Blue Whale Network

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Introduction

The "gig economy" is burgeoning globally: freelancers will make up a whopping 58% of the US workforce by 2027[1]. Consequently, peer-to-peer booking platforms like AirBnB and Uber have seen a meteoric rise in demand accompanying these shifts in the job market. A report by McKinsey & Company - 'A labour market that works: Connecting talent with opportunity in the digital age' - indicates that the matching activity conducted by such digital marketplace platforms are projected to add $2.7 trillion to global GDP, or about the size of the entire UK's GDP, by 2025. The seismic shift to freelance work and self-employment is driven by "push", as well as "pull" forces.

"Push" forces

Technological disruption. Innovation entails "creative destruction": each time technology finds a way to do something better, and cheaper, human labour gets displaced. In previous industrial revolutions, we taught machines to do the work of human hands - in the coming Fourth Industrial Revolution, artificial intelligence will do the work of human minds[2].

"Pull" forces

Work & the Internet Age. On the other side of the equation, although many of these displaced workers move into freelance gigs do so for lack of better alternatives, many others are joining the ranks of people the self-employed by choice.

Prior to the invention of online platforms in the internet age today, being a freelancer entailed significant customer acquisition costs, and limited outreach using traditional media and marketing methods. The rise in marketplace platforms and matching apps have made it possible for

[1] Mbopartners.com. (2016). *Predictions for the Future of Independent Work | MBO Partners*. [online] Available at: http://info.mbopartners.com/rs/mbo/images/Whitepaper_FutureTrends.pdf [Accessed 5 Feb. 2018].

[2] Frey, Carl Benedikt, and Michael A. Osborne. 2017. "The Future Of Employment: How Susceptible Are Jobs To Computerisation?". Technological Forecasting And Social Change 114: 254-280. doi:10.1016/j.techfore.2016.08.019.

salaried employees to jump the corporate ship, and set sail at their own steering.

Problems of Freelancing

Freelancing is often associated with freedom: the freedom to decide what to do, and when to do it. However this freedom comes at a price:

Loss of employment benefits

Employment benefits such as paid-time-off, sick leave, and retirement pensions are employment traditions born out of a long history of bargaining between employers and employees. Freelancers who abandon the corporate ship find that they have to find their own rations, navigate their own course, and row their own oars. Time is tied to money, and time spent to rest, recuperate, or tend the family - means earnings forgone.

Loss of stable income

> *"The dubious privilege of a freelance[r]... is he's given the freedom to starve anywhere."*[3]
>
> S.J. Perelman (1904 - 1979)

While freelancers may have control over their time, they quickly learn that companies provide employees with a constant stream of tasks to do, for which they are paid. While employees on the corporate ship only earn a small slice of what their large corporation's fishing trawler rakes in, freelancers sailing their own ship often find themselves adrift in the open seas, armed with only a fishing rod. Acquiring clients, and building a brand through traditional advertising is slow, laborious, and costly.

[3] Gale, S. H. 2015. *S. J. Perelman: Critical Essays*. Routledge.

Current Solution to Problems of Freelancing

Problems of Freelancing	Current Solutions
No Employment Benefits	N.A.
No Stable Income	Marketplace Platforms
	Marketing Platforms

Table 1 - Current Problems of Freelancing

Employment Benefits

Although freelancers depend on online gig economy platforms to match them to jobs much in the same way that corporations provide employees with a steady stream of tasks which a client paid for, none of the freelancers who depend on these platforms to make a living are actual employees of these tech giants. Legally hired as “independent contractors”; they do not receive the employment benefits available to employees.

Employment Benefits	Sharing Economy Platforms	Blue Whale
Retirement Plan	✗	✓
Paid Time-Off	✗	✓
Unemployment Benefit	✗	✓
Medical Benefit	✗	To be announced

Table 2 - Current Problems of Freelancing

Stable Income

Online platforms including matching apps like Uber, search engines like Google, and marketplaces Fiverr like provide freelancers who possess skills and basic capital equipment, with the ability to make a stable income via two main elements:

1. **Network** - Building and granting freelancers access to a vast network of buyers and sellers

2. **Tools** - Providing them with a structure and tools to facilitate transactions and interactions (matching, verification, arbitration, payment, etc.).

These internet age companies grew to such sheer sizes and positions of power by providing superior solutions to the early problems of self-employment, laying the foundations for the gig economy today. But behind the techno-utopian jargon of companies like Uber and Fiverr, lies the dark side of self-employment in the gig economy.

Limitations to Current Solution - "The New Slavery"

Problem of Freelancing	Current Solution	Limitation of Current Solution
No Employment Benefits	N.A.	N.A.
No Stable Income	Marketplace Platforms	High Commission
	Marketing Platforms	High Marketing Cost

Table 3 - Limitations of Current Solutions to Freelancing

"I worked 100-120 consecutive hours almost every week for the past fourteen plus years....in 1981, I averaged 40-50 hours. I cannot survive any longer with working 120 hours!..... they squeeze rates to below operating costs and force professionals like me out of business. They count their money and we...drive becoming homeless and hungry. I will not be a slave working for chump change. I would rather be dead..... It is the new slavery."

- *Douglas Schifter's suicide note before he parked in front of New York City's mayor's office, shot himself in despair with Uber.*

Increasing Commissions

Since freelancers depend on these platforms to provide them with a steady flow of clients, the tech giants behind these platforms wield significant power over the people who depend on it to make a living. As they are pressured by shareholders to generate proceeds, commission rates on transactions rise steadily each year, reaching extortionate levels.

Company Name	Commission Rate
Uber	25% - 42.75%
Upwork	12.75% - 22.75%
Fiverr	22.9%

Table 4 - Commission Rate Comparison Chart

Commissions act like progressive income tax - forcing freelancers to pay more as they earn. But unlike income taxes which only apply in "brackets", these platforms pinch the same amount from every penny earned, no matter how much freelancers actually earn at the end of every month. Since freelancer's earnings are directly proportional to their time spent, reduced proceeds from constantly creeping platform commissions have made it necessary to spend even more time to earn the same amount as before. With commision rates reaching as much as 40%, the touted "freedom" which freelancing was supposed to bring is starting to sound increasingly Orwellian.

High Marketing Cost

Freelancers stay on existing centralized platforms despite the exorbitant commissions because these platforms act as information aggregators. They reduce the search costs for prospective customers by gathering them all on one platform, with a common interface and a vast amount of behavioural data. However, the costs of independent advertising on Google and Facebook are still onerous for freelancers and SME owners.

Platform	Average Cost-Per-Click (CPC)	Average Cost-Per-Action (CPA)
• Facebook Ad	• $1.72	• $18.68
• Google Adwords	• $2.32	• $59.18

Table 5 - Average Cost-Per-Click/Action

The average small business using Google AdWords spends between $9,000 and $10,000 per month and $100,000 to $120,000 per year on their online advertising campaigns alone.

The difficulties encountered by freelancers and part-time workers such as the lack of protection, and the insecurity of self-employment will only

worsen[4]. This not only affects the growing mass of freelancers, but also ruptures the social contract between workers and governments. Simmering dissatisfaction has created popular backlash, as concerned governments in several countries such as France have begun to crack down on platforms like Uber[5] and AirBnB[6]. Despite these worrying trends, no workable remedy has been proposed - until now.

[4] Popper, B. (2015). *Today's ruling that drivers are employees could cripple Uber's business*. [online] The Verge. Available at: https://www.theverge.com/2015/6/17/8797021/uber-california-lawsuit-labor-employee-contractor [Accessed 5 Feb. 2018].

[5] Fortune. (2018). Uber Service Is Being Suspended in Yet Another Country. [online] Available at: http://fortune.com/2017/08/14/uber-suspended-philippines/ [Accessed 5 Feb. 2018].

[6] Meyer, D. (2017). France Is Gearing Up For an Airbnb Tax Crackdown. [online] Fortune. Available at: http://fortune.com/2017/08/10/france-airbnb-tax-crackdown/ [Accessed 5 Feb. 2018].

Freelancing Blockchain Solutions Compared

With blockchain technology, it is now possible to build a trustless network whereby there is no longer a need for a centralized authority to manage contracts on the network.

It is possible to provide freelancers with the exact same functions which these online platforms currently do: but without the concentration of power into the hands of a few rentiers.

1. Providing an autonomous, decentralized network of buyers and sellers

2. With the features of current platforms such as matching demand and supply, arbitration of disputes, and payment processing.

Problem of Freelancing	Current Solution	Limitation of Current Solution	Other Blockchain Solutions
No Employment Benefits	N.A.	N.A.	N.A.
No Stable Income	Marketplace Platforms	High Commission	Commissions minimum to cover cost
	Digital Marketing Platforms	High Marketing Cost	N.A.

Table 6 - Freelancing Blockchain Solutions Compared

Blue Whale is not the only blockchain-based solution that has been proposed. Numerous other ICO projects have also seen the problem that we do, and are all trying to solve the fundamental issues which millions of freelancers face. The Blue Whale Foundation is set to rock the boat of the gig/sharing economy by solving issues that its predecessors cannot.

Blue Whale's Blockchain Solution

So what makes us different from the other gig economy blockchains? The Blue Whale Foundation goes one step further by providing freelancers with employment benefits such as paid-time-off, and retirement pensions traditionally available only to salaried employees.

The following sections will discuss:

1. Features of the Blue Whale Network
2. Growing and Governance of the Network
3. Token Economics of the Blue Whale Network

Features of the Blue Whale Network

The "WORK" (Worker Optimized Reward Keeper) system is comprised of three main components.

1. Contribution Activity Manager **(CAM)**
2. Decentralized Associated Network **(DAN)**
3. Reward Bank **(ReBa)**

Problem of Freelancing	Current Solutions	Limitation of Current Solutions	Other Blockchain Solutions	Blue Whale's Blockchain Solution
No Employment Benefits	N.A.	N.A.	N.A.	ReBa
No Stable Income	Marketplace Platforms	High Commission	Commissions minimum to cover cost	CAM
	Digital Marketing Platforms	High Marketing Cost	N.A.	DAN

Table 7 - Blue Whale's Blockchain Solution Compared

Contribution Activity Manager (CAM)

The CAM has been designed to distribute the rewards earned through contributor activities. Rewards are provided for connecting to the Advertising Network, resolving disputes through Arbitration[7] and building trust with the Verification[8] system.

However, due to the differences in the nature of specific businesses, not all of the CAM activities will apply equally for all businesses. For instance, community verification may be relevant for a photography freelancer, but not for a ice cream stand. Therefore, sub components within CAM will be modularized and used only when relevant.

Category	Contribution Activity	Description
Referral	AD Referral	Successful advertising and Social Media referrals leading to purchases (conversion)
	Lead Generation	Community-driven freelancer acquisition
Verification	Curation	Freelancer registration process via community approval
	Authentication	Users will vet the service providers (e.g. freelancers) for authenticity
Arbitration	Reputation	Interactive reputation scores for freelancers and customers
	Arbitration	Council of juries selected from service providers (e.g. freelancers) and buyers who meet the prerequisite AdNet Score threshold

Table 8. CAM-Recognized Activities

[7] *The Bee Token: The Future of Home Sharing. (2018). Beetoken.com. Retrieved 5 February 2018, from https://www.beetoken.com/*

[8] *Gem's Blockchain. (2018). Gem. Retrieved 5 February 2018, from https://gem.co/*

AD Referral

The Blue Whale Ad Network allows the service providers (e.g. freelancers) to promote their own services for free by using the SaaS tools provided by the Blue Whale Foundation. The providers on the network can utilize the various participants' social media accounts to promote their own goods/services. When this leads to purchases, the participants will be rewarded.

