VQ Marketplace:
A Decentralized Marketplace Network

VQ-Labs

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Abstract

We outline the concept and architecture for VQ Marketplace Network, including:
(1) set of protocols powering sharing-economy marketplace scenarios with core parts of the transactions to be realized on blockchain,
(2) global ecosystem of decentralized sharing economy marketplaces,
(3) tools to start new marketplaces in the network,
(4) supplementary value-adding centralized services.

VQM Token is cryptographic utility token in the ecosystem.

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1. Executive Summary

We design and build **VQ Marketplace Network**, a partly decentralized marketplace ecosystem.

VQ Marketplace Network will be the first system which proposes decoupling of different departments in the platform economy, allowing the customers and suppliers to choose which storefronts and services they use to access the network and transact.

In addition to that, we will build tools to start marketplaces in selected verticals such as rentals, services, ride-sharing that can be customized and deployed cost-free by anyone in our ecosystem.

We propose 3-tier architecture consisting of decentralized ledger on Ethereum network, marketplace dApps and value-adding centralized services.

The go-to-market strategy involves targeting and incentivizing entrepreneurs, developers and small business owners to join the ecosystem and build marketplaces. The focus is laid on sharing economy use cases.

Value for Marketplace Creators

We enable entrepreneurs, developers and businesses to build their marketplace platforms in the ecosystem. We provide plug & play solutions for starting new marketplaces based on predefined marketplace templates or other existing marketplaces. No developers are needed for starting a new marketplace. The marketplace can be easily built and managed through the Admin dashboard. Enabling anyone to start marketplaces will boost competition. Every marketplace will have access to one decentralized database of listings from the beginning. We will build an ecosystem that is self-sufficient and powerful enough to compete with the biggest marketplace providers in the over 1 trillion online marketplace sector.

Value for Suppliers

In the VQ Marketplace Ecosystem, there is one decentralized database of all listings. All marketplaces connect to a global decentralized database of listings. Suppliers in the network gain global exposure without the need to maintain their listings across different marketplaces.

Value for Customers

The end-customers will be able to easily switch between marketplaces and still have access to the same listings. This will create a natural competition among marketplace creators providing a better user experience and lower fees for the end-consumer. Accounts in the ecosystem are global with one reputation.

Value for the world

For the world — The entire system will be open source and free-to-use by anyone in the world. The entire end-user application codebase of VQM is and will be completely open-sourced to boost competition and lower market entry in the Marketplace Ecosystem.

2. Introduction

A. The rise of the Sharing and On-demand Economy
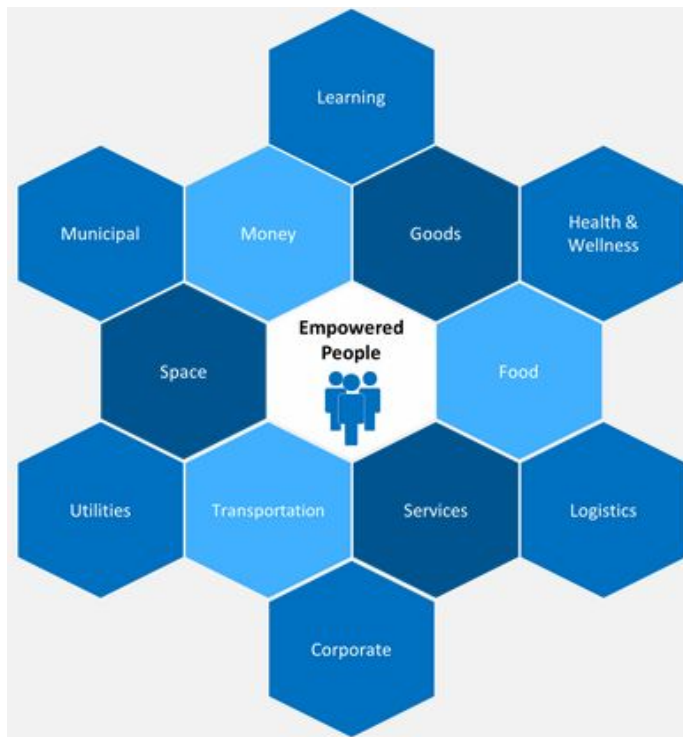
Due to limited resources, people are now striving to create sustainable solutions which generate not only economic prospects, but true value for both users and providers alike. The two main foundational aspects of the Sharing Economy are: the conversion of idle assets into economic opportunities, and building of communities through the sharing of goods and services amongst one of more entities. Since its inception, the Sharing Economy concept has rapidly spread across the globe, in large part due to innovative SaaS (Software-as a-Service) solutions and the ever-growing globalization of communication platforms. This shift in economic structure has resulted in the creation and overwhelming success of several online marketplaces, spanning a wide variety of sectors, in an attempt to meet the accelerating demand. One such example is Airbnb, a peer-to-peer accommodation platform created in 2008, which had a reported value of roughly $30 billion in 2016. Shortly thereafter Uber, a personal taxi service, was launched and now has a reported value of over $68 billion.
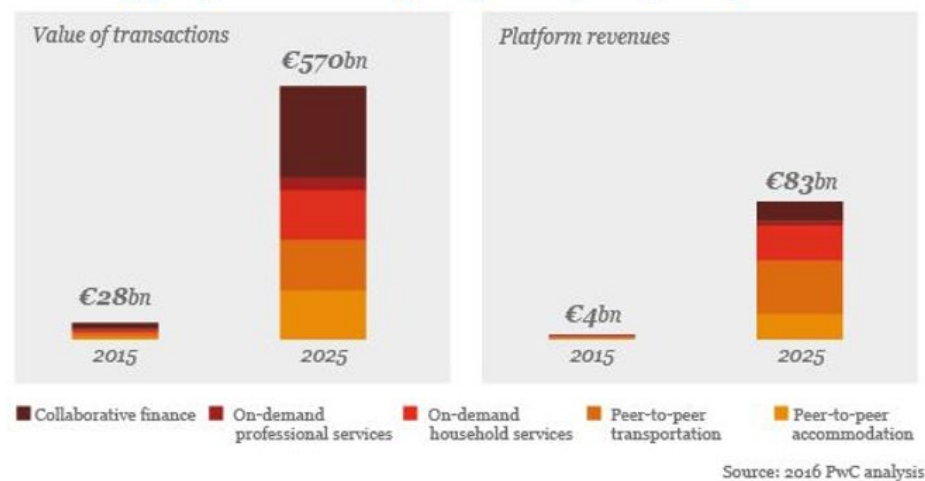
This shift has been noticed by everyone from small start-ups to globally established corporations; resulting in a need for efficient online marketplaces, which seamlessly combine supply and demand in one platform. However, the creation, implementation and maintenance of the aforementioned software is not an easy task. It requires a substantial amount of time, and a very specific skill set, which can be cost prohibitive for new and smaller companies to create and sustain.

B. The future of the Sharing Economy

The value of sharing is an inherent trait in human nature. Our technology system will enable users to raise it to a new level. The Sharing Economy has the potential to address global issues such as: the unsustainable growth of cities and their required resources, poverty, and the degradation of community values.

From a purely financial point of view, the Sharing Economy is projected to undergo exponential growth and generate a transactional value of $570 billion by 2025. With the growth of newly emerging online marketplaces, the market will experience a decentralization, further facilitated by Blockchain technology.

Revenues and total transaction value facilitated by sharing economy platforms in Europe by sector, 2015-2025

Value of transactions

€570bn

€28bn

2015   2025

Platform revenues

€83bn

€4bn

2015   2025

■ Collaborative finance ■ On-demand professional services ■ On-demand household services ■ Peer-to-peer transportation ■ Peer-to-peer accommodation

Source: 2016 PwC analysis

VQ Marketplace recognizes the potential of growth and the positive outcomes which can be achieved through the Sharing Economy. By enabling the creation of online-marketplaces for anyone in short time, we empower entrepreneurs to turn their ideas into reality, helping them realize their full potential while also aiding in the development and success of the global economy.

C. Vision

We believe anyone should have quick access to anything. The Sharing Economy will play a major role in the sustainability and success of societies' social and economic development by replacing 'ownership'

with 'access' through peer-to-peer and on-demand platforms. We strive to further increase its effect by decentralizing the sharing and on-demand Economy, thus lowering the entry barriers. Our solutions will bring people together and allow them to interact and share with one another without the need for an intermediary. Anyone with an idea will be able to start an online marketplace and this democratization process will lead towards a more sustainable future by contributing to the social and economic growth of societies.

D. Network Effects

A network effect (also called network externality or demand-side economies of scale) is the positive effect described in economics and business that an additional user of a good or service has on the value of that product to others. When a network effect is present, the value of a product or service increases according to the number of others using it.

"Once you've built a strong network effect, it's really difficult for others to compete with you.", says James Currier from NFX Guild.

In the following, an overview of relevant network effects are discussed.

a) Protocol Network Effect

A Protocol Network Effect arises when a communications or computational standard is declared and all nodes and node creators can plug into the network using that protocol. Bitcoin and Ethereum are recent examples of protocol networks. The protocol setter can be either an individual company, a group of companies, or a panel.

Protocol networks coalesce around communication and computational standards, which form the basis for the links between nodes (e.g. Bitcoin miners and Bitcoin wallets).

Ethernet is another, more traditional, example of a Protocol Network Effect. When Robert Metcalfe founded 3Com, he persuaded DEC, Intel, and Xerox to adopt Ethernet as a standard protocol for local computer networks, with a standard speed of 10 megabits per second, 48-bit addresses, and a global 16-bit Ethertype-type field. Competing proprietary protocols existed, but as Ethernet pulled away and began to capture more and more market share, Ethernet-compatible products flooded the market. This increased the value of Ethernet at a compounding rate and decreased the value of competitors, regardless of their relative performance. Soon, ethernet ports became standard features of all modern computers.

Once a protocol has been adopted, it is extremely difficult to replace. Note how the fax protocol is still in use, or the TCP/IP protocol (even though other, better protocols now exist for those purposes).

It's also true that the protocol creator doesn't typically capture most of the value from the development of the network, as they normally do with other direct nfx.

This distribution of value in a Protocol Network can be shifted if the protocol creator can maintain ownership of a significant percentage of the tokens within a token-enabled network, or maintain central control over addressing, identity, wallets, naming, or prioritization and still get the network to adopt the protocol.

The success of such an adoption strategy is often less about technology and more about marketing, social engineering, and choice of market niche. That's why VHS beat Betamax, even though Betamax was arguably a better standard. It's also part of why Bitcoin has taken off as a digital store of value, when it is costly to operate and less transactional than many other digital currencies.
(Source: https://www.nfx.com/post/network-effects-manual#protocol-direct)

Market Network Effect
A Market Network combines the elements of a professional network, an online marketplace, and a SaaS tool all in one. As a result, its network effects and defensibility are more powerful than any of the three elements would provide alone. At the core, no marketplace is as defensible as other marketplaces combined due to the significant multi-tenanting on the supply side. So, there was a drive for scale and deepening the network effect.

3. Problems

A. Problems faced by new online marketplaces:
- With the established paradigm in the market "Winner takes it all", it is often hard to enter the market and compete with existing players.

- Creating an OMp requires technological know-how & time. People usually lack one/both, and often do not possess the financial resources to pay for professional assistance.

- People prefer to start with a simple, but well-functioning solution in order to validate their idea. This allows them to build a solid user base prior to investing large amounts of money.

B. Problems faced by suppliers:

- Suppliers are dependent on the centralized platforms

  Based on research in years 2013-2016, 27% of the suppliers are dependent on the platform for their primary source of income. It has been found that 29% of respondents who were involved in online gig work reported that the income they earned "is essential for meeting my basic needs" (2).

- Suppliers need to maintain their listing portfolio on a wide range of platforms to ensure the exposure.

C. Problems faced by customers:

- Customer are charged high fees, often ranging to 30% of the transaction volume for transacting on existing on-demand and conventional marketplaces

- Due to local regulations, the same marketplace verticals are covered by local marketplaces. These marketplace have centralized listing databases. Customers have to discover new products and applications.

3. Solution

Our current solution, VQ Marketplace Platform enables entrepreneurs and developers to start an online marketplace. Starting marketplaces in our marketplace infrastructure requires no coding, it's risk-free, entrepreneurs can start marketplaces easily with plug&play templates, and the whole codebase is open-source.

The next step is to introduce a element of decentralization to the system. We introduce an architecture of global decentralized database of listings, transactions, disputes and more.

Multiple rentals-, services- and ride-sharing marketplaces can connect to this global database. Those platforms become in this context just "enablers" or "storefronts" of the transactions between the demand and supply side.

We develop decentralized protocols:
- for storage of listings
- for transactions for sharing economy use cases
- for resolving disputes in the ecosystem

We develop a platform:
- for building new marketplaces without the need of coding
- providing value adding services

We develop an ecosystem of marketplaces, suppliers and clients.

In the VQ Marketplace Ecosystem, suppliers maintain global listings on the blockchain per vertical. Apartment rentals, services and ride-sharing marketplaces are examples of possible types for the listings.

Due to global decentralized database, every marketplace joining the network increases the value for the end-consumer and every consumer creates more value for each marketplace participating in the ecosystem.
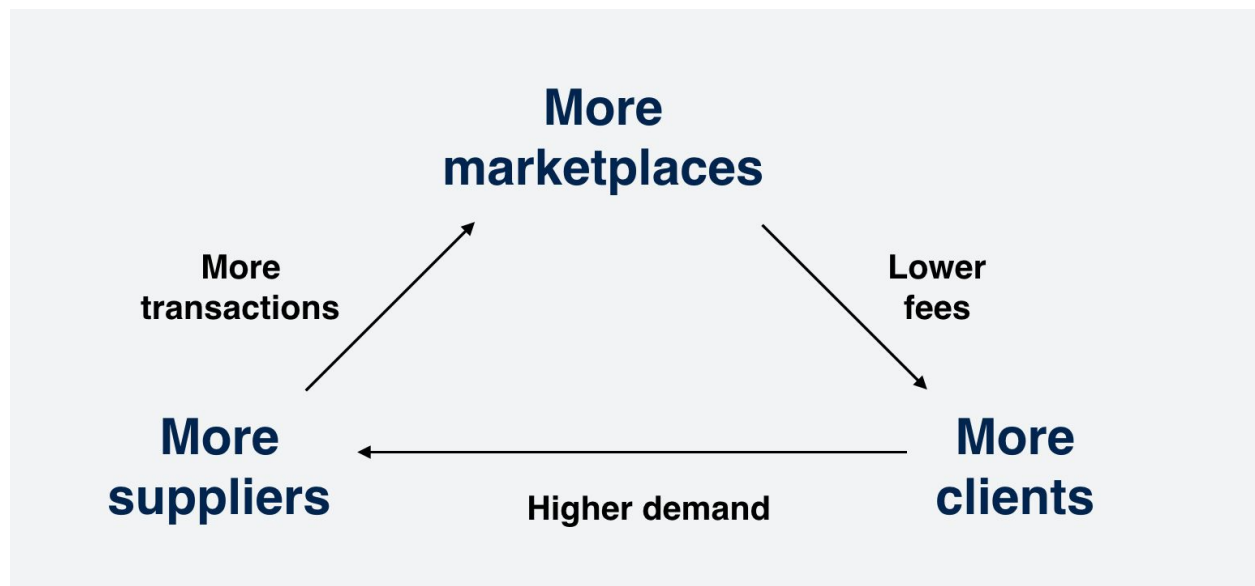
Everyone will be able to create marketplace templates utilizing our standards and protocols. It should lower the hurdle of starting new marketplaces, simplify the launch of existing business models in a new geography, form local markets and increase the competitiveness in the market. The marketplace creators own their brand, but the marketplace infrastructure and the data is intended to be a public good.

we identified and will implement network effects early on and will leverage them to build strong supply and demand side, to incentivize growth and introduce defensibility in its ecosystem.

In the Ecosystem, every user in the marketplace will have one global account instead of many separately for each marketplace. In this way, the customer will be able to use marketplaces in every vertical

seamlessly. Imagine AirBnB (Rental Marketplace), Uber (On-Demand Taxi Marketplace), Amazon (Product Marketplace) in one unified network. Every user that comes to the ecosystem profits from a spectrum of all the different marketplaces listings combined without the hurdle of having multiple accounts / identities. Users can still use different wallets with varying levels of identity attached for certain transactions, or choose only to reveal their true identity to the seller while using a single-use wallet.

4. Architecture

4.1. Components

VQ Marketplace (**VQM**) is an open-source platform consisting of many micro-projects and is built on top of several existing open-source libraries and protocols.
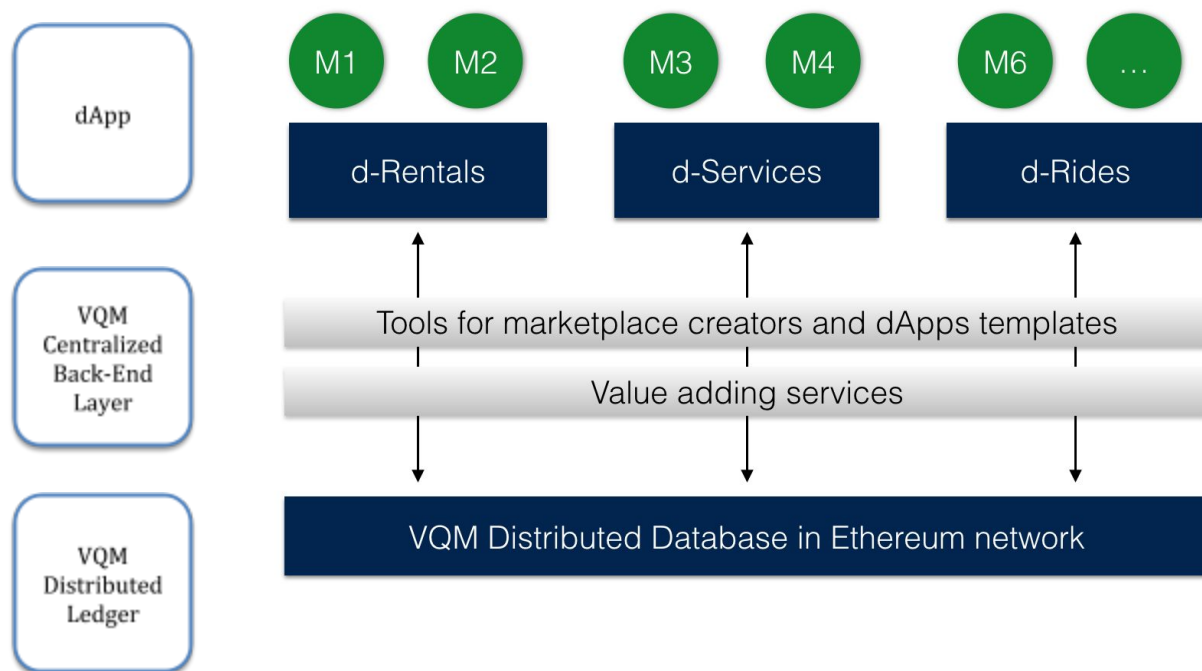
A. Marketplace dApp

The marketplase dApp is an open-source HTML and JavaScript application that connects and interacts with the Ethereum network and the centralized back-ends. The D-App allows users a

user-friendly way to create, manage, validate and publish listings. The D-App will use js-ipfs for connecting to the IPFS network and web3.js for smooth integrations with popular clients like Mist, MetaMask, and Toshi, with fallback instructions for those who wish to transact manually.

While we envision competing front-end applications, it's important to remember that they will all interact in one ecosystem.

VQM dApp Builder

The VQM D-App is a white-label dApp that is shaped by marketplace configuration created by the VQM Builder. It also offers an admin panel for marketplace creators.

B. Centralized back-end layer
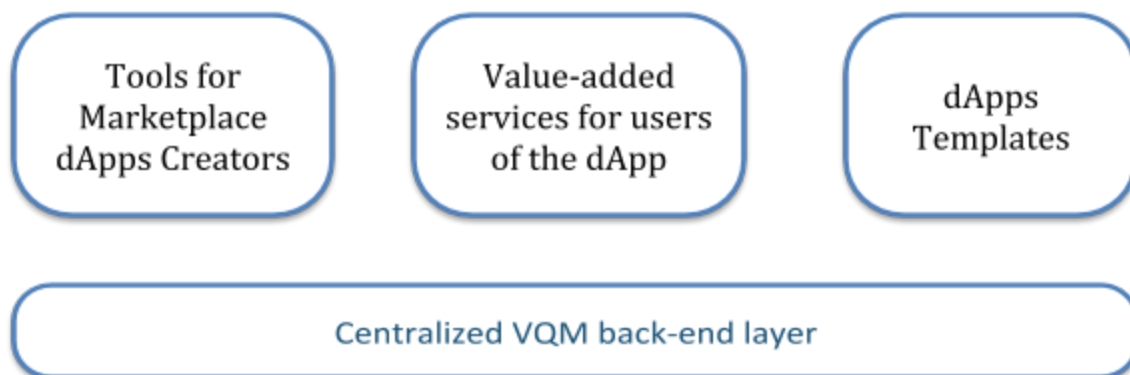
The centralized VQM layer is an engine that provides one/many of the following:

a) supplementary services like integration with centralized 3rd parties for email sending, fiat payment processing, notification services, content indexing,

b) tools for marketplace dApp customizing, management, administration and other.

c) templates for starting new marketplace dApps

The platform follows RESTful standards of data exchange to allow easy and fast integration with any third-party services.

VQM Platform

The Centralized Backend Layer will be offered by VQ LABS as an supplementary service on a subscription basis to marketplace dApps creators. However, any other party can provide a competing solution. It will

be up to the marketplace dApp creator to choose which provider he goes with or decides to run it on its own.

The Centralized VQM back-end layer will evolve from the current VQ Marketplace Platform for building and running sharing economy marketplaces.

C. Decentralized VQM Ledger

The Decentralized VQM Ledger will be the engine that regulates all transactions and relationships between the suppliers and the clients. It will keep an address book of all listings on the blockchain and users in the marketplace ecosystem. Settlement information will be recorded, secured and executed on blockchain. VQ Labs develops the ledger architecture to be blockchain-agnostic. An implementation in the Ethereum network will be realized.

This layer is open-source and will remain for universal free use by everyone. It is not controlled by anyone, including VQ Labs. We will encourage more applications to use it in the future which on its end can widen the practical applications for the VQM token.

The Decentralized VQM Ledger is the engine that regulates all transactions and relationships.

The VQM Ledger will keep record of all transactions and will regulate the transaction executions through client/supplier driven smart contract triggers. The VQM Ledger will run solely with the native VQM token and any application that wishes to connect to the engine will have the freedom to provide added value services such as support of additional payment methods which they can convert into VQM at the time of the booking. This can be done either through integration to external exchanges or by converting the currencies themselves with an internal algorithm.

 Some of the operations (but not limited to) the decentralized VQM Ledger will run:

- Product, service and rental listings

- Purchase, service and rental requests

- Orders

- Escrow accounts for deposits

- Deposits

- Rating

- Reputation

- Disputes

Solidity contracts
A series of smart contracts written in Solidity act as both the distributed database and the authoritative source of truth of all VQM listings. These smart contracts will be used to publish and manage demand and supply listings, make request and orders, leave reviews, and perform

other interactions. We will use smart contract abstraction layers to enable code updates. Each smart contract will have a wrapper contract that lives at a fixed, publicly advertised address. These wrapper contracts will import the smart contracts containing the latest business logic and listing data. Previous version contract locations are logged in a version control mapper so people can reference old contract addresses and use them directly if desired. Each VQM listing will have its own set of smart contracts which will be recorded in a single registry.

4.2. On-Demand marketplace model

Listings

Listing is a property, rental object, service or any asset. Listing can specify its class/category quantity, availability or state of being active or inactive, be bound to a location or/and a date. Listings must have an owner. We differentiate between two types of listings:

Demand Listings indicate a need for a certain service, product or a rental.
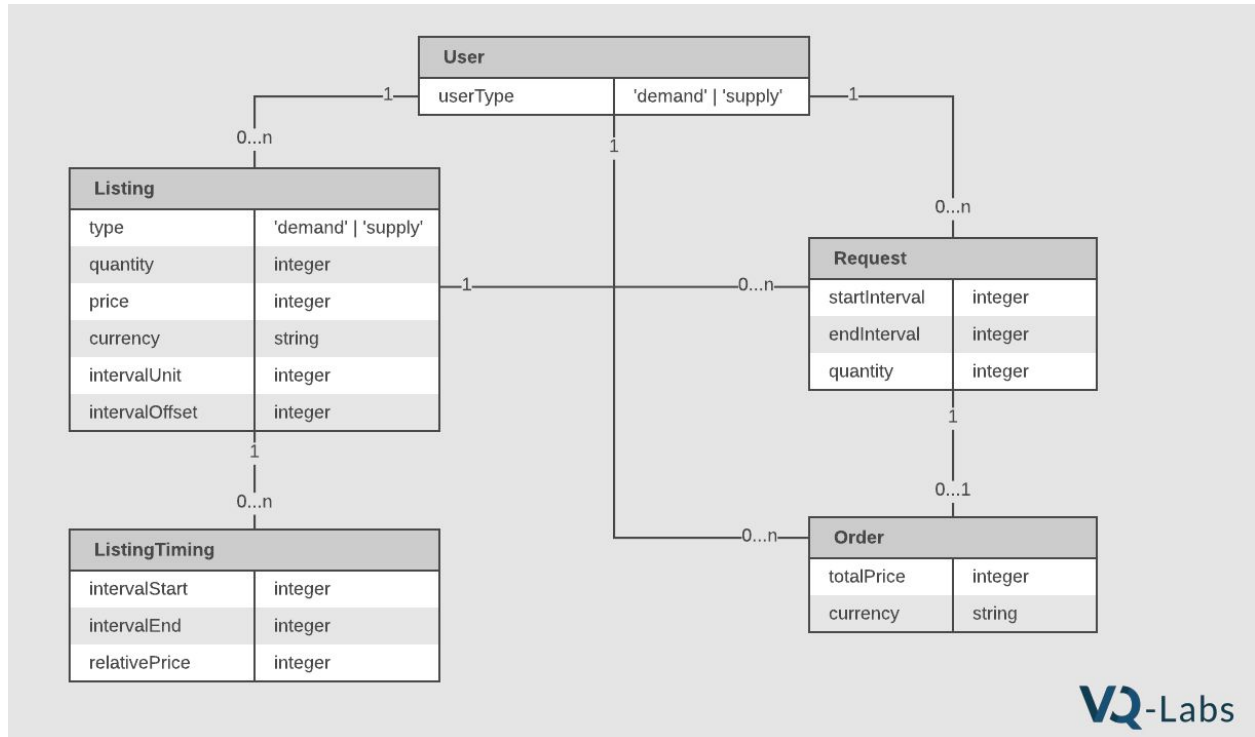
Supply Listings are offers of rental properties, services and a product.

Users

Users on VQ Marketplace can be demand or supply. Supply users can create supply listings and send requests for demand listings. Demand users can create demand listings and send requests for supply listings.
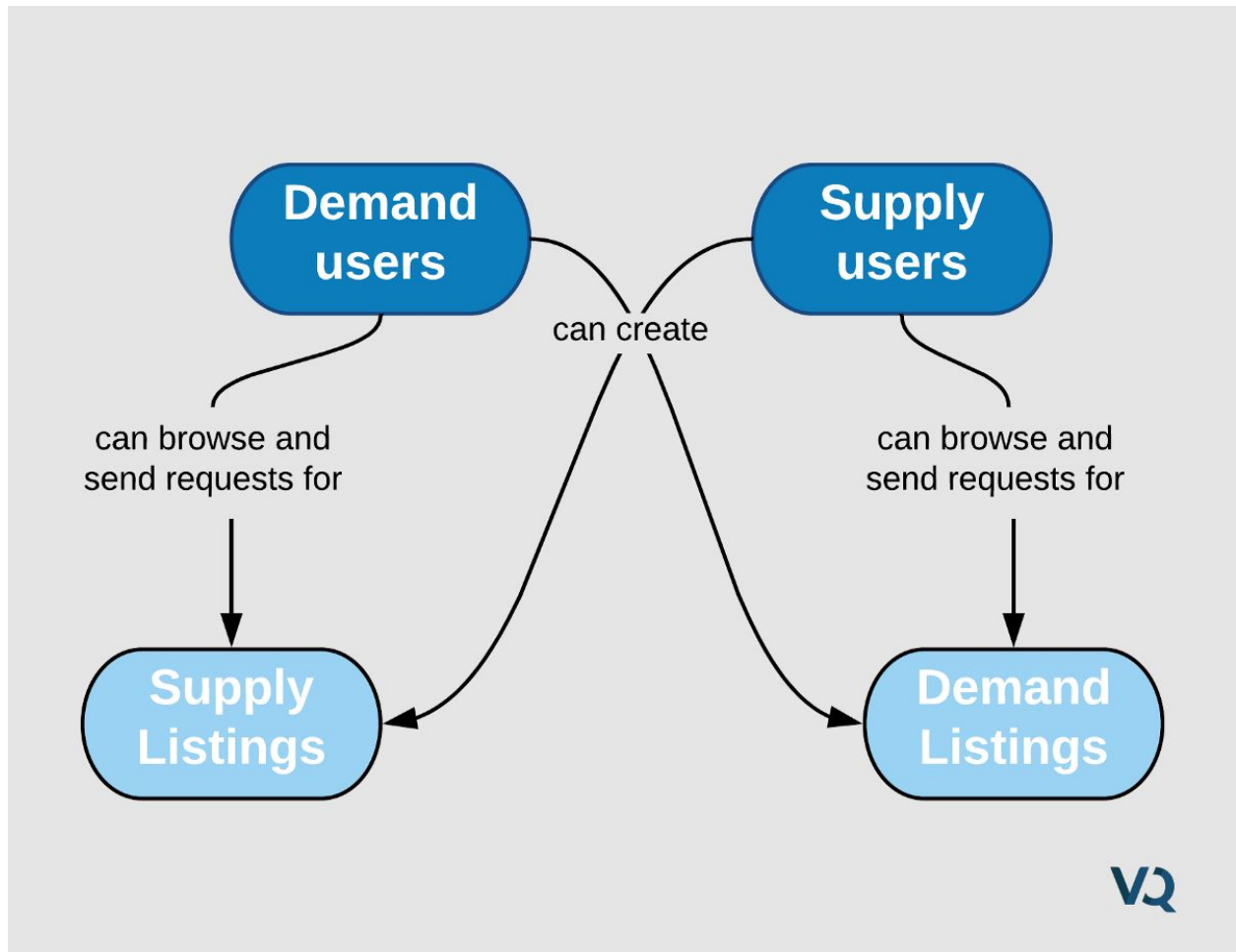
Booking: Requests and Orders

Demand users can create orders based on requests. We outline couple of scenarios:

Instant booking
Demand user sends a request for Supply Listing and an order is immediately created based on the request.
This scenario finds a use-case in all types of marketplaces.

- Product marketplace — "Order now" as seen in Amazon and similar eCommerce marketplaces
- Rental marketplace — Instant booking scenario as seen in airBnB
- Service marketplace — Instant sale of a service

Request booking and approval
Demand user sends a request for Supply Listings. The supply user can approve up to all requests that he or she received. After approval of the request, an order is created for the demand user.

Applications
Supply user sends a request for Demand Listings. The demand user can browse through the requests and create one or many orders, respectively for each received request.

Life cycle of a booking

1. Listing is created.

2. Request is created with a pending status for an active listing.

3. Order is created for the request. Request changes its status to accepted. Depending on a booking scenario, there are variety of workflow configuration possibilities:

• **Demand Task Workflow:** All other requests are declined. Task changes its status from active to booked (inactive).

• **Demand Listing Bidding:** All other request remain pending with separate orders that can be created for each of them, respectively.

• **Supply listing purchase or rental:** Order creation follows directly the creation of a request. There is no bidding or approval process.

4. Furthermore, requests and orders undergo a life cycle. Their target status is to be closed (transaction disputed, not paid or not delivered) or settled (transaction done and paid).

5. Both parties - demand and supply - of the transaction can have an optional „Mark as done / delivered / settled" indicator. If both parties agree, the request and order go to „settled". There is also complex logic possible (time-based auto-settlement).

If the parties do not agree on the final status of the booking (request and orders), the booking is closed and a dispute is generated for the order. Disputes must be resolved per dispute pre-specified policy or a trustless 3rd party.

Example booking workflow
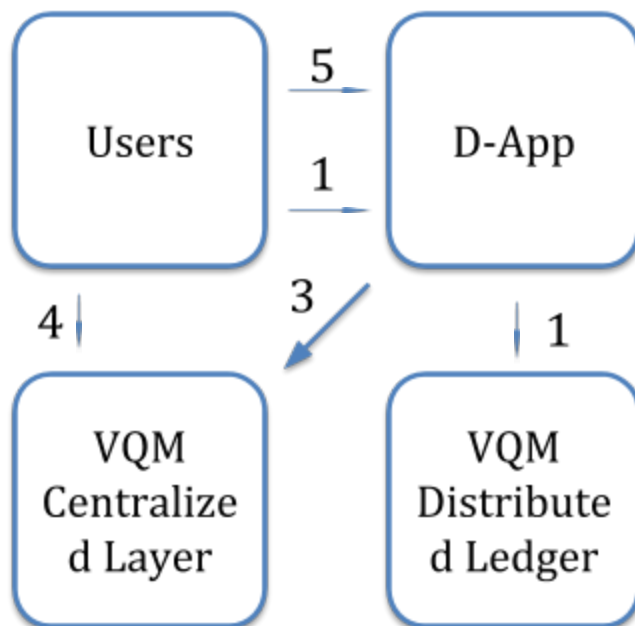
- A user connects to any VQM-enabled D-App and sends a request with the content hash of the listing.
- The request is stored on the VQM Distributed ledger.
- VQM Centralized Layer notifies other users per e-mail, pop-up notifications etc.
- Supply user can directly communicate with the Demand user on the VQM Centralized Layer on a request communication channel.
- Supplier confirms the request and an order is created for the demand user and stored.

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A similar architecture will be employed for less common operations such as cancellations, requesting a refund, or involving a dispute hub. VQM Distributed Ledger will serve as a source of truth whereas VQM Centralized Layer will offer value added services for the users.

Fractional quantity and interval usage, scheduling and availability

Fractional Quantity Usage

When an order is executed, the quantity (*quantity*) of the listing counting the number of units available will decrement. When the quantity of the listing becomes 0, it is evident that it is sold out. New requests need to specify the desired *quantity.* If the new request's quantity is higher than listing available quantity, it will be automatically declined or refused to be created. The supplier can always increase the number of units available.

Intervals

Listings for services or assets that are made available to different parties over time must first be broken into intervals that represent blocks of time representing when the asset can be booked. For example, a freelance software developer may offer their services by an hour, while a hotel would offer their rooms by a day.

These intervals are a fundamental building block for managing bookings in the VQ Marketplace Ecosystem.

Listings that offer fractional usage of assets must define a constant size (in seconds) of each interval (*intervalSize*) as well as the initial timestamp of the first interval (*intervalOffset*). In this manner, desired windows of usage can be calculated client-side using basic algebra. Timezone adjustments can be done on the client-side. By default, the minimum purchasable interval is 1, but it can be set to any integer greater than or equal to 1. This can be made configurable either as a global marketplace setting or a listing setting.

Intervals are represented with whole numbers and are non-divisible since they represent the smallest purchasable unit of time on VQM. Intervals are numbered starting from 0 and are calculated relative to the interval start time (a unix timestamp) of a listing.

When we consider now fractional usage of an asset, we do not need to understand how large of a window of time that interval represents. It only needs to know whether that interval is available and how much it costs.

Availability and time-depended price

The listing owner can create an availability calendar. By default, it can be assumed that the listing is always available with the price specified in the listing (*price*). The owner can then specify **non-overlapping** intervals for the listing with start and end for each interval. Optionally, a new price can

be specified for each interval. In order to avoid currency conflicts, the price is specified as a reference to the main listing price (*relativePrice*) from 0 to x%.

Requesting fractional usage
When requesting a booking of a fractional asset, the new request must specify the desired start and end of the booking interval. When the request is accepted and an order is created, the availability calendar adds a blocking interval hindering a double booking.

Additionally, the intervals model of fractional usage can easily be extended with periodic rules. In particular, the Recurrence Rule (RRULE) section of the iCalendar specification can be adopted format for displaying recurring events on a calendar and is a possible extension for defining bookable intervals for VQM listings.

5. VQM Token Economics
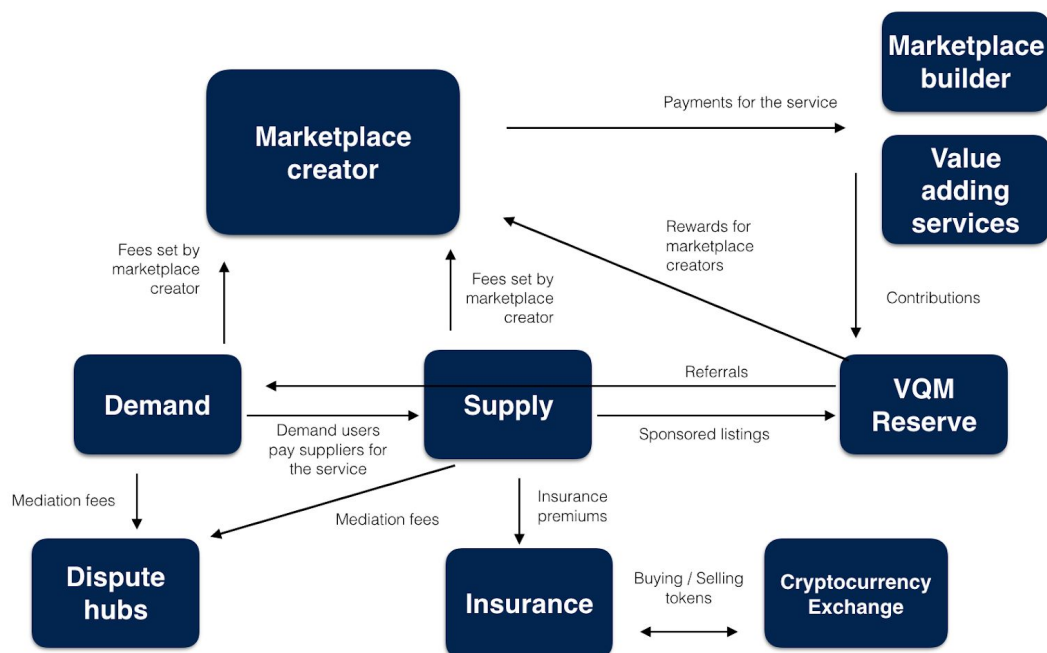
A. Introduction
The VQM Token acts as fuel in the VQ Ecosystem.

The VQM cryptographic token will be introduced to create crypto economic incentives in the VQ Marketplace Ecosystem. It will be a fungible asset for marketplace participants that want to buy/sell the token for use in the ecosystem. The token serves key functions in the ecosystem:

- ensuring ecosystem security by creating both positive and negative incentives,
- facilitating demand/supply transactions as a transfer of value
- enabling network governance,
- serves the role of collateral and reputation in transactions
- payment form for utilities in the ecosystem such as sponsored listings

B. Token functions

- **Transactions**
  The token will be the primary transfer of value in the ecosystem.

- **Sponsored listings**
  Suppliers will be able to advertise their listings in the network. In order to make the listing more visible, they will have to spend a certain amount of tokens. The required amount of tokens will be determined by a bidding algorithm. The tokens spent for sponsored listings will be burned, this decreasing the total supply and benefiting every token holder.

- **Token reputation**
  Listings owners may require that only users with sufficient amount of tokens are able to send requests for the listings.

- **Token collateral**
  Malicious behavior (e.g. failing to return a rented asset, creating fraudulent listings) will result in the possible freeze of the token that is staked at the account. In this way, the accounts will not have an incentive to exploit the system. In case of a dispute, the account's tokens serve as collateral.

- **Dispute**
  The disputes are resolved by 3rd party. We foresee an establishment of in-depended arbitrage hubs with the sole task of resolving disputes. A sufficient amount of VQM token will grant right to become such a dispute hub. The incentive for assisting in the disputes will be the token premiums for each resolved dispute. These premiums are paid directly by the users participating in the dispute.

- **Referrals**
  We want early buyers and suppliers to promote the platform to their peers. A referral program will be implemented to incentivize individuals and businesses to engage in to promotion and increase the total number of network participants. This program will offer gradually decreasing token award sizes as the referrals are completed. In this way, early advocates of the platform will get a larger stake of VQM token than later advocates as they are doing the hard work of building up the buyer and seller user bases.

- **Governance**
  As a community-driven project, the eventual goal is to allow VQM token holders to self-govern the direction of both software development and business/operational initiatives. We intend to allow VQ buyers, sellers, developers, and other participants to shape the direction of the project based on their ownership of VQM tokens.

- **Subscriptions to VQM value-adding services**
  Subscriptions to the VQ LABS supplementary services will be paid in VQM Tokens or in other currencies which will be automatically converted to VQM tokens. A certain amount of the subscriptions will be redistributed as rewards to new marketplace creators.
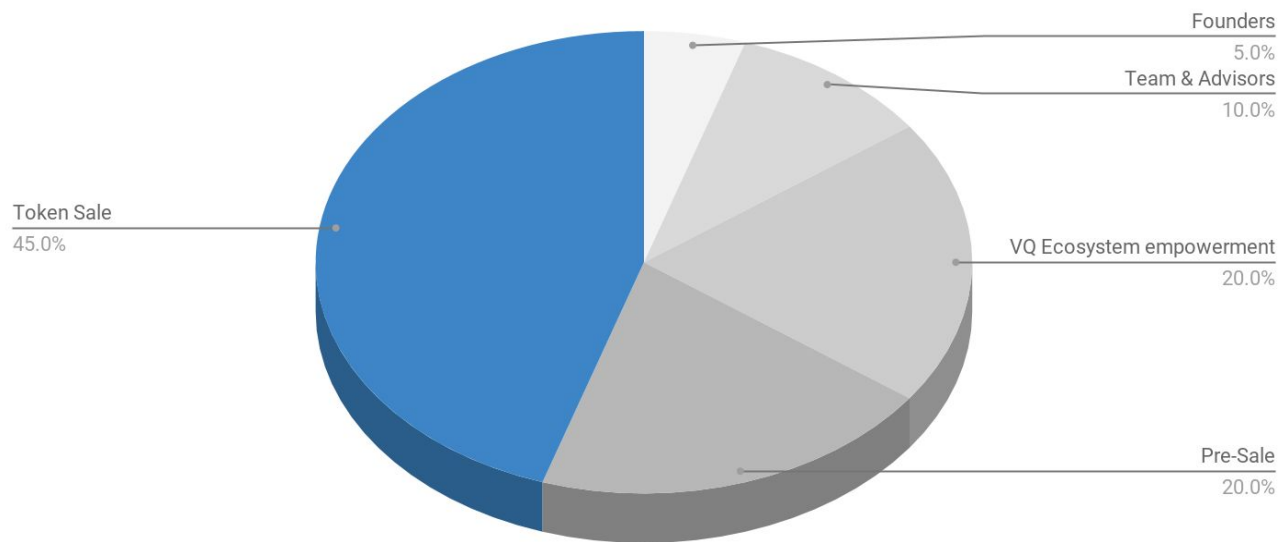
C. VQM as ERC20 token

As an ERC20 token, the token will take full advantage of the Ethereum network's built-in wallets, developer tools, and resulting ease of use.

It allows **sidechaining** which is a mechanism that allows tokens from one blockchain to be securely used within a completely separate blockchain but moved back to the original chain if necessary. It prepares the ecosystem to become **agnostic to a single cryptocurrency or digital token**.

6. Token Sale

Ticker Symbol	VQM
Token Background	VQM is built as an ERC20 token on the Ethereum blockchain
Total Supply	100 000 000
Target Raise	5000 ETH
Hard Cap	to be announced
Scheduled Start	to be announced
Planned End	to be announced

Token Distribution

- Founders 5.0%
- Team & Advisors 10.0%
- Token Sale 45.0%
- VQ Ecosystem empowerment 20.0%
- Pre-Sale 20.0%

Budget Allocation

The estimated allocation of the contributions is the following:

- Utilites / Facilities 3,2%
- Administration 13,4%
- Marketing 34,1%
- R&D 49,4%
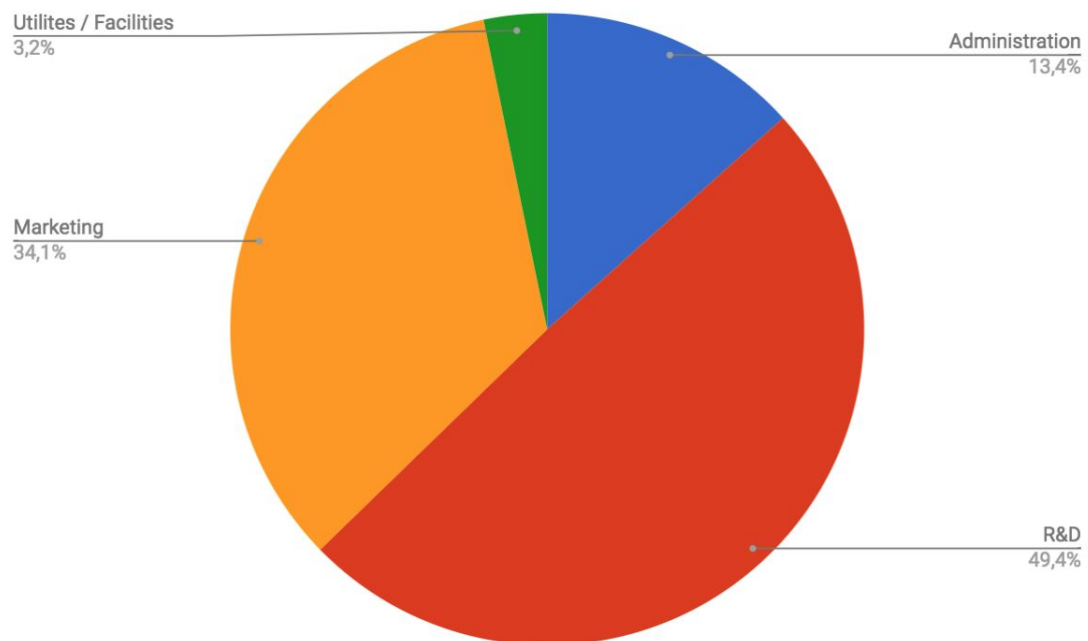
(in T Euro)	2018	2019	2020	2021	2022
Administration	71	90	90	90	90
R&D	120	380	380	380	380
Marketing	187,4	228	228	228	228
Utilities	21	21	21	21	21

7. Team

The team and advisors can be viewed at the company website under https://vq-labs.com.

8. Timeline

2017-Q1

- Market research and PoC VQ Marketplace Platform

2017-Q2

- Proof of Concept - Service Marketplace

2017-Q4

- Beta release of the VQ Marketplace Platform with 1 vertical: Services

2018-Q1

- Marketplace builder for rentals marketplace
- R&D - VQM decentralized marketplace network
- White paper release
- Legal framework for token sale

2018-Q2

- VQM testnet launch

- Private round of presale
- Implementation of sale smart contracts
- Start of template marketplace
- Whitelisting for token sale

2018-Q3

- VQM testnet launch
- Presale for accredited investors
- Proof of Concept: Listings on Ethereum Blockchain
- Proof of Concept: Start of the first decentralized marketplace

2018-Q4

- Token sale

2019

- Marketplace Unions Launch with 1 Vertical
- Support for payments in VQM tokens
- Reward program for marketplaces
- Delegated node program for centralized back-end layer
- Global users rating and reputation across the network
- Governance model for future protocol improvements

Partners

Innowerft is our strategic partner and also a significant shareholder. InnoWerft is the first key partner/investor and are constantly helping us in business development. FZI is a research institute for applied research in computer science from Karlsruhe.

9. Go-To-Market Strategy

We will lay focus on acquiring marketplace creators and developers in the initial stage. The token will play a vital role in bootstrapping the system. We will reward the most creative, most performing marketplaces on a regular basis with token airdrops.

1. Crypto events sponsor
VQM's initial market segment is the crypto-community. We will target conferences and events by sponsoring and engaging in post-conference networking. This is a quick way to bootstrap our initial network and capitalize on brand recognition as the main sharing economy platform on the blockchain.

2. Referral Program
We plan to implement a referral program to incentivize user acquisition of new marketplaces and reward the growth on them. Users referrals that result in a booking will be rewarded with VQM tokens.

3. Ambassador Program
VQM plans to onboard VQM Ambassadors who are excited about the potential of a decentralized sharing economy platform. By promoting events, organizing hackathons, and volunteering for campaigns, we believe that the ambassador program will be pivotal in order to grow our developer's community. VQM Ambassadors will handle:
- Planning and hosting VQM/Crypto events/meetups
- Developing marketing and outreach programs
- Creating and promoting high quality content
- Collecting feedback and sharing ideas to further promote the VQM Platform

Market

Gig-economy market

| 200 million workers | 2 Trillion $ transactions worldwide | 10% annual growth |

The "gig-economy" is comprised of freelancers, tradespeople, home service providers, digital service providers and self-employed professionals. It is growing extremely fast as more and more people prefer flexibility and control over their careers. It is forecasted to grow towards 40% of the global workforce in the next ten years, with over 200 million workers and with a total annual transaction volume approaching $2 trillion. Looking at the market size, those problems become big problems.

For a global assessment we extrapolated from the biggest markets: India, China and USA and arrive at an estimated 200 million workers and a total annual transaction volume approaching $2tn with an annual growth of 10%.

10. Summary

For the past two decades, Internet marketplaces have changed the way that buyers and sellers connect, creating new opportunities for the exchange of goods and services. However, these marketplaces have always been governed by centralized companies that maintain their individual monopolies on data, transaction and other service fees, and ultimately, user choice. With blockchain and other distributed technologies beginning to hit the mainstream, the world is poised for a new wave of decentralized commerce. VQ is focused on bringing change and innovation to the marketplace economy. We're excited by the opportunity to lower fees, increase innovation, free customer and transaction data, and decrease censorship and unnecessary regulation. Even if you are perfectly content with the centralized providers of today, what about the day when these monopolies stop being so benevolent? We hope you agree that future-proofing our world against oligarchs and tyrants is a worthwhile endeavor. We are building a platform that invites other interested parties including developers and entrepreneurs to build this technology with us, altogether working to create the economy of tomorrow.

We hope you'll join us on this exciting journey.

11. References

(1) **Network Effects Manual by NFX**
[https://www.nfx.com/post/network-effects-manual#market-networks]

(2) **Dependence and Precarity in the Platform Economy (page 13)**
(https://www.bc.edu/content/dam/files/schools/cas_sites/sociology/pdf/Dependence%20and%20Precarity%20Feb%202017.pdf)

(3) **New study finds freelance economy grew to 55 million Americans this year, 35% of total U.S. workforce** (https://www.upwork.com/press/2016/10/06/freelancing-in-america-2016/)

(4) **McKinsey sees blockchain technology reaching full potential in 5 years**
(https://bravenewcoin.com/news/mckinsey-sees-blockchain-technology-reaching-full-potential-in-5-years/)