtown Accelerator in Boulder, helping early-stage startups reach product market fit and become successful high-growth companies. Jose is a Stanford graduate with a background in Industrial Engineering and User Experience Design. He worked at Google as a designer in the Google Offers department, and before that founded and sold a company in the loyalty/ coupon space. Jose also has an MBA and Masters degree in Computer Science from CU Boulder.

### **Jonathan Roderick, Advisor**

Having obtained a Bachelor of Science degree in Economics from New York's Long Island University, Jonathan embarked on a career in the energy industry in Denver, Colorado, in the late 1970's. In 1992, Roderick with his business partner started an exploration company. In a relatively short period, Jonathan and his partner grew their small company into a multi-million dollar success

## **Risks**

The risks associated with purchasing tokens in an ICO such as Balehu are both known and speculative in nature. While this list is not intended to be comprehensive, here are some of the common challenges we will face:

### **Immaturity of the Ethereum Technology**

The Ethereum blockchain is at an early stage of development, and it is not fully known whether it will be able to sustain long-term operation of large-scale D-apps such as The Balehu protocol. As recently as June 2017, the Ethereum blockchain experienced significant delays in processing block transactions due to extremely high volumes associated with similar token sales around that time. It is not certain whether the Ethereum development community will resolve these technical issues in the future.

### **Unknown Impact of Proposed Changes to Ethereum**

The Ethereum Foundation has laid out a roadmap for the improvement and development of Ethereum. While some proposals hold promise for resolving known technical issues, it is uncertain when these improvements will be introduced, or whether they will be successful. In particular, proposals to "shard" the blockchain in order to greatly increase blockchain speeds is, at the time of publication, far from implementation. Impacts of a proposal to change the mining process from the current Proof-of-Work algorithm to a Proof-of-Stake algorithm remain to be seen.

### **Prohibitively High Gas Prices for Transactions**

All transactions over the Ethereum blockchain, including the transfer of BAL, have a real-world cost in ETH ("Gas"). While Gas prices for basic transactions over the Ethereum network are currently nominal, there is no certainty that Gas prices will not increase, thereby making the trading of BAL over the Ethereum network commercially unfeasible. In addition, high volumes could lead to very high Gas prices for processing transactions, making use of the blockchain prohibitively expensive.

### **Ethereum May Be Superseded**

While the Ethereum blockchain technology presents, in our view, the most promising advances in blockchain technology today, there is no guarantee that Ethereum will not be supplanted by competing protocols that improve upon the Ethereum technology. The Ethereum technology is open-source, which means anyone can copy and disseminate the same code with modifications. It is not known whether the Ethereum platform will become the predominant protocol adopted by global industry. If Ethereum is surpassed or superseded, the BAL program could be impacted as usage and adoption declines.

### **Blockchain Risk**

On the Ethereum blockchain, timing of block production is determined by proof of work, so block production can occur at random times. For example, ETH contributed to the Balehu token sale smart contract (the "Smart Sales Contract") in the final seconds of a distribution period may not be included for that period. You acknowledge and understand that the Ethereum blockchain may not include your transaction at the time you expect and you may not receive BAL the same day you send ETH. The Ethereum blockchain is prone to periodic congestion during which transactions can be delayed or lost. You acknowledge and understand that Ethereum block producers may not include your transaction at the desired time, and that your transaction may not be included at all. Individuals may also intentionally spam the Ethereum network in an attempt to gain an advantage in purchasing cryptographic tokens.

### **Risk of Theft or Misuse of Private Keys**

The control of the BAL source code resides with the BAL Foundation, which holds the requisite private keys in cold storage. While all reasonable measures may be implemented to prevent unauthorized use of the private keys, there is no certainty that the private keys will not be subject to theft, fraud or misuse. The unauthorized use of the private keys could result in significant disruption to the BAL, and in a worst-case scenario, cause the BAL to be unusable and therefore worthless.

### **New Technology**

The protocol and all matters set forth in this white paper are new and untested. The protocol may not be capable of completion, implementation, or adoption according to the development roadmap laid out in this white paper. Even if the protocol is completed, implemented, and adopted, it may not function as intended, and any tokens associated with the protocol may not have the desired functionality. In addition, the rapid evolution of , technology means that BAL and any tokens transferable on the protocol may become outdated.

### **Unknown Merchant Adoption Rates**

The success of the protocol relies, in large part, on mass adoption of the protocol by participating merchants. Developers are in advanced discussions with a number of global merchants for the deployment of the protocol. It is not known whether any other merchants will adopt the protocol. Furthermore, there is no guarantee that merchants in advanced discussions will ultimately deploy the protocol.

### **Unknown Consumer Adoption Rates**

Mass consumer adoption of blockchain technology has not yet occurred. Only a very small percentage of consumers of incentive programs are familiar with blockchain technology, let alone Ethereum. Consumers may opt not to use BAL Tokens, which would impact the attractiveness of the protocol to merchants.

### **Competition**

Utilizing blockchain technology to disrupt the consumer marketing industry has been proposed as one of the earliest use cases for distributed ledger technology. Consequently, as of the publication of this white paper, there are a number of other consumer marketing companies that compete directly or indirectly with the protocol. It is not known which company will prevail in the competition for consumer and merchant adoption. It is also not known how many other blockchain consumer marketing companies will enter the market prior to or during the token sale.

### **Business Execution Risks**

The implementation of the protocol roadmap and deployment of its related technological

components require a high degree of professional business and software engineering experience. While the developers have a proven track record of software engineering and business development, it is not certain whether they can fully deliver on the technical milestones set forth in the roadmap.

### **Changes to the Protocol**

The modules for the protocol are under development, and may undergo significant changes over time. Although Balehu intends for the protocol to have the features and specifications set forth in this white paper, Balehu may make changes to such features and specifications for any number of reasons.

### **Project Completion**

The development of the protocol may be abandoned for a number of reasons, including, but not limited to, lack of interest from the public, lack of funding, lack of commercial success or prospects, or departure of key personnel.

### **Ability to Transact or Resell**

You may be unable to sell or otherwise transact in BAL at any time, or for the price you paid. By using the ERC-20 Balehu token contract (the "Smart Token Contract") or the Smart Sales Contract (collectively, the "Smart Contracts"), or by purchasing BAL, you acknowledge, understand and agree that: (a) BAL may have no value; (b) there is no guarantee or representation of liquidity for BAL; and (c) Balehu and its affiliates are not and shall not be responsible for or liable for the market value of BAL, the transferability and/or liquidity of BAL and/or the availability of any market for BAL, through third parties or otherwise.

### **Token Security**

BAL may be subject to expropriation and/or theft. Hackers or other malicious groups or organizations may attempt to interfere with Smart Contracts or BAL in a variety of ways, including, but not limited to, malware attacks, denial of service attacks, consensus-based attacks, Sybil attacks, smurfing and spoofing. Furthermore, because both the Ethereum platform and BAL are based on open source software, there is the risk that Ethereum smart contracts may contain intentional or unintentional bugs or weaknesses which may negatively affect BAL or result in loss of your BAL, loss of your ability to access or control your BAL, or loss of ETH in your account. In the event of such a software bug or weakness, there may be no remedy, and holders of BAL are not guaranteed any remedy, refund or compensation.

### **Access to Private Keys**

BAL purchased by you may be held by you in your digital wallet or vault, which requires a private key, or a combination of private keys, for access. Accordingly, loss of requisite private key(s) associated with your digital wallet or vault storing BAL will result in loss of

such BAL, access to your BAL Token balance, and/or any initial balances in blockchains created by third parties. Moreover, any third party that gains access to such private key(s) by obtaining login credentials of a hosted wallet or vault service you use may be able to misappropriate your BAL. Balehu is not responsible for any such losses.

### **BAL are Non-Transferable Until Completion of the Token Sale**

You acknowledge and understand that BAL are not transferable until after the end of the BAL sale process.

### **Balehu May Modify or Stop the Sale at Any Time**

You acknowledge and understand that Balehu may modify the timing, sale price, and number of BAL available for sale at any time during the BAL Distribution Period. You further acknowledge and understand that Balehu reserves the right to terminate the sale process at any time and withdraw any unsold BAL. If the sale process has been stopped prematurely, BAL purchased by you may not be transferable.

### **Exchange & Counterparty Risks**

If you send ETH to the Smart Sales Contract from an exchange or an account that you do not control, pursuant to the Smart Sales Contract, BAL will be allocated to the account that has sent ETH; in this scenario, you may never receive or be able to recover your BAL. By using the Smart Contracts and/or by purchasing BAL, you acknowledge and agree that you send ETH to the BAL Token Contract through an exchange account, and/or hold BAL on a cryptocurrency exchange or with another third party, at your own and sole risk.

### **Uncertain Regulatory Framework**

The regulatory status of cryptographic tokens, digital assets, and blockchain technology is unclear or unsettled in many jurisdictions. It is difficult to predict how or whether governmental authorities will regulate such technologies. It is likewise difficult to predict how or whether any governmental authority may make changes to existing laws, regulations, and/or rules that will affect cryptographic tokens, digital assets, blockchain technology and its applications. Such changes, including, for example, a determination that BAL are regulated financial instruments that require registration, could negatively impact BAL in various ways. Balehu may cease the distribution of BAL, development of the protocol, or operations in a jurisdiction in the event that governmental actions make it unlawful or commercially undesirable to continue.

### **Currency Regulation Risks**

Governments are still grappling with public policy on the regulation of cryptocurrencies as a form of settlement in trade. Governments averse to the proliferation of the use of cryptocurrencies in local commerce could issue laws and regulations deeming the use of cryptocurrencies a regulated activity. This could result in holders of BAL being unable to use

their BAL without further regulatory compliance by Balehu.

### **Risk of Government Action**

As noted above, the industry in which the company operates is new, and may be subject to heightened oversight and scrutiny, including investigation or enforcement actions. There can be no assurance that governmental authorities will not examine the operations of Balehu and/or pursue enforcement actions against Balehu. Such governmental activities may or may not be the result of targeting Balehu in particular. All of this may subject Balehu to judgments, settlements, fines or penalties, or cause company to restructure its operations and activities or cease offering certain products or services, all of which could harm Balehu's reputation or lead to higher operational costs, which may in turn have a material adverse effect on BAL and/or the development of the protocol.

### **Risks Associated with Licensing of the BAL Exchange**

Licensing procedures to register a cryptocurrency exchange are complex and subject to stringent qualification requirements. In the event that such license or registration is required, there is no guarantee that the developers will be able to obtain a license to accept customer deposits for use in a global cryptocurrency exchange. Failure of the sponsors to establish a registered BAL Exchange could result in decreased liquidity of BAL as a form of settlement currency within the protocol.

### **Risks Associated with the Token Sale**

BAL are not investment products. Rather, BAL serve a specific function within the protocol, providing the means to access Merchant Tokens. Without BAL, the general public may not access the BAL Exchange to acquire Merchant Tokens. There is also no expectation of future profit or gain from the acquisition of BAL. BAL do not represent (i) any equity or other ownership interest in Balehu, (ii) any rights to dividends or other distribution rights from Balehu, or (iii) any voting or other governance rights in Balehu. For these and other reasons, we believe the sale of BAL does not constitute a public offering of securities subject to prospectus registration requirements. However, public policy towards token sales is changing, and it is conceivable that regulators may in the future seek to broaden the scope of regulation of token sales. This could make token sales subject to registration requirements in the U.S. and similar jurisdictions. If the BAL token sale becomes subject to registration requirements, this would delay or potentially postpone the proposed BAL token sale indefinitely.

### **Taxation Risks**

The use of Merchant Tokens as a form of settlement currency may or may not be subject to local income tax, capital gain taxes, VAT, or other forms of taxes. This uncertainty in tax legislation may expose merchants and customers alike to unforeseen future tax consequences associated with the use of Merchant Tokens as a settlement currency, and/or the trading of tokens or BAL for capital gains.

### **Capital Control Risks**

Many jurisdictions, such as China, impose strict controls on cross-border flow of capital. Holders of Merchant Tokens and BAL may be subject to these regulations and/or arbitrary enforcement of such regulations at any time. This would make the transfer of BAL out of local jurisdictions to overseas exchanges an unlawful activity, exposing the user of BAL to government fines or other regulatory sanction.

### **CTF and Anti-Money Laundering Regulations**

The U.S. has issued a series of regulations to combat terrorist financing (CTF) and money-laundering activities. Many other countries have enacted similar legislation to control the flow of capital for such illicit activities. The use of cryptocurrencies by bad actors would breach such regulations. Any illicit use of BAL or Merchant Tokens could seriously impact the global reputation of the protocol. In such event, it is conceivable that this could trigger scrutiny by CTF and anti-money laundering regulators, and potentially cause significant disruption to the distribution and circulation of tokens and BAL in the BAL ecosystem.

# Appendix

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