For instance, when Customer C buys goods/services from Freelancer A through the Ad Widget on Freelancer B's account, 5% of the purchase price will be allocated to Freelancer B, while another 5% will be allocated to the Blue Whale Foundation.

The collected proceeds will go towards covering the Blue Whale Foundation's operating costs, and 60% of net proceeds will be channeled towards the WORK Reward System.

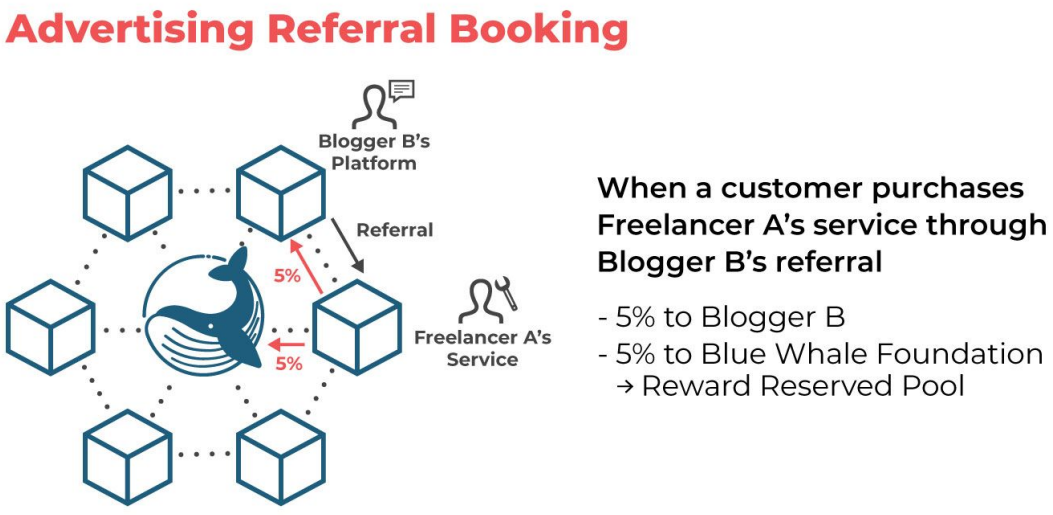


Figure 1 - Incentive Structure of Referral Booking

The Advertising Referral compensation system is designed to incentivize individuals to direct digital traffic across different platforms. For instance, if a meaningful connection exists between a cleaning service and a home-sharing service like AirBnB, the Blue Whale's Big Data and Machine Learning (ML) algorithms will discover the relationship through its analysis and suggest targeted advertisements accordingly.

The Referral System will support heterogenous platforms across the Blue Whale Network. The Blockchain Smart Contract will build trust and

transparency between the various platforms and allows for the automation of the Referral System's rewards to contributors.

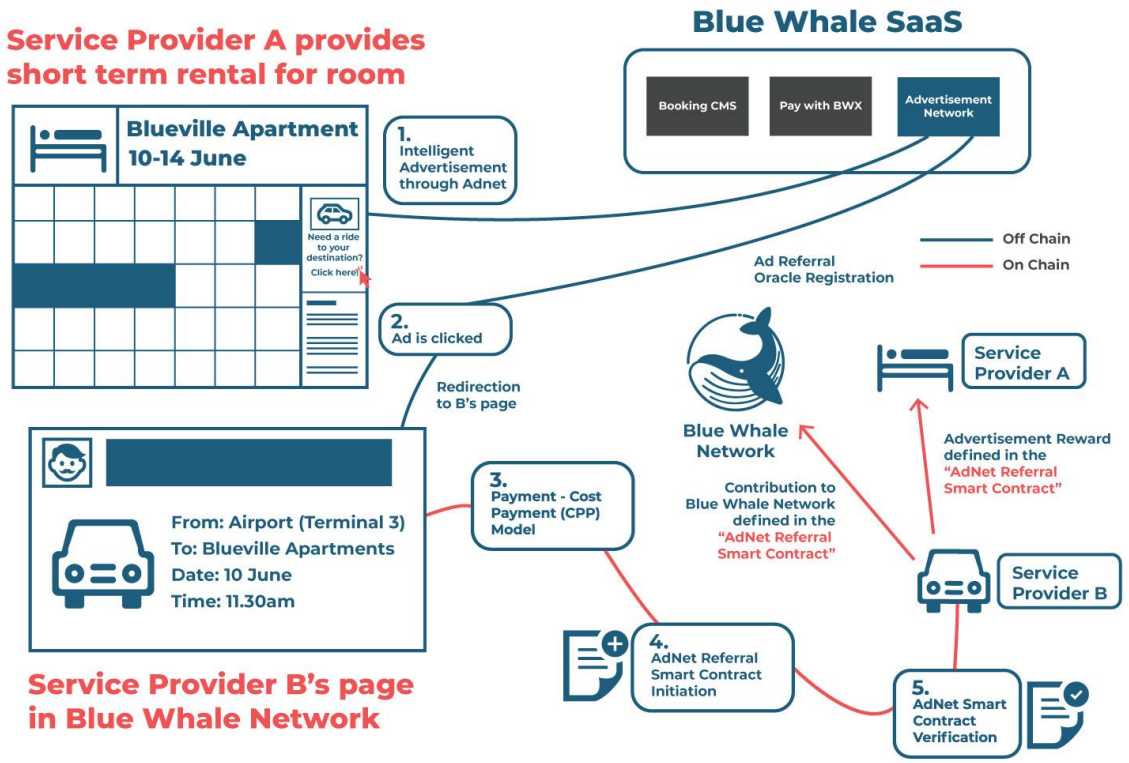


Figure 2. Referral System Flow Diagram

Lead Generation

Hiring sales staff to acquire more customers is the conventional way to grow a business, but this drives up operating costs for the company. Many small and medium-sized companies fail to maintain their momentum due to the high costs of increasing their market share.

Blue Whale's CAM system aims to enable community-driven market expansion by engaging freelancers to introduce Blue Whale to their network. Freelancers are entitled to a promotional reward for bringing other members on board the Blue Whale Network.

After the newly-joined freelancer has been registered, both the introducing freelancer and the new freelancer get paid for their contribution to the community's growth. However, the reward will only be paid based on the service revenue to prevent malicious actions such as attempts to introduce a fake freelancer just to earn a promotional reward.

Curation

As freelancers join the Blue Whale Network, freelancers and their services are to be verified during a registration process to ensure that only qualified ones are listed and matched to customers. The verification which happens when a new freelancer join the network is called “curation”.

The service is curated by the community (Service Curators) and filtered to eliminate irrelevant or inappropriate information. Instead of having a special internal team of moderators or automatic spam discovery tools (like Facebook has), this task is delegated to the community.

In the registration process, only qualified freelancers in the same industry, but not in the same competitive space, are entitled to participate in the curation of new freelancers. In turn, they receive a reward for their contribution. If the curator does not act in a timely manner to approve the freelancer or if the approved service proves to be a false report during an auditing process, they lose their curation rights.

Authentication

After the freelancers have fulfilled their contracts, the results of their work need to be authenticated. This is especially important for new entrants, or freelancers with lower ratings on the network. The authentication of these freelancers by the community’s members will ensure a high quality of service by creating a reputational reward system.

For Freelancers. For new freelancers, the initial 50 “tasks” will be checked by an independent “authenticator” and the results sent to the buyers who hired the freelancer. The buyer then provides a rating for the task done by the “authenticator”. If after 50 completed “tasks”, the freelancer’s rating is lower than 4.0 out of a maximum score of 5, the freelancer will need to be authenticated again prior to making any sales. Else, if the freelancer’s rating is higher than or equal to 4.0, the freelancer need not be authenticated for his subsequent sales. To make authentication processes fair and professional, freelancers who meet the requirements will be promoted as an authenticator. Conversely, a “authenticator” can also be demoted to a freelancer needing authentication if the authenticator’s rating falls below 4.0. For each authentication, around 12 people will be selected from the Authenticator Pool to perform the authentication. After authentication, the result which includes all authenticators’ opinions will be made available to

the buyer as well as the freelancer being authenticated without revealing authenticators' private information.

The authentication cost will vary according to the freelancers' ratings; higher ratings equates to lower authentication costs. The freelancers wanting to switch to a different authenticator will need to pay a 2% fee of the service value.

$$\text{Authentication Cost} = \text{Service Cost} \times \text{Min}\left(\text{Max. ARR}, \left(\text{Min. ARR} \times \left(\frac{\text{Minimum Threshold Rating}}{\text{Actual Freelancer's Average Rating}}\right)^2\right)\right)$$

- **Authentication Cost:** Cost that a freelancer is required to pay for being authenticated based on their rating
- **Maximum Authentication Reward Rate (Max. ARR):** As the freelancer's rating drops, the authentication costs increase but cannot exceed the maximum authentication reward rate.
- **Minimum Authentication Reward Rate (Min. ARR):** Guaranteed authentication reward rate for a authenticator is pre-defined.

For example, a freelancer with a 2.0 rating who wants to have a $10 service authenticated will have a Maximum Authentication Reward Rate (Max. ARR) of 50%, and a Minimum Authentication Reward Rate (Min. ARR) of 10% and a minimum threshold rating of 4.0 is required to pay the following authentication cost:

$$\text{Authentication Cost} = \$10 * \text{Min}\left(50\%, \left(10\% * \left(\frac{4.0}{2.0}\right)^2\right)\right) = \$4$$

For Authenticators. To ensure that the authentication process is fair, a authenticator must:

- be a freelancer working in the same field,
- have completed over 100 "tasks", and
- within top 100 in the field

To discourage reviews from being carried out in bad faith, the authenticator needs to submit 1% of the service value to an escrow account. After completing a successful authentication and receiving a rating above 4.0,

the authenticator will be refunded the 1% escrow payment, and receive an additional authenticator Reward. If the rating drops below 4.0/5.0, the authenticator will receive only a portion of the Authentication Reward while forfeiting the escrowed fee. If the authenticator does not act in a timely manner to authenticate the freelancer, the authenticator will forfeit both the escrow fee and the Authentication Reward.

Authentication Reward = Min (Authentication Cost, Authentication Cost x (Actual authenticated task rating / Minimum threshold rating)^2)

- Authentication Reward: Reward that a authenticator will receive for a authentication.
- Authenticated Task Rating: The actual rating of the authentified task will decide the reward for the authenticator.

For example, the authentication cost for a $10 product while receiving a Rating of 2.0 with the minimum threshold rating of 4.0 will be the following:

Authentication Reward =$10*(2.0/4.0)^2=$2.50

Authentication Escrow Rate = Max (Minimum Escrow Rate, Minimum Escrow Rate x (Minimum threshold rating / Average authenticated service rating by the authenticator)^2)

- Authentication Escrow Rate: Authentication Rating below the Minimum threshold rating will result in higher escrow fees
- Minimum Escrow Rate: Minimum participation rate for authentication

For example, when the authenticated services are rated 2.0 with the minimum threshold rating of 4.0, the authentication escrow rate will be the following:

Authentication Escrow Rate = 1% * (4.0/2.0)^2 = 4%

Reputation

The reputation-related activities maintain reputation scores of verified freelancers and their services. These activities ensure that freelancers deliver their services as agreed upon and builds trust for the customers who use their services. In addition, the reputation scores enable freelancers who switch their jobs frequently to maintain their credibility from previous services and facilitate their offering of new services.

For example, freelancer A has multiple reputation scores with different services as follows:

- Score for a cooking class: 4.5
- Score for driving: 3.5
- Score as a customer: 4.0
- Score as a verifier: 4.3
- Score as an arbiter: 4.1

In the sharing economy, feedback system is vital to create transparency through which people can trust without middlemen or third-party entities. Not only are freelancers required to be properly assessed by customers but also customers need to be properly reviewed by freelancers. The reputation system keeps track of reputation scores for each entity and compensates freelancers and customers who add reputation scores to their interactions.

The list of possible reputation activities will be rewarded from the Reward Bank to encourage community-driven autonomy.

Arbitration

When a dispute occurs between freelancers and their customers, both parties can request for arbitration. The cost of arbitration will be transferred into an arbitration fund. The dispute will be arbitrated by a Council consisting of community jury members fulfilling the prerequisite qualifications. This allows the networked community to objectively and securely resolve disputes internally.

To qualify as a Council jury, the jury needs to:

- be a freelancer working in the same field,
- have completed over 100 “tasks”, and

- maintain a rating above 4.9

Participants picked as jurors in the arbitration Council will submit their BWX coins into an escrow account. This ensures their impartiality and discourages members from acting in bad faith. This also encourages the jurors to decide in a timely manner. Jurors are not penalized for incorrect decisions and can only lose their coins if they fail to provide a decision within the time limit.

Jurors are required to provide justifications for their decisions. This ensures that the requesting parties understand the logic that led to the decision. If the rationale behind the decision is not satisfactory to the requester, the requester has the right to escalate the dispute to the wider public who will vote on the decision. If this happens, the appeal rate for each jury that failed to render an adequate decision will go up, undermining their chances of participating in future arbitrations.

After the dispute has been resolved, the participating jurors are paid their rewards at market rates and will receive ratings by the disputing freelancer and the user. Jurors with consistently low ratings will be disqualified from future juries.

If the jurors fail to provide a reasonable decision, both disputing parties can decide to expand the size of the jury pool up to a maximum of three times but will be required to deposit a bigger amount (at least 2x) to compensate the jurors and prevent frequent escalations (“vexatious litigation”) by disgruntled losing parties.

Arbitration Process
1. Dispute Initiation: Either the freelancer or the user can request for arbitration in cases of conflicts 2. Dispute Reporting: The request is sent to the arbitration Council and the two parties need to submit the required payments 3. Dispute Review: 5 or more jury members will be selected at random to decide the case 4. Dispute Conclusion: Payments are made to the jury members

Table 9 - Arbitration Process

Decentralized Associated Network (DAN)

The DAN is created by installing SaaS tools such as Booking and CRM software on websites and social media accounts, transforming each website/social media account into a node in the network. The DAN collects user data from online traffic, much in the same way which search engine and social media giants like Facebook and Google currently do. The main purpose of DAN is to collect user data and build a decentralized advertising network as a main business model of Blue Whale Network.

Case Study: Verlocal[9]

Verlocal, the official partner of the Blue Whale Foundation, is a SaaS-enabled marketplace currently operating in the U.S., Canada, and Singapore with a plan to launch in Japan in February 2018.

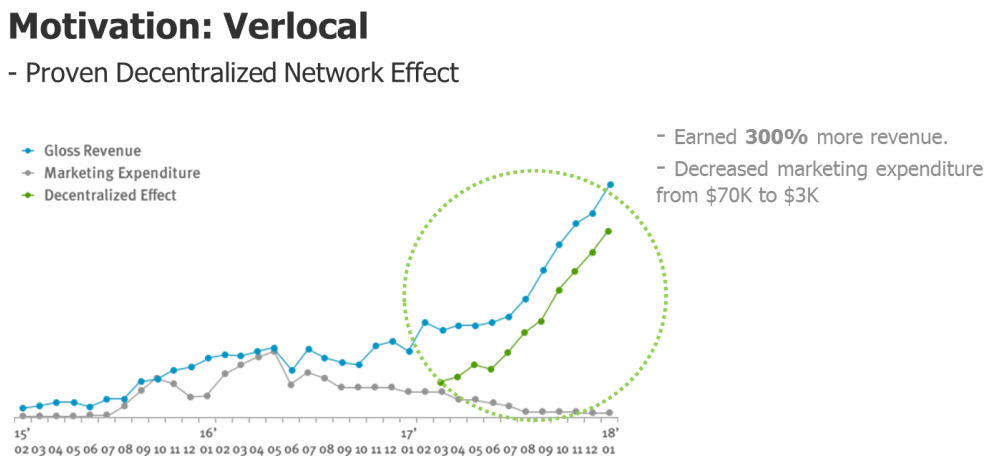


Figure 3 - Verlocal Decentralized Network Effect

Verlocal differentiates itself from other competitors by providing free Booking & Scheduling Software to be installed on providers' websites which motivates providers to join the network. Re-targeting of advertising to visitors lowered the monthly advertising bill to SMEs from $70,000 to $4,000 while resulting in 300% higher sales.

Architecture of DAN (Decentralized Associated Network)

The Decentralized Associated Network can be created by installing SaaS tools such as Booking Software and Ad Display Widgets on websites and social media pages.

[9] Note: The purpose of the Blue Whale Foundation's ICO is not to launch a reverse ICO of Verlocal.

Booking Software Widget

Providers installing the Booking Software on their own websites, blogs, and social media accounts can convert all incoming transactions from fiat currency to cryptocurrency coins. This establishes the required cash flow for Blue Whale tokens.

Advertising Network. The Blue Whale Foundation's decentralized advertising network is established when the providers install the Booking Ad Widget and the Ad Widget. The Booking Ad Widget, as a component of the Booking Software, is used to provide windows - digital real estate - for other providers to run their advertisements and promotions.

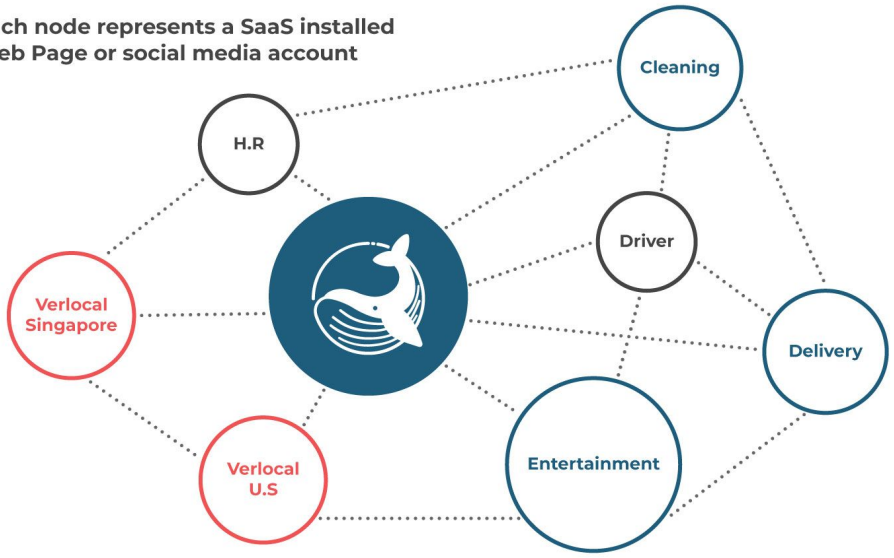


Figure 4 - Blue Whale Decentralized Ecosystem

The diagram below provides an example of how the Booking Ad Widget can help the providers not only operate their own promotions but also help other providers as well.

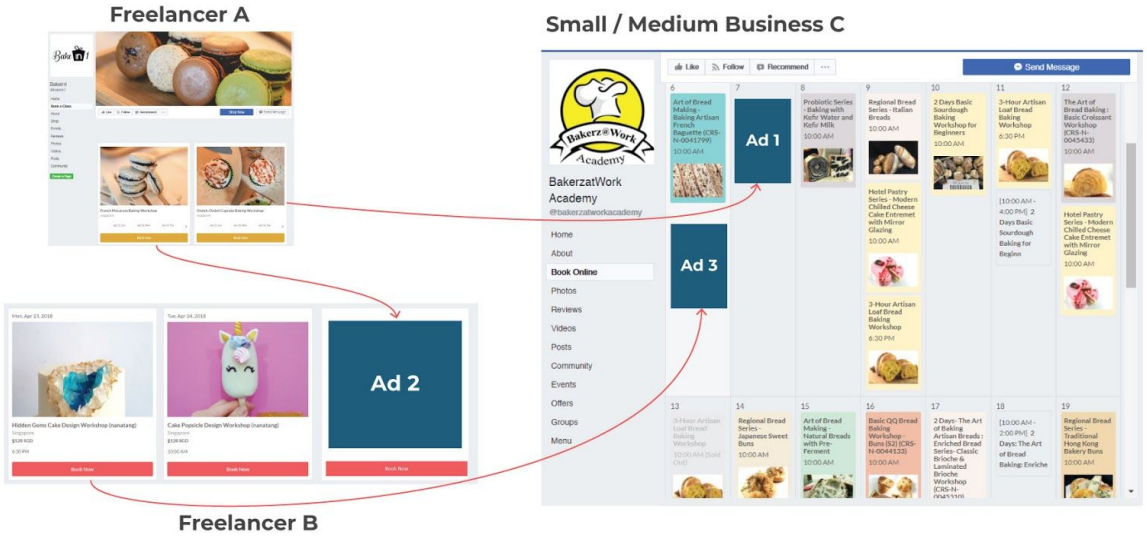
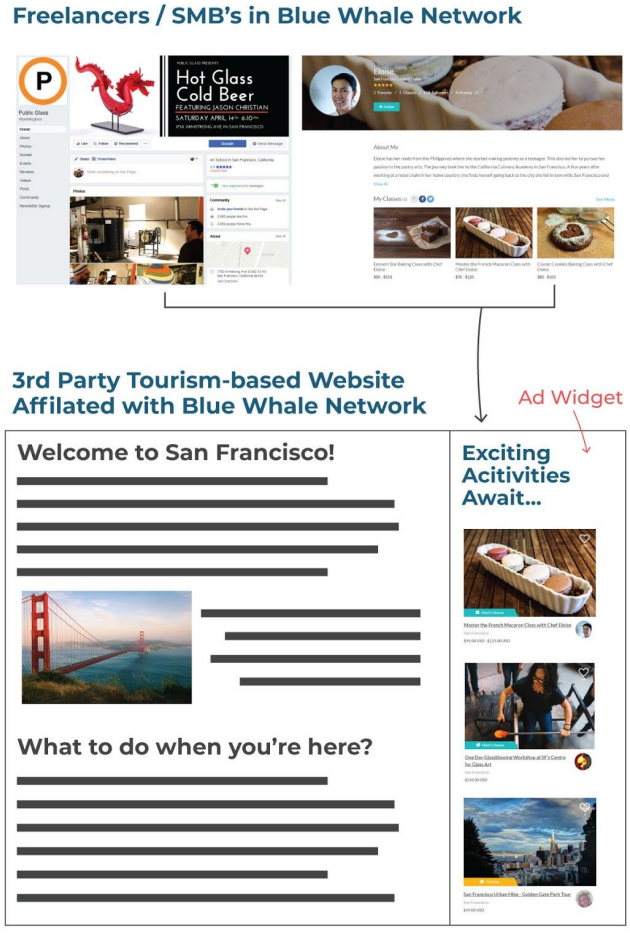


Figure 5 - An example of the Blue Whale Ad Network utilizing the Booking Ad Widget



Not only the service providers, but other participants on Blue Whale Network can also install the Ad Widget on their websites and social media accounts to promote their products and services and earn rewards.

Figure 6 - Example of Ad Widget on the Blue Whale Ad Network

The Blue Whale Network will establish a Referral System using the diverse Ad Network. Corresponding Ad Network Referral data will use Blue Whale Network's Oracle (a trusted connection between the blockchain and the real world) to connect to the blockchain. This allows different sharing platforms to secure advertising and commission agreements using the Smart Contract, and to earn compensations through the Referral System. For instance, an AirBnB host posting an ad for Uber on their page can earn Referral rewards if a customer uses Uber by accessing the ad.

In deciding the advertising exposure rate of each service provider, the service provider's BP share, exposure frequency, and other factors including random selection will be combined. The reason for including random selection into exposure rate calculations is to help smaller BP shareholders to have a fair chance of being discovered on the Ad Network.

Big Data & Machine Learning Solution

The decentralized network, based on the same SaaS architecture as the Blue Whale's Booking Software, is the optimal solution for collecting data. Data collected in this manner will be saved to the database in real time.

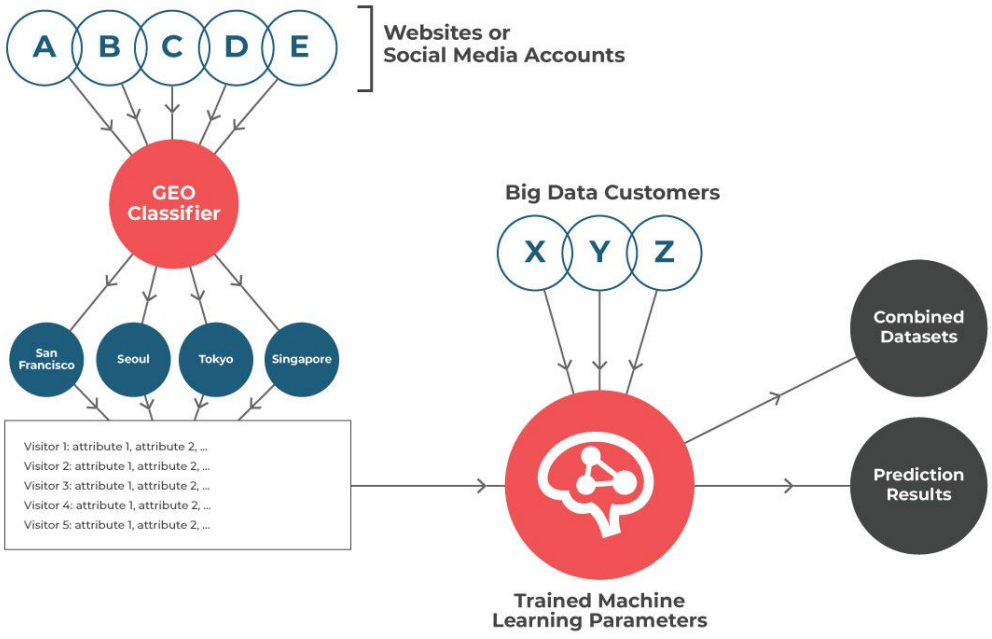


Figure 7 - Blue Whale Big Data & ML Architecture

The saved user data will be tagged according the type of goods/services purchased through the Booking Software. The tagged and categorized data will then be used to train the Machine Learning algorithm for two different uses.

1. Using visitors' data to aggregate and create a predictive list of potential future purchases

2. Analyze target visitor's purchase data to find lookalike visitors

Blue Whale Foundation's privacy policy regarding data collection and analysis will be released publicly and adhered to strictly. The predictive data using Machine Learning, and the proceeds of the data sold, according to the privacy policy will be collected by the Blue Whale Foundation. A portion of the proceeds will be accrued into the Reward Bank to be disbursed as incentives.

Reward Bank (ReBa)

The Reward Bank functions as a depositary for receiving and disbursing rewarded Blue Whale eXchange (BWX) from providers to contributors.

20% of BWX offered at Blue Whale's initial ICO will be kept in the Reward Bank. In addition, 60% of net proceeds and freelancers' referral rewards will also be kept in the Reward Bank. The specific amount to be held as reserves will be calculated annually and can be adjusted depending on the financial performance in any given year. The Reward Bank may form future strategic alliances with partners who provide solutions relating to pension systems and asset management.

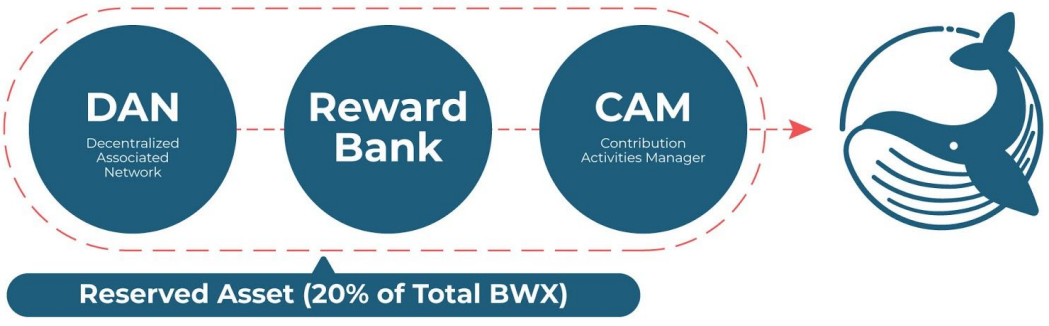


Figure 8 - WORK System Main Modules

Deposits in the Reward Bank will be utilized as rewards and welfare benefits for freelancers as follows.

- All contribution activities will be rewarded from the reward bank.

- Like pensions, rewards earned through referrals are saved in the ReBa, and rewards will be made only after a certain period; in a lump sum or monthly.
- 60% of the annual net proceeds for Blue Whale Foundation is reserved for offering paid leave in case of events like sick leave.

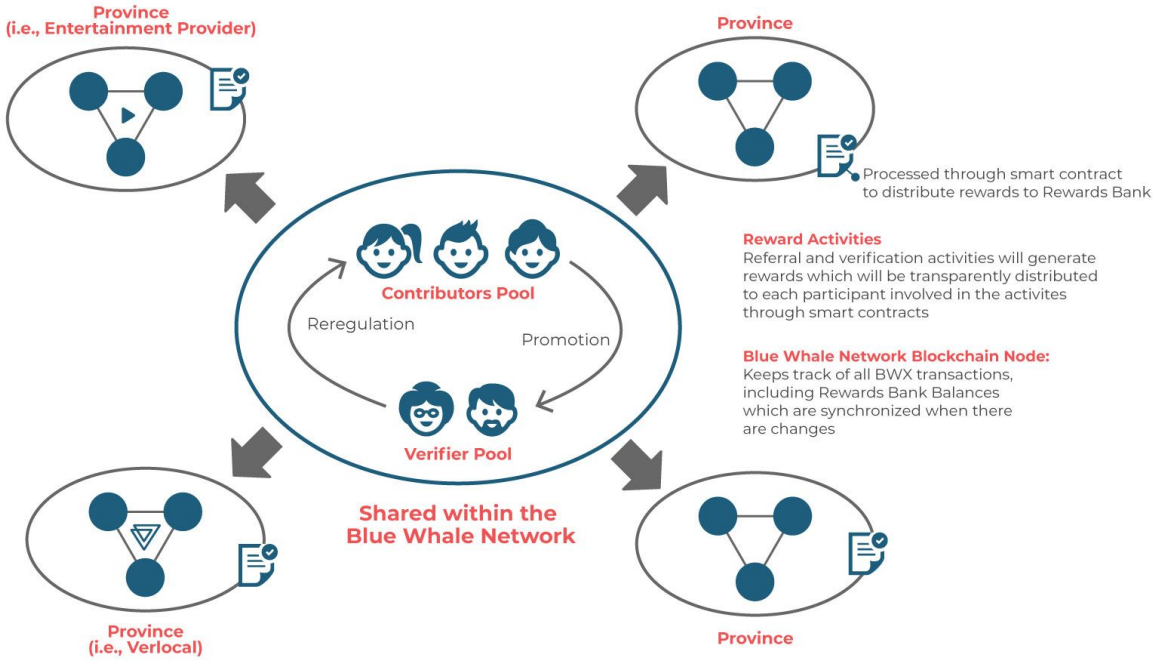


Figure 9 - Blue Whale Network

Blue Whale will build a network consisting of many blockchain nodes. Each blockchain node will keep track of all BWX transactions, which includes Reward Bank balance as well as each user's balance (the balance information is ReBa). Reading the Reward Bank is open to public but writing on the Reward Bank will only be allowed through consensus-verified transactions.

When a new transaction which involves the BWX balance, change happens either automatically through smart contract, or through being initiated by either service providers or freelancers to verify their service/task. This transaction will be verified by some of the verifiers among the pool of verifiers. When the transaction is successfully verified, this will trigger updates on balances saved on blockchain nodes through the synchronization mechanism provided by blockchain technology.

Two main activities which can generate a transaction are: promoting work and validating work.

1. **Promoting Work:** This happens when ad referrals result in payment. This activity will create an incentive for ad referrals. To support the transparent distribution of the rewards generated through this ad referrals, APIs which help service providers easily generate smart contracts will be provided.

2. **Validating work:** This happens when either service providers or freelancers want to validate other freelancers' work. The Blue Whale Network will have a ready pool of verifiers which can help validate others work and provide incentives for this validation. This process will be also managed via smart contract within Blue Whale Network. Depending on verifiers' needs, the Blue Whale Network will consider providing private validation which can anonymize verifiers' personal information.

Each service provider can participate in the Blue Whale Network by setting up local blockchain nodes within its network. ReBa balances will be distributed through networks comprised of the Blue Whale network as well as service providers' own sub networks. Protection of integrity on the ReBa is most critical to the integrity Blue Whale ecosystem. The Blue Whale Network will utilize enhanced security mechanisms to keep the information safe, encrypted and hardened against attacks.

Growing & Governing the Blue Whale Network

Growing a large network of users generates network externalities which are critical to the success of any platform. The Blue Whale Network plans to create a network of various sharing platforms which share our philosophy.

Decentralized M&A (On-boarding)

A decentralized merger and acquisition structure has been designed to ensure the scalability and exponential growth in adoption rates of the Blue Whale by increasing the number of DMA Partners and “provinces” on the Blue Whale Network..

Like a white-label franchise, Blue Whale provides small businesses with white-label tools which they can use for their own communities (“provinces”). Each of these DMA Partners feature their own CAMs, DANs, and access to ReBa, which are powered by the Blue Whale blockchain. This allows those small businesses to offer the same contribution-based reward and employment benefits to the freelancers on their own sub networks. These incentives attract freelancers to join their sub networks, allowing them to grow their communities. For instance, a small content creation and publishing house (called “WordSmiths Inc.”) who relies on freelance writers to produce content for them, could move their community onto Blue Whale’s network, where they can manage their pool of freelance writers through their own WordSmiths tools, and offer them the benefits of CAM, DAN, and ReBa.

By allowing existing small businesses and their client networks to participate on the Blue Whale Network as a sub network, not only are we able to allow small business owners to scale quickly and afford freelancers the benefits traditionally reserved for salaried employees - but this in turn enables Blue Whale’s network to grow exponentially.

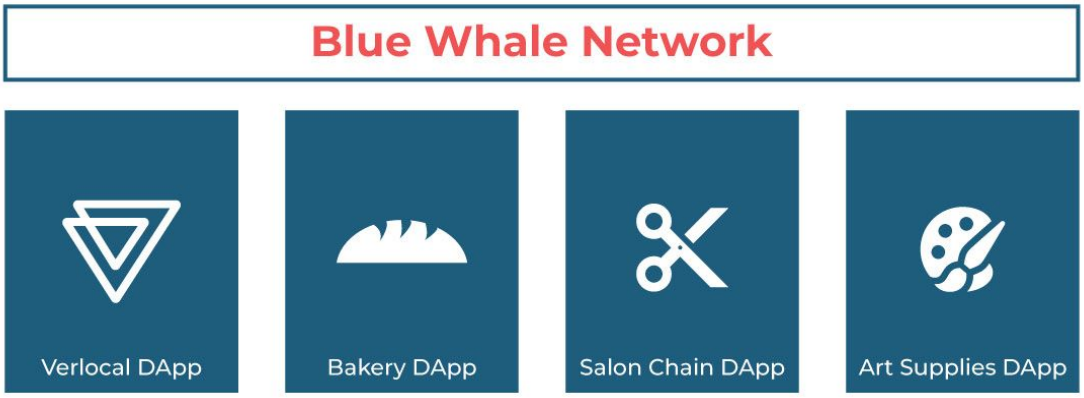


Figure 10 - DMA Partners on Blue Whale Network

1. We will evaluate the value of incoming DMA Partners to decide how much BWX tokens they have to buy as reserve in order to join the network. Eg. 10% of their total value or 10% of their token sum should they decide to ICO.

2. We will whitelabel the Verlocal platform to very quickly create a DMA Partner's marketplace that is integrated into our blockchain

3. Each DMA Partner can produce their own tokens eg. SIM Coin; or they can simply use BWX

When these small businesses come on-board the Blue Whale network as a white-label tools, they may also choose to issue their own coin to raise funds through ICOs - of which, 10% will be kept as a reserve with Blue Whale. However, they may also decide that they do not need to raise funds, or through an ICO. If they choose not to hold an ICO, they must purchase 10% of their valuation (by annualized EBITDA) worth of Blue Whale eXchange (BWX) tokens at the prevailing exchange rate. This ensures that the Blue Whale main network, and its sub networks, continue to remain mutually-invested in each other.

Decentralized Ad Network

As an individual freelancer with a specialized skill set, it is impossible to take on larger, higher-value projects which require multiple skill sets. Much in the same way that corporations coordinate between different forms of specialized labour - e.g. marketing, legal, HR, finance, operations - Blue Whale's DAN aims to develop a UI which allows freelancers with different skill sets to collaborate to take on larger, more complex projects together. This provides freelancers with the option of offering full-stack solutions to clients' business needs, which not only increases their earning potential and helps them to grow into a small business, but can also strengthen relevant areas of collaboration between DMA Partners across different verticals in the Blue Whale Network.

Users on different gig economy platforms can participate on a common Ad Network by placing ads and providing windows and channels for other advertisers. When the ad results in a purchase, both the window provider and the Blue Whale Network will earn commissions.

As explained earlier, blockchain technology allows for users to benefit fairly across various platforms using the Decentralized Ad Network. It makes sharing of purchasing data and the subsequent tracking and analysis to be performed transparently and without fees. Instead of running separate ML algorithms on each platform, the Blue Whale Network's Oracle will aggregate the advertisement data in order to increase the efficiency and the accuracy of advertisement targeting.

However, each platform is free to decide, through voting, on whether it will participate on the Ad Network.

Service Integration

Referral, Verification, Arbitration and Payment are the basic services supported in Blue Whale Network.

Ad Referral

The following shows Ad Referral flow. When a customer clicks an Ad in Referrer's site, which leads the customer to Preferred site. AdNet Referral Smart Contract will distribute Ad Referral incentives properly and save the result of the transaction to Blue Whale Blockchain. The transaction Referrer's balance update information and Reward Bank's balance update information is inside the transaction. This transaction basically updates Reward Bank balance and return notification and acknowledgement to Referrer and Customer respectively. APIs which are necessary for communication to AdNet Referral Smart Contracts will be provided so service providers can easily integrate this service in their service without any difficulties.

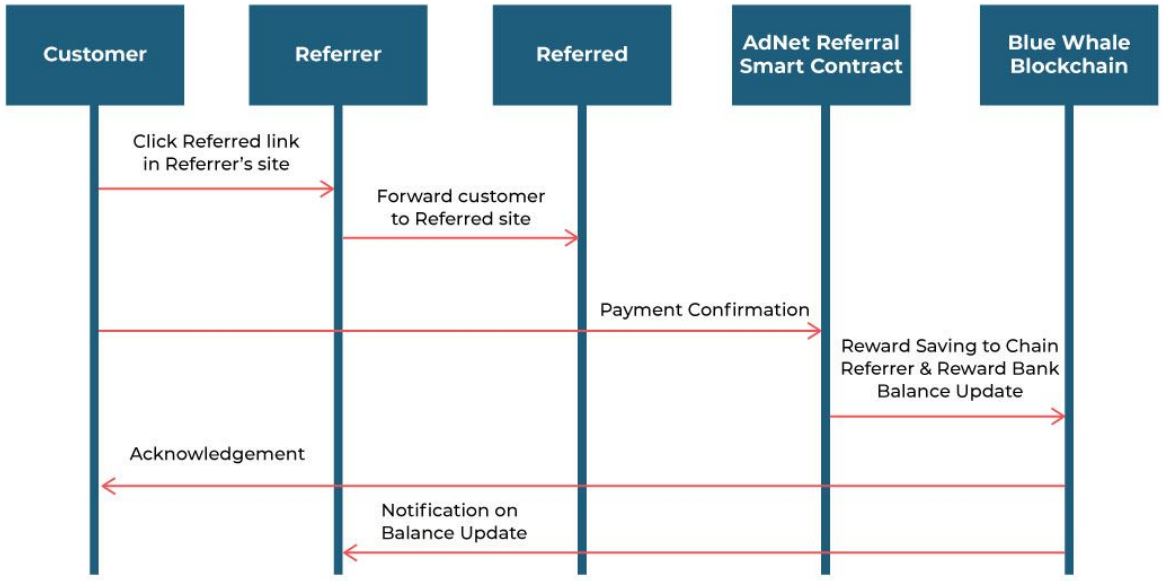


Figure 11 - Ad Referral Workflow Process

Verification

When a freelancer joins a service platform, verification step is inevitable to prevent from registering inappropriate service contents or providing false information. The freelancer is required to provide service related information including their profile which will be verified by community members. As a result of community members' assessment, the freelancer and their service will be listed and those who participate in the verification will be rewarded.

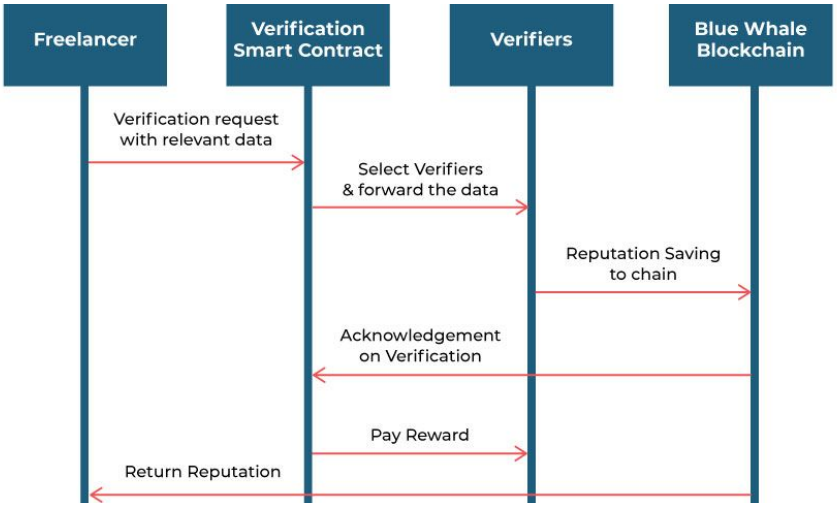


Figure 12 - Verification Workflow Process

Arbitration

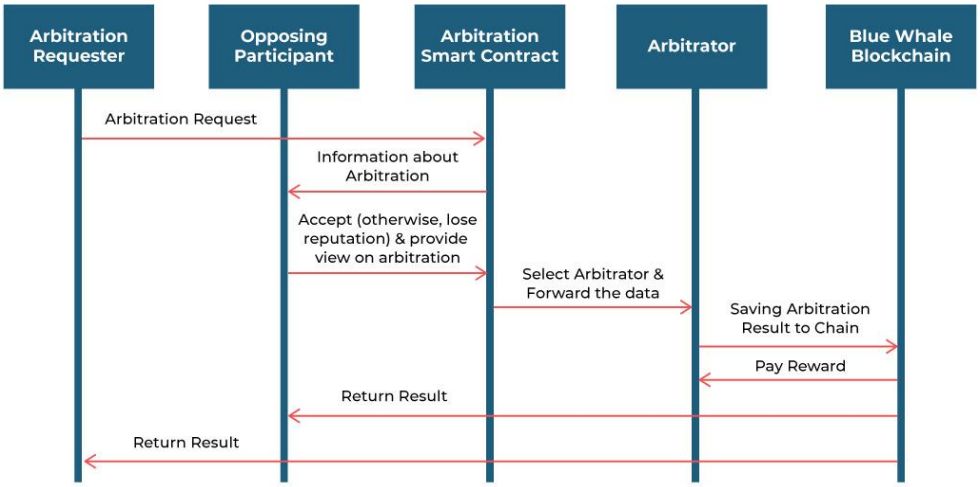


Figure 13 - Arbitration Workflow Process

When either a freelancer or their customer stake an issue amount BWX and request for arbitration in case of conflicts, the issue is sent to the arbitration list where community members arbitrate by assessing the issue. After the issue is ruled out, those who participate in the arbitration will be rewarded and the winner takes the stake deposited from both side.

Financing the Network - Token Economics

Blue Whale adopts Steem's proven Token Economy structure[10] but improves upon existing problems with their token economy.

Blue Whale Economy introduces Blue Whale eXchange (BWX) and Blue Point (BP).

Blue Whale eXchange (BWX)

Blue Whale eXchange is the fundamental unit of account on the Blue Whale Network and is the base token for the value of Blue Whale Point. BWX may be transferred to other users as a form of payment.
BWX can be used as following:

- BWX can be used to make P2P payment from users to freelancers as a service fee
- Users and freelancers receive rewards in BWX for their contribution including referral, authentication and arbitration
- Paid-time off and other benefits will be paid by BWX.
- BWX can be promoted to Blue Point while transfering from BWX to BP while BP can be demoted to BWX while transfering from BP to BWX

Blue Point (BP)

Token holders are able to stake their BWX as a long term contribution, and they may receive additional benefits within the platform. As a hypothetical illustration BWX tokens which have been staked to a 13-week vesting schedule may be converted into Blue Points (BP). BP balances non-transferable and non-divisible.

Freelancers with more BP have more chance to expose their services on the Blue Whale Network and but also have more chance to participate in the contribution activities for the distribution of rewards.

BP can be transacted in the following ways:

[10] *https://steem.io/SteemWhitePaper.pdf*

- Advertisement referral rewards are paid in BP, which is stored in a pension fund, with a vesting period of 10 years.
- Freelancers with more BP have more benefits they receive for their contribution to the community.

Federal Architecture on Blockchain

Since each platform has their own unique form of governance, it is impractical to ask the various platforms to change to participate in the Blue Whale Network. The network respects the independence and the distinctness of the various white-label platforms. By operating with a federalized philosophy, each platform/node on the BWN will be called a "Province" with the free exchange of ideas and coins between the different Provinces. The blockchain is the best technology to achieve this vision.

Blue Whale Network's cryptocurrency is called the Blue Whale eXchange (BWX). The platforms who are using BWX can set their own reserve ratio and can also issue their own coins.

The benchmark reserve ratio (RR) will be set at 110% of previous year's lowest BWX price adjusted for inflation in each year. When the coins issued by a platform provider does not meet or exceed this reserve ratio requirements, it is required for the platform provider to lock-in more reserves through purchase of additional BWX to stabilize BWX prices as well as the whole BWX-based economy. If and when the coins issued by another platform does not meet or exceed this reserve ratio requirement, they are required to lock-in a purchase of additional BWX.

Participating platforms can issue their own coins. Due to differences in national economies and exchange rates, localized platforms will be able to issue coins that meet their specific needs based on their own reserves of BWX. However, to simplify the management of transactions with locally issued coins, the individually issued coins needs to have a fixed exchange rate with BWX.

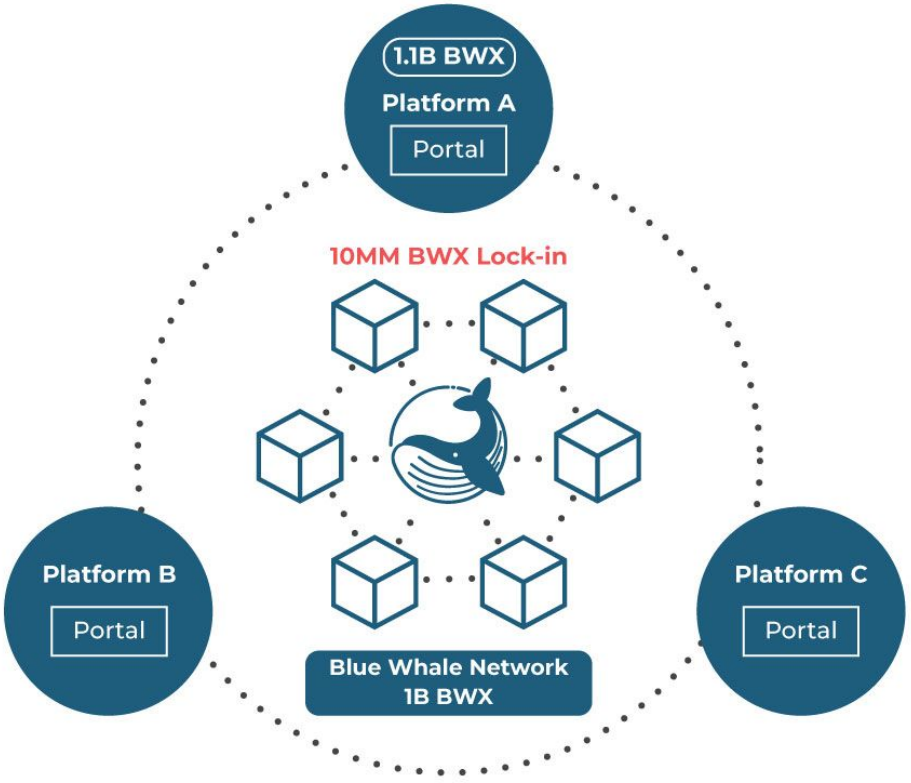


Figure 15 - Federal Architecture on Blockchain

Federal Architecture Process

This section will detail the process of growing the network's Federal Architecture.

New platform launch

Many factors, including the financial status of the joining platform will be considered in calculating the reserve requirements. For instance, if the reserve requirement is 20%, it is proportionately calculated based on 200M Monthly Active Users (MAU) for each platform. Newly launched platforms that do not meet the 200M MAU threshold are apportioned additional coins, free of charge. For example, a platform with 10M MAU wishes to join the Blue Whale Network. 10M is 1/20 of the 200M base MAU size. Therefore, the platform will be given 1% (1/20 of 20% basis Reserve requirement) of BWX coins for free.

The initial BWX issuance is presumed to be 100B coins. This means that each platform can issue 1B coins and receive a free allocation of 100M coins. Platforms wishing to issue more than 1B coins are required to purchase and lock-in additional BWX.

When a platform's issued coins exceed the Lock-In requirements

The use of Smart Contracts will prevent platforms from issuing more coins than the Lock-In requirements allowed in the BWN. In cases where the Reserve falls below 10% due to decreasing BWX price, the participating platform is required to purchase additional BWX within 1 month. The reference BWX price is calculated as the simple moving average (SMA) of the hourly closing price within the last 24 hours.

Conclusion

Since the inception of the Blue Whale Foundation, we've considered our revenue models to build a sustainable reward system for worker and contributors. We strive to connect the providers with the appropriate users to benefit all parties and not just a few platform owners.

Through this sustainable reward system, Blue Whale Foundation will provide the essential solutions to the fundamental problems arising from the increasing prevalence of the sharing economy.

Appendix

A. Anticipated Timeline (Roadmap)

Business Roadmap

Date	Description
2018. Q2	• ICO (May) • Partnership - Sharing Economy Industry in Korea
2018. Q3	• Kickoff event (1st annual VIP summit) • Listing of BWX • Blue Whale Network Launch (Alpha) • Blue Payment Gateway (Alpha)
2018. Q4	• Integrating Verlocal Services • Service Offering in Singapore • Service Offering in Korea • Smart City Festival in Seoul • Design Festival in Seoul • Partnership - Sharing Economy industry in global - EU, ASIA and US ○ Entertainment, HR, Education, Space sharing, Logistics, Skill Sharing • Launch Entertainment Platform based on Blue Whale WORK system
2019. Q1	• Integrating Arcardier Marketplace into BWN • Launch HR Platform based on Blue Whale • Meetups at 5 major cities with partners
2019. Q2	• Launch Education Platform (To be determined)
2019.Q3	• Launch Space Sharing Platform (To be determined) • Launch Space Sharing Platform (To be determined)

2019. Q4	• Annual Summit • Smart City Festival in Seoul and other cities • Design Festival in Seoul and other cities • Service Offering in US • Service Offering in Canada • Mainnet Open • Services Open: WORK for 2-3 more partners(SMB)
2020.Q1	• Meetups at 5 major cities with partners
2020.Q4	• Annual Summit • Open API based partner platform

Table 10 - Business Roadmap

Technical Roadmap

Date	Version	Description
2018.Q4	Arctic	• Open source of WORK ○ CAM - Referral • ICO Platform for partners • Apply to Verlocal • SaaS Platform V1.0 (CRM, Ads, Analytics and more)

2019.Q4	Atlantic	• Open source of WORK
		  ○ DAN for Advertisement
		  ○ Reward Bank
		  ○ CAM for all other activities (Verification, Acquisition, Reputation)
		• Mainnet / Testnet
		  ○ Sub-token exchange system
		• SaaS Platform V2.0
		  ○ Matching, Timetable and more
		  ○ Blue Whale Payout

2020.Q4	Pacific	• Apply retirement benefit and insurance system in RB
		• SaaS Platform V3.0
		  ○ Open APIs for 3rd party Premium SaaS tools
		  ○ Apply Big Data and ML to Advertisement

Table 11 - Technical Roadmap

B. Token Sale

Blue Whale eXchange	
Token Name	Blue Whale Exchange
Ticker Symbol	BWX
Technology	ICON
Token Features	Multi-Utility Token
Total Supply	32,160,000,000(Token Sale) + 32,160,000,000
Soft Cap	20,000,000 SGD
Hard Cap	30,000,000 SGD
Accepted Currency	ETH, ICX

Table 12 - Token Summary

Token Allocation

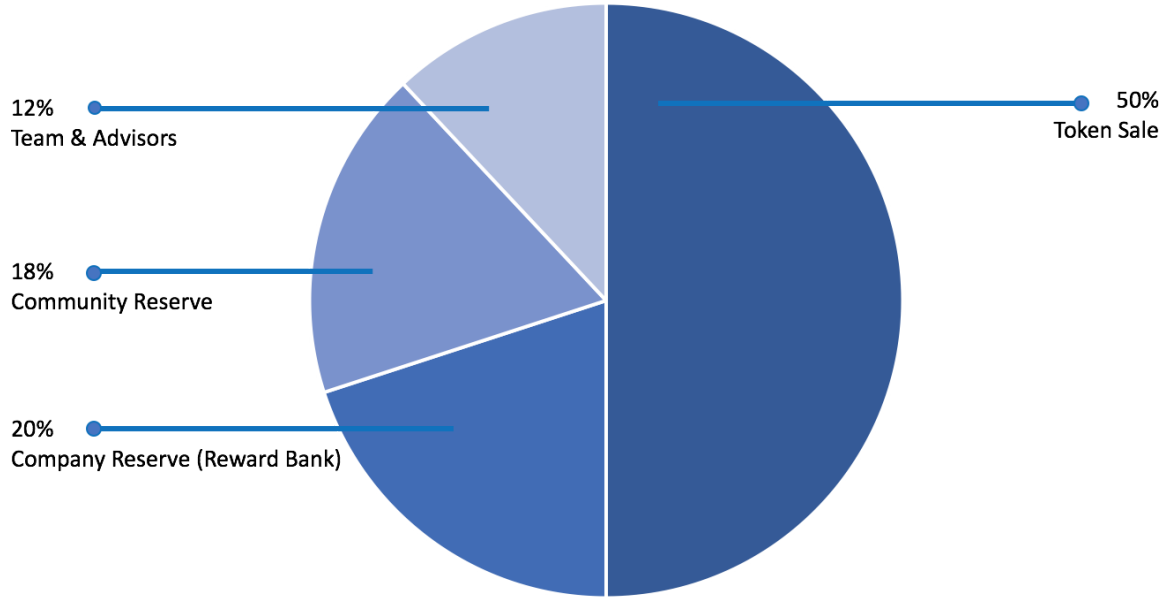


Figure 16 - Token Allocation Chart

The Blue Whale team will be on a 3-year vesting schedule. The team will receive ⅛ of their allocation 6 months after the end of the Public Sale. Every quarter thereafter, the team will receive 3/36 of their allocation until the 3-year vesting schedule is finished. Therefore, if one of the current members were ever to leave, no more tokens will be distributed to the team member. The remaining tokens will be allocated to a newly appointed team member.

- 50%: token sales
- 20%: Company Reserve (Reward Bank)
- 18%: Community Reserve
    - Bounty program
    - Community leader (verifier)
    - Community program
    - DMA swap
- 12% Team & Advisor: Co-founders, Project Team, Advisors, Early contributors.

Note: Unsold tokens will be burned after the ICO public sale.

Use of funds

Below is the breakdown of the funds after the token sale.

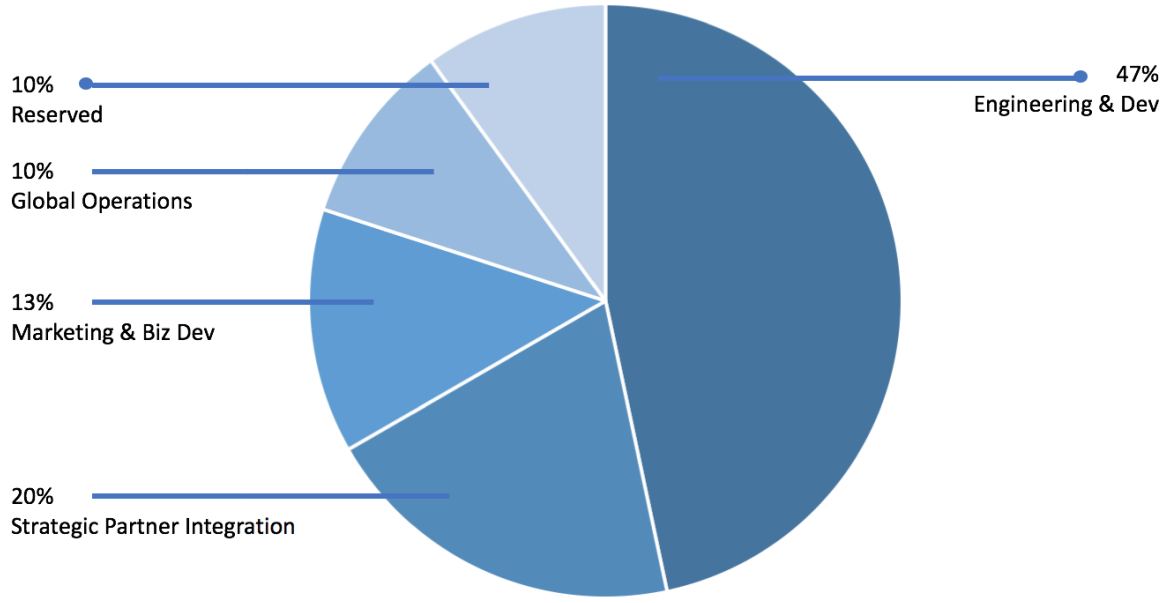


Figure 17 - Fund Allocation Chart

Total 30M SGD

- **Engineering & Dev** (14M SGD): 2 and half year plan, 40H/C with 3M SGD in 2018, 40 H/C with 5M in 2019, 50H/C with 6M in 2020
    - HQ is based on Singapore (10 H/C)
    - Blockchain R&D team and platform team is based on Korea (20-25 H/C)
    - SaaS dev team is based on San Francisco/Korea (5 H/C)
    - Korea, Japan, Europe, 2 more branches (4-10 H/C)
- **Strategic Partner Integration** (6M SGD)
    - Vertical platform integration in 5 strategic business areas - Freelancer(Skill Sharing), Entertainment, HR, Delivery, House Sharing, Ride Sharing and more.
        - Collaborative Development H/C
        - Collaborative Marketing
        - Operation cost

- **Marketing & Biz Dev** (4M SGD):
    - Decentralized M&A
    - Blue Whale events (annual conference, meet-ups) and PR
    - Blockchain and ICO platform partner.
- **Global Operation** (3M SGD)
    - Blue Whale SG, Blue Whale Korea, Blue Whale EU, Blue Whale US
- **Reserved** (3M SGD)
    - Tax (based on Singapore regulations)

C. Team

Will Lee / CEO, Co-founder

Will Lee is the CEO of Verlocal. He is a serial entrepreneur and has been running a couple of startups in the San Francisco Bay Area for the past 7 years. Will has also worked in the sharing economy industry for 5 years. He studied Artificial Intelligence at Stanford University and now runs Verlocal, a SaaS enabled decentralized marketplace where people can monetize their intangible assets such as skills and knowledge. His mission is to empower individuals to become one-person business owners and maximize their full potential. He aspires to create a human-centered industry where individuals can continue to develop and improve themselves through learning experiences.

Jaehyun Park / Co-founder

Jaehyun Park worked at SKT (EVP) and at Samsung Electronics (VP) for 10 years. He developed the first sharing economy platform in Korea and created Samsung Pay as Global General Manager. He has spent over 24 years in the S/W and ICT industry. He is also an entrepreneur, a blockchain investor, and a public speaker. He has written about Software technology for over 10 years and continues to write technical columns on Electric Daily and ZDnet Korea about blockchains and cryptocurrencies. He is leading a blockchain technical research group.

Hyunjin Choi / CTO

Hyunjin is an expert in computer security with more than 20 years of experience in R&D as well as commercialization. As the head of Advanced Platform lab at Samsung Electronics, he led the development of software platform which now runs on a wide range of Samsung devices, such as smartphones, tablets, TV etc. Believing that security is the key to payment technology, he initiated secure operating system development and demonstrated a world first prototype during 2012 London Olympics in collaboration with VISA Inc. He also served as one of the chief architects during Mars Polar Lander project at NASA, USA. He holds a Ph.D. in computer science from Cambridge University, UK.

Hawon Chung / COO, Co-founder

Hawon Chung is the CEO of ChainTOB, a global blockchain service operator. He studied computer science and engineering at POSTECH. He holds a wide breadth of experience through multiple positions (e.g. country

manager, sales, strategic programs manager, product/project manager, and system engineer) at various global companies including Sun Microsystems, Oracle, Splunk, and Elastic. He had setup multiple startups and has ran his own business in the IT industry since 2000. He believes that blockchain technology would not only change the world, but also give fair value to all participants in the economy. He is continuously looking out for new IT technologies that would contribute to the society.

Changsup Keum / CIO

Changsup is a software architect and researcher with 20 years of experience in the ICT industry. His interests include blockchain technologies, service platforms, and software architectures. Most recently, he was the research director of a trustworthy network service platform at ETRI, a government-sponsored research institute in South Korea. He got the Master at CMU (Carnegie Mellon University) and Ph. D at KAIST. He is a board member of Korean Software Engineering Society.

Jaewoong Choi / Managing Director, Co-founder

Jaewoong is an experienced product manager with over 10 years of experience in the IT industry. His expertise lies in infrastructure, software, web, and mobile applications. Most recently, he was the head of product and service at DomoSafety S.A. a leading healthcare startup in Switzerland. His responsibilities include managing service strategies, designing and implementing machine-learning algorithms for healthcare platforms and medical data analytics. Previously, he has led numerous large-sized projects at Sun Microsystems and Oracle that required the application of ERP, MES, Enterprise Portal and Cloud Platform for Samsung, LG and Hyundai.

Younggyo Seo / Full-stack Software Engineer

Younggyo is a cloud platform architect and software engineer with over 15 years experience. He is a co-founder and full-stack software engineer of Gitple, commercializing In-app Customer Support with chat. His recent 5 years expertise is on Software as a Service(SaaS) in the startup industry and he has experienced how to handle big data and design cloud platform architecture. Prior to that, he has over 7 years experience in mobile browser and web platform development.

Jaeyong Lim / Full-stack Software Engineer

Jaeyong is a Full-stack software engineer at Gitple, commercializing In-app Customer Support with chat. His recent expertise lies in Software as a

Service(SaaS) and recently worked as a full-stack engineer in Daliworks, which commercialized cloud-based IoT platform. Previously, he worked development of HTML5 browser and platform integration for Automotive devices.

Jaehun Jee / Blockchain Engineer

Since 2016, Jaeheon has been an active participant in the blockchain community as an open source developer for several blockchain platforms such as Ethereum, LISK, Hyperledger and Loopchain. His contribution focused on consensus algorithm in particular. Prior to that, he worked as a backend developer specialising in the area of Security in the Computer Systems Development Department of the Republic of Korea Army. and when he was a member of the Korea Information Technology Research Institute, he participated in the development of forensic tools with the National Digital Forensic Center.

Minsu Jeong / Smart Contract Engineer

Minsu is a blockchain enthusiast, having been involved in the blockchain community since 2015, he has a significant experience in developing smart contacts on Ethereum. He devoted past 10 years to development of financial application and platform at Nautilus Hyosung and TmaxSoft.

Sophie Ahn / Global PR and Communication Manager

Sophie has an unconventional career of Operational manager, Recruitment consultant and Educator. She is passionate entrepreneur and strong believer of share economy of sustainable ecosystem in career and education. After reading Biomedical Science at St George's University of London, Sophie utilized her analytical skill to both HR and Finance in Samsung C&T where she managed subsidiary companies and projects in the UK. She moved to Seoul two years ago to merge and enhance her operational knowledge with business development and sales skill as a recruiting consultant. Honed with well-rounded knowledge and skills of business, operational management, she is accustomed to the fast-paced industry.

Ludovic Gilbert / Communications Manager

Ludovic is a digital marketing expert with over 10 years of experience in the startup industry. Graduated with a Master’s Degree in Marketing and Technologies from France, his expertise lies in user acquisition, digital communication and paid advertising. Armed with great entrepreneurship

experiences leaning towards blockchain industry, Ludovic's missions is to introduce the objectives, core values and elements of the Blue Whale Foundation establishing relationship and rapport between all stakeholders and the foundation.

Ivan Hong / Content Manager

Ivan majored in Global Studies (Development Economics) at the National University of Singapore. He worked as a freelance researcher for the last 5 years, for clients in 15 universities across Singapore, Australia, Sweden, China, and the UK. While his work ranged from criminal law to digital marketing, he specializes in industrial policy and entrepreneurship. He spent 3 years as a product manager; designing and producing infantry clothing and equipment for clients in Asia. He held the 2016 Tan Kah Kee Young Inventors' Award during his time there.

Verlocal SaaS Team

Qihan Zhu / Head of Engineering

Head of Engineering at Verlocal, leading engineering team and product development. Graduated from UC Berkeley with double major in Math and Computer Science. Devoted to build reliable software solution for small-medium business owner.

Shiyan Yang / Full-stack software engineer

Shiyan is all-around full-stack software engineer at Verlocal, a start-up company in San Francisco Bay Area focusing on marketplace and Saas tools. Her solid grasp of software originates from her Master's degree in Engineering at Washington University in St Louis and as a researcher in deep learning algorithms. At the core of Verlocal, Shiyan effectively manages and builds platform and booking software for small business owners to accommodate their sales and bookings.

Hao Yu / Full-stack software engineer

Hao Yu is a full-stack software engineer work at Verlocal. The company is in San Francisco provide marketplace platform and SaaS tools that enable business owners to work effectively. Her job responsibility is to maintain the current platform and develop the software products. Previously, Hao worked as a full-stack engineer in a healthcare platform. Graduated from Washington University in St Louis with Master's degree in Engineering.

Chelsea Zhou / Product Designer

Chelsea Zhou is the product designer at Verlocal. She is a design generalist with experiences across digital products, transportation research and construction. As the product designer at Verlocal, she leads product design and management across platform, SaaS and blockchain teams. Previously, she worked on several blockchain and ICO projects including Mercury Protocol. She got Master's degree in Design from UC Berkeley.

Verlocal Sales & Marketing Team

David Huerta / Business Development Associate (U.S.)

David Huerta serves as a Business Development Associate, guiding the sales roadmap and implementation plan for Verlocal. Before joining Verlocal, David served as an Account Executive and Team Lead managing a team of five sales reps at Womply, which provides a data analytics and reviews management platform for small to medium sized businesses. David holds a B.A in Political Economy from the University of California, Berkeley.

Terry Grinner / Business Development & Sales (U.S.)

Prior to joining Verlocal, Tre spent a year working in private wealth management and contributed a great amount of effort to The Make a Wish Foundation. Tre is directly responsible for raising $1.2m for the organization.

Ryan Chew / Director of Business Development & Strategy (Singapore)

Ryan studied the sociology of small business at the Nanyang Technological University, and now runs Verlocal's operations in the Southeast Asia region: a SaaS-enabled, decentralized marketplace for freelancers. Ryan spent several years in the startup scene, having founded several startups ranging from gaming apps to utility apps including Fixir, an Uber for car repairs. As a serial entrepreneur, he is on a mission is to create a sustainable ecosystem which empowers individuals to become unchained from office desks and become successfully self-employed.

Alexis Low / Business Developer (Singapore)

Alexis is a business developer at Verlocal in Singapore and is part of the team in pioneering the expansion of Verlocal into Singapore. She graduated from Nanyang Technological University with a major in Business and is currently committed to her role in creating opportunities for Verlocal to help fulfill her mission of empowering local businesses and building a skill-sharing ecosystem in Singapore.

D. Advisors

Injong Rhee / Former CTO, Head of R&D, Software and Services at Samsung

Injong was the former CTO, head of engineering – in charge of all software and services globally at Samsung mobile. As the CTO, Injong was responsible for all aspects of software of all products of Samsung mobile including UX, Product Management, Development, Support and Updates. His most recent accomplishment is the software powering the flagship smartphones such as Galaxy S8 and Note 8, Gear smart watches and IoT services. During his six years with Samsung he spearheaded several signature software service businesses from incubation to full blown businesses; most notably Samsung Knox, Samsung Pay and Bixby. Prior to joining Samsung, Injong was a professor of computer science at North Carolina State University for 14 years. He is a two-time winner of the prestigious IEEE William Bennett Award for his work in computer networks (2013, 2016). He has published over 100 journal and conference papers in the areas of distributed computing, computer networks and mobile computing. He received his PhD in Computer Science from the University of North Carolina at Chapel Hill.

Mai Gang (Mark Mai) / Co-Founder of OKCOIN and Founder of VenturesLab

Mark is the co-founder of OKCoin, one of the world's largest and pioneering cryptocurrency exchanges. Subsequently Mark founded VenturesLab in 2005, China's first internet business incubator, along with legendary venture capitalist Tim Draper. He was also the venture partner of DFJ Dragon fund in Silicon Valley in the early 2000s.

Arturo Bris / Professor of Finance and Director of IMD World Competitiveness Center

Arturo Bris is Professor of Finance at IMD. Since January 2014 he is also leading the world-renowned IMD World Competitiveness Center. At IMD he directed the Advanced Strategic Management from 2009-2014. He has directed programs for senior executives in several industries and continents. Prior to joining IMD, Professor Bris was the Robert B & Candice J. Haas Associate Professor of Corporate Finance at the Yale School of Management (USA). Arturo Bris has co-authored a new book called: "Blockchange! How to survive the crypto economy." It provides a sharp

picture of the working mechanism, function and possibilities of blockchain technology. Professor Arturo Bris ranks among the top one hundred most-read finance academics in the world. He is also the President of the Board of Trustees of IMD Pension Foundation.

Marco Torregrossa / Managing Director at Euro Freelancers and Secretary General at European Forum of Independent Professionals

Former policy officer in the EU Commission and a lawyer by training, Marco is specialized in new forms of collaborative self-employment, cooperative solo-entrepreneurship, digital work platforms, and the impacts of flexible labor regulations on the future of work. For the past 13 years, he has been leading government relations and advocacy efforts, advising policymakers on the issues that one-person businesses and their ecosystem encounter.

Kyungjoon Lee / ICON Foundation Council member and CEO at DAYLI Intelligence

Kyungjoon studied computer science and engineering at POSTECH. He developed, at securesoft, Suhoshin which is the first indigenous firewall of Korea. He ran his own company, NomadConnection. He launched Zimly (a P2P media service) platform with over 30M registrations. Currently, he is the CEO of Dalyi intelligence and holds a position as a ICON foundation council member.

Jonghyup Kim / ICON Foundation Council member and CEO at theloop

Jonghyup studied computer science and engineering at POSTECH. He has a 20 year experience as a security engineer working on areas such as PKI, authentication, and security protocols. He holds a CISA certification and multiple patents relating to information security. Currently, he is the CEO at theloop (blockchain technology company responsible for loopchain) and an ICON foundation council member.

Young Min Kim / CSO and Chairman of the Board at SM Entertainment Group

Young Min Kim is the Chief Strategy Officer and the Chairman of the Board at SM Entertainment Group. With over 19 years of global experience in the entertainment industry, Mr. Kim is a visionary leader who oversees and leads SM Entertainment Group's global business strategy. He brings a rich experience from the entertainment industry into Blue Whale to strengthen our culture and global diversity in Sharing / Gig economy

Simon Yu / CEO at Storm

Simon Yu is the CEO and Co-founder of StormX. At the age of 19, Simon turned a $100 gift into a $500,000 business. Simon became fascinated with Bitcoin and Blockchain technology when he was working at his last job in banking. In 2014, Bitcoin filled the media due to the negative aftermath of Mt. Gox and Silk Road but Simon dove into the technology and saw an opportunity from Blockchain that would disrupt multi trillion-dollar industries. Since then, Simon has used his unique vision and ability to execute joined to grow a small dorm room project with multi million users on the blockchain across 187 countries

Nick Yang / Entrepreneur, Lebox Capital

Nick is an entrepreneur who founded the Angel investment fund Lebox Capital, one of the most well-known angel investors in the People's Republic of China. He is also Chairman of the Chinese Young Angel Investor Association and Vice-Chairman of the Shaanxi Province Chamber of Commerce. Yang graduated from the University of Michigan with a BSc in Electrical Engineering and an MSc in Electrical Engineering from Stanford University. While at Stanford, he co-founded a community site ChinaRen.com, which was sold to Sohu.com in September 2000. Yang left Sohu.com to found KongZhong, a company focusing on wireless value-added services. In two years of operation, KongZhong became the leader in this field in terms of user number and revenue. The company was listed on the NASDAQ, making Yang the youngest president of a listed company on a US stock exchange. In August 2008, he left KongZhong to start his third venture Wukong, a mobile Internet operation support company for telecom operators and mobile Internet distribution network.

Kwangsug Lee / Co-founder and Chairman, Incruit Corporation

Kwangsug is the co-founder and chairman of Incruit. In 1998, he created an Internet service to match job opportunities with resumes. He has 20 years of experience in the internet recruitment industry. He is serving as an independent director for Winix, Co, Ltd. He is an active member of Entrepreneurs' Organization, helping startup entrepreneurs. He was previously a partner at Primer and an independent director for Gravity, Co. Ltd.

Namsik Lee / President at Suwon University

Namsik graduated Seoul national university and got MS and Ph.D. at KAIST. He started to work as researcher at Michigan University and KRISS for 10 years. He has an enthusiasm as an educationist. He was a professor start from KAIST, Hansung University and Hongik University. And, He was a university president at Gyewon Art University, Suwon University and Junnam University. Besides his educational experience, he has been chairman, BOD, committee in various social association, public institute and government. Currently, he has been looking into the blockchain technology for the next generation.

Sangbum Kim / Bloter.net CEO

Sangbum is the CEO of BLOTER, which is the most popular technology news media in Korea. He has worked as a reporter since 1995 for multiple IT-oriented news media such as The Electronic Times, Dot21 and INEWS24. He wrote various articles and tech columns focused on software & services. He is focused on blockchains because he is confident that technology will lead to better human lives.

Hyunkeol Kim / Dalcomsoft CEO

Heunkeol is the CEO and founder of Dalcomsoft, Co., Ltd., where he has developed and published mobile music games including Superstar BTS (Superstar SM, JYP). Prior to Dalcomsoft, he was the COO and co-founder of Soribada, Co., Ltd., the first online music streaming service company in Korea, which listed on KOSDAQ in 2007. During his tenure as COO of Soribada, he developed and produced various projects including Milk and Samsung Music apps for Samsung Galaxy smartphones.

Sanku Jo / Kozaza CEO

Dr. Jo is founder & CEO of KOZAZA, a Home Sharing of Korea. He is a seasoned global serial entrepreneur with 30-year Internet experience both in Silicon Valley and Seoul. Prior to KOZAZA, he leads new businesses of Internet and Mobile as a Vice President both in KT and LG U+. As CTO, he co-founded NetGeo, an Internet Geolocation pioneer in Silicon Valley. He researched Interenet2 and distributed computing at the Lawrence Berkeley National Laboratory in California. He got the doctoral degree from Texas A&M in USA and BS/MS from KwangWoon University in Seoul.

Taejin Kang / Insignary CEO

Taejin is an experienced IT professional whose career ranges from a startup founder to executive positions at some of the largest companies in the world. In 1999, he co-founded ThinkFree with the mission to deliver desktop software as a free internet service. In a 2001 magazine interview, Microsoft CEO Steve Ballmer mentioned ThinkFree as one of the biggest threats to his company, second only to Linux. He was one of 20 “Web 2.0 Heroes” Bradley Jones interviewed for the 2008 book by the same title. When mobile became the major battleground for internet services, he served as the head of the Service Incubation Office at Korea Telecom, and then as the head of the Media Service Team at Samsung Electronics before returning to his start-up roots as the President and CEO of Insignary. He has presented at high profile tech and business conferences around the world such as Web 2.0 Expo, Open Mobile Summit, and MIDEM.

Jongmin Ham / LF VP

Jongmin has been working in Internet service technology and marketing for over 20 years. He is currently working as CTO/EVP at LF and leads their digital commerce services. Since 2006, he worked as EVP of Naver and as VP of Samsung Electronics, creating and developing many Internet services.

Minu Park / CrowdWorks CEP

Minu is an entrepreneur who has had 4 startup and 3 M&As. He is a columnist and an ICT specialist for university professors. His company, Crowdworks, is working on an online crowdsourcing platform for machine learning engineers, similar to Amazon Mechanical Turk. His expertise lies in, but is not limited to, strategy planning, service planning, system design, organization management, and startup consulting.

E. Partners

Company Name	Website	Description
Verlocal	http://www.verlocal.com	Global freelancer SaaS platform provider (US, Canada, Singapore and Japan)
ICON Foundation	http://www.icon.foundation	Global Top Tier blockchain based distributed platform and operating foundation
theloop	http://www.theloop.co.kr	Global No.1 blockchain core technology - loopchain
ChainTOB	http://www.chaintob.com	BPaaS platform based on loopchain technology
Insignary	http://www.insignary.com	Security firm detecting vulnerabilities in binary codes
Kozaza	http://www.kozaza.com	Korea's No.1 house-sharing company (i.e. Airbnb)
Dalcomsoft	http://www.dalcomsoft.co.kr	Korea's No.1 music and entertainment company
CrowdWorks	http://www.crowdworks.co.kr	Korea's No.1 crowdsourcing company (i.e. Mechanical Turk)
Bloter	http://www.bloter.net	Korea's No.1 ICT magazine and blog company

Table 13 - List of Strategic Partners