LiQNET

ICO WHITE PAPER

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BRIEF DESCRIPTION

By the end of the decade, global cryptocurrency trading found itself scattered among various platforms, which led to severe fragmentation of liquidity. The lower the liquidity, the lower the average volume of a trading position in comparison to stock and other classical markets. Moreover, in the moments of abrupt market movements, it can be insufficient even for trading low volumes of cryptocurrencies.

LIQNET is a cryptoexchange, which allows to unite liquidity from different platforms and solve the problem of scattering of users, their trading requests, and orders, thus forming a unified order book with better market depth and better prices for private persons and legal entities from various jurisdictions.

What makes the LIQNET exchange unique is the LEN (Liquidity Exchange Network) tool, which allows to collect and combine orders of our exchange's clients and orders from third-party platforms into a single order package and make them available for trading by all LIQNET's clients. The holders of the LEN tokens get privileged terms.

Other advantages of LIQNET:

1) Desktop apps (own desktop app, MultiCharts, TradingView, and MT5)
2) Fully functional mobile trading apps for Android and iOS
3) An online-wallet project that provides the ability to exchange cryptocurrencies and fiat money by the press of a button. Additionally, it has the easy cryptocurrency investment service with free and paid built-in strategies
4) Acquiring service for receiving payments in cryptocurrencies that provides sellers with many capabilities and protects from many risks

MARKET AGENDA

Today, the number of exchanges has grown so much that the market needs unification to be able to continue to develop as a single organism. Users and their assets are split; therefore, liquidity is split, too. Cryptocurrencies should unite people, companies, and financial streams, but the fragmentation of trading over several platforms leads to increased volatility of many cryptographic currencies and assets.
This scares traditional investors away from investing in cryptocurrencies. Low level of liquidity and considerable spreads don't help the development of the cryptocurrency industry. Naturally, exchanges should seek to get into a unified trading place to be able to use the combined liquidity to increase revenue.
The abundance of exchange and trade tools on the market should also be critically reviewed. At first glance, the market is filled with stock and cryptocurrency exchanges. However, when filtered by such parameters as reliability, accessibility for end users (many exchanges are selective in allowing residents of different countries and jurisdictions to trade), ability to trade with required tools (fiduciary currencies included), the choice is narrowed drastically, and the illusion of abundance goes away.

At the remaining optimal exchanges, liquidity will be limited. Therefore, during a market move or when buying or selling a significant amount of funds, a trader risks to fail to get the required amount or get it at an unacceptable price. We solved this problem by uniting liquidity streams from different platforms into one order book.

LIQNET SOLUTIONS

The basis of the LIQNET project is a secure cryptocurrency exchange. It collects liquidity using both classic methods and a standalone mechanism that uses the in-house LEN technology.

LEN is a mechanism that through an API allows to collect and combine data on requests to sell/buy from many cryptocurrency exchanges located anywhere in the world (Picture 1) and to form a unified order book.

Picture 1. Scheme of formation of a unified order book of the LIQNET exchange

LEN aggregates requests into a single stream, and because of that users can make deals at the most favorable price with a minimal spread (Picture 2).
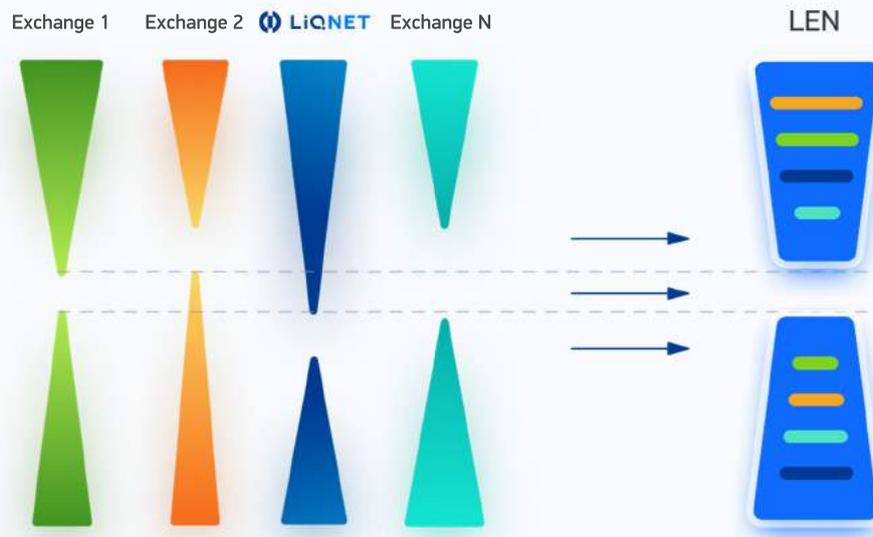
Picture 2. Scheme of aggregation of requests into a unified order book

LEN allows the LIQNET system to get an improved model from the standard model of market depth (Picture 3). The new model offers added liquidity at the intersection of supply and demand (Picture 4).
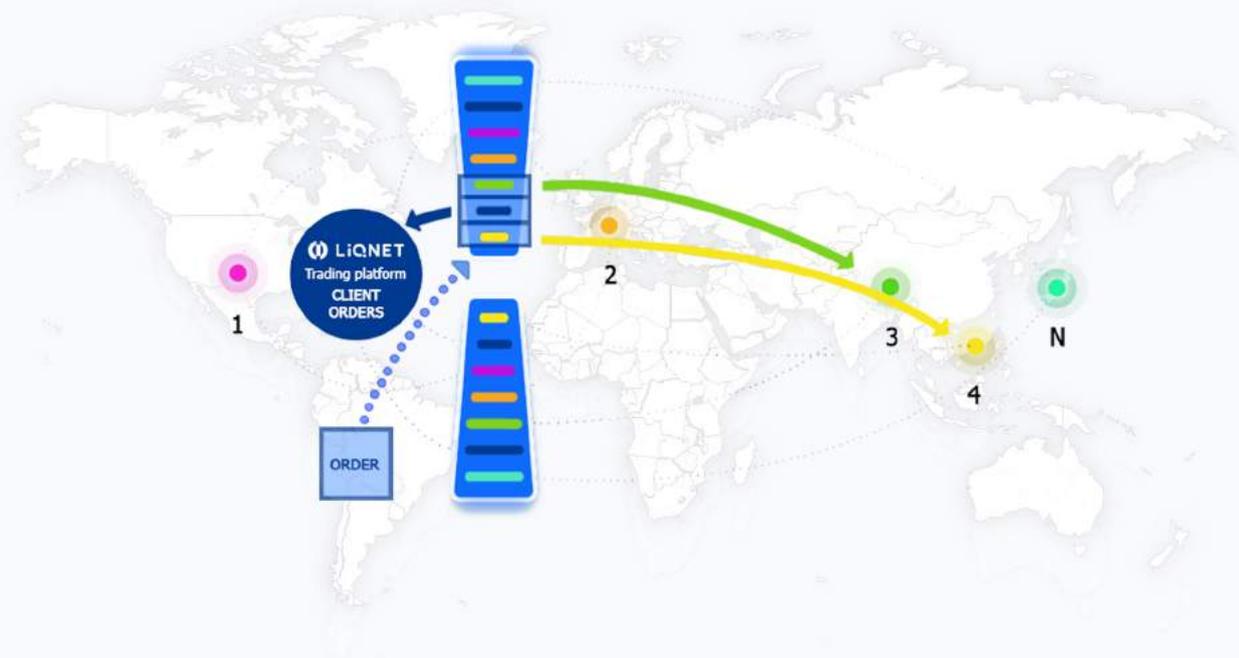

Picture 3. Standard market depth model

Picture 4. Improved market depth model

As a result, LIQNET users work with a unified order book, which contains both orders of clients of this exchange and orders relayed from other platforms.

Picture 5. LEN technology assembler's workflow

The server side of the LIQNET platform is a private cloud, which is composed of physical servers in several locations and client terminals (currently, one terminal for web browsers). The security of the server side has been thoroughly tested.
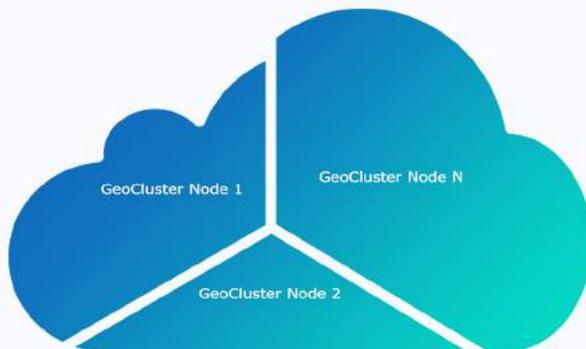
Picture 6.1. Physical servers are spread out geographically
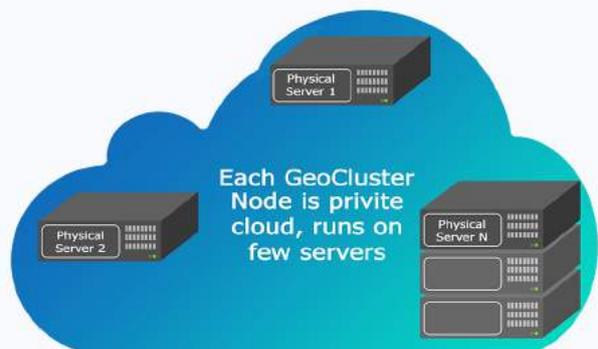
Picture 6.2. Node scheme

The LEN technology comprises three essential services:

1. Data collector
2. Automated trading system (provides hedging of clients' deals at "external" platforms)
3. Automated system that allocates and accounts for funds (provides positive balances at "external" platforms, accounts for profitability as an additional control tool of an automated trading system)

All large platforms aim to increase the liquidity and trading volumes in their markets. The standard way of doing that is to connect an API of a platform to automated trading systems (trading robots). Almost all cryptocurrency exchanges provide such trading APIs. They see LEN as an automated trading system, which makes numerous trading operations thus increasing liquidity and pays a fee for each transaction making profits for them.

LEN is a symbiosis of cryptocurrency exchanges, so it has no problems with integration. The technology allows to skip negotiations with competitors because the service does all interactions through their existing public APIs.

Any cryptocurrency exchange that LIQNET intends to connect to its platform should be checked by LIQNET's specialists if it has a license to work with cryptocurrencies. If a cryptocurrency exchange that LIQNET wishes to connect to the platform is located in a jurisdiction that has no explicit regulation of cryptocurrencies, then LIQNET has to make sure by itself that such exchange has documents that regulate AML and CFT. In the case when such internal records do not correspond to the minimal requirements of the Singapore laws and international standards, this exchange will not be connected to the platform.

To connect a cryptocurrency exchange to LEN, a user should register an account, deposit some money, and implement a particular LEN module that uses the exchange's open API. LIQNET also perform this operation. The central questions that arise are about economics: transmitted size of market liquidity, choice of markets, and amounts of fees.

Nevertheless, LEN has one pressing issue: not all exchanges offer a trading pair with USD, some trade cryptocurrencies directly for national currencies. The solution is to make interactions in LEN more complex: national currencies can be transmitted by connecting a currency gateway and quoting these pairs with their exchange rate to the dollar in mind and then into the main blotter. In this case, unfortunately, fees for currency conversion are added. Economic calculations prove that it is better to pay an additional fee and get cheaper liquidity so that is why that possibility will be given till 1-st quarter 2022.

The server side of the system comprises several services (apps), which have different functions. The LIQNET platform uses cluster databases all financial data is saved to several servers and can be replicated between locations. Thereby, the system is ready to be scaled.

Cryptocurrency storage and accounting system are worth pointing out. They comprise the following subsystems:

- platform's internal cryptocurrency storage system (a geographically spread out array of hot, conditionally hot, and cold wallets and multisig addresses for every cryptocurrency);

- background clearing service (validates current balances and inputs and outputs between full cross-sections, and if there's an inconsistency, it registers the dangerous state and transfers the funds to cold wallets and multisig addresses);

- external cryptocurrency storage system LEN Funds Manager (accounts for circulating capital distributed among exchanges, allows to transfer cryptocurrencies between exchanges and the platform);

- circulating capital, earned fees, storage locations, and transfer limits accounting system.
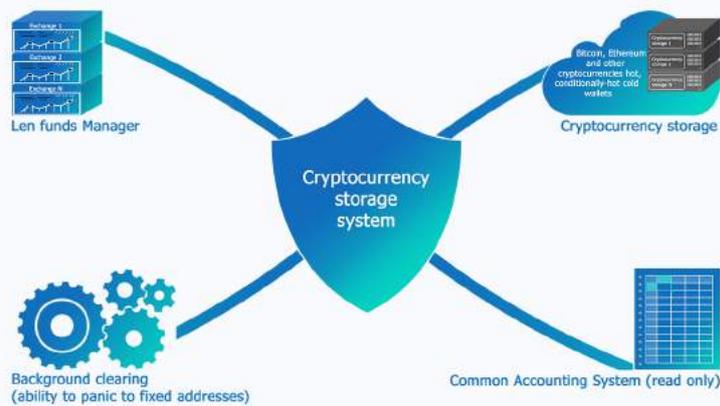
Picture 7. The cryptocurrencies storage and accounting system

The basic machinery provides the exchange with a 18-20 thousands transactions per second throughput at the moment. If it is necessary, the core scales using several additional servers, so, the performance can be greatly increased as soon as possible.

VERIFICATION OF USERS

The platform provides 4 different levels of verification for the user:

- without verification;
- basic verification (data entered , e-mail address confirmed, phone number is listed);
- extended verification (the entered data is verified by the remote identification service);
- full verification (the client sent a full set of documents and signed the contract).

For each level of verification in the system, you can define a policy for the amount of daily and monthly withdrawals. Remote authentication policies and services are in intensive development now.

THE PLACEMENT OF TOKENS ON THE EXCHANGE

Placement of tokens procedure: the selection of tokens to be added to the exchange is carried out by the LIQNET team before the ICO. And after the ICO it depends on voting of token holders (1 LEN token = 1 vote).

The mechanics of voting for the choice of tokens to add to LIQNET is the following: since in the LIQNET voting system one token is equal to one vote, the importance of the token holder's opinion in decision-making in the voting process is distributed in proportion to the number of LEN tokens available to him.

LiQNET

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PROJECT'S ECONOMICS

LIQNET team calculated the profit of competitors. On the basis of these data, the exchange's profit model was built according to three scenarios. For the calculation, the 9 largest exchanges in terms of trading volumes that have been existing on the market for some time are taken (Table 1). On the basis of data for 08.2018, the average monthly trading volume was obtained, which is $ 9 084 220 350.

№	Exchange	Volume, $	Share, %	Arbitrage Potential, $	Taker Commissions	Share of Arb. Volume	Arb. Volume	Commissions, $	Arb. Profit, $
1	Binance	54 599 048 970,00	0,286549759	1 952 310 860,98	0,10%	0,5%	29 284,66	$58,57	29 226,09
2	OKEx	44 558 538 540,00	0,233854595	1 593 290 000,14	0,10%	0,6%	28 679,22	57,36	$28 621,86
3	Huobi	31 998 515 010,00	0,167936382	1 144 178 324,86	0,20%	0,3%	10 297,60	41,19	10 256,41
4	Bitfinex	26 582 840 460,00	0,139513538	950 528 793,54	0,20%	0,5%	14 257,93	57,03	14 200,90
5	HitBTC	9 084 220 350,00	0,047676309	324 826 574,59	0,10%	0,7%	6 821,36	13,64	6 807,72
6	Kraken	7 420 356 360,00	0,038943926	265 331 403,88	0,26%	0,7%	5 571,96	28,97	5 542,99
7	GDAX	8 955 218 400,00	0,046999274	320 213 821,94	0,15%	0,3%	2 881,92	8,65	2 873,28
8	Bitstamp	5 289 745 650,00	0,027761937	189 146 662,43	0,25%	0,1%	567,44	2,84	564,60
9	WEX	2 051 020 620,00	0,01076428	73 338 820,15	0,20%	0,2%	440,03	1,76	438,27

Table 1. Calculation of average monthly trading volume based on data from the largest exchanges

The predicted value of the volume of positions from third-party sites = 25%, and the arbitration percentgetting of 0.3%. Thus, the share of cross positions will be $6 813 165 262. Further, three scenarios for different commission sizes are constructed and estimates of net profit are obtained, provided that they fall into the top ten largest exchanges and reach the average monthly trading volumes (Table 2):

Monthly Scenario	0,10%	0,15%	0,20%
Revenue	**$15 996 187,75**	**$23 944 880,55**	**$31 893 573,36**
Cross comm. Income	$2 271 055,09	$3 406 582,63	$4 542 110,18
Comm. Income	$13 626 330,53	$20 439 495,79	$27 252 661,05
Arb. Income	$98 802,13	$98 802,13	$98 802,13
Operating Costs	**$105 142,84**	**$105 142,84**	**$105 142,84**
Money Transfer	1000	1000	1000
Arb. Commissions	$142,83	$142,83	$142,83
Avg. Taker Com., %	0,14%	0,14%	0,14%
Salary	90 000,00	90 000,00	90 000,00
Servers & Hosting	14 000	14 000	14 000
Operating Income	**$15 891 044,91**	**$23 839 737,72**	**$31 788 430,52**
Administration and General Costs (5% Rev) Interests Paid Interests Received NWC (5% Rev)	$-479 885,63	$-718 346,42	$-956 807,20
EBT	**$15 411 159,28**	**$23 121 391,30**	**$30 831 623,32**
Taxes (MAX)	$2 619 897	$3 930 637	$5 241 376
Net Profit	**$12 791 262,20**	**$19 190 754,78**	**$25 590 247,36**

Table 2. Calculation of net profits in case of growing to the trading volumes of the largest exchanges

Also, an intermediate development scenario is calculated, for which the exchange trading volume is set at $350 000 000, and the volume of positions from external platforms is 70% (Table 3). For these indicators, the share of cross positions will be $ 105 000 000, and the estimates of net profit for the three options of the commission sizes are as follows:

Monthly Scenario	0,10%	0,15%	0,20%
Revenue	$553 802,13	$781 302,13	$1 008 802,13
Cross comm. Income	$245 000,00	$367 500,00	$490 000,00
Comm. Income	$210 000,00	$315 000,00	$420 000,00
Arb. Income	$98 802,13	$98 802,13	$98 802,13
Operating Costs	$26 142,84	$26 142,84	$26 142,84
Money Transfer	1000	1000	1000
Arb. Commissions	$142,83	$142,83	$142,83
Avg. Taker Com., %	0,14%	0,14%	0,14%
Salary	20 000,00	20 000,00	20 000,00
Servers & Hosting	5000	5000	5000
Operating Income	$527 659,30	$755 159,30	$982 659,30
Administration and General Costs (5% Rev) Interests Paid Interests Received NWC (5% Rev)	$-16 614,06	$-23 439,06	$-30 264,06
EBT	$511 045,23	$731 720,23	$952 395,23
Taxes (MAX!!!)	$86 878	$124 392	$161 907
Net Profit	$424 167,54	$607 327,79	$790 488,04

Table 3. Calculation of net profits for the trading volume of $350 000 000

Due to the fact that the platform will aggregate a sufficient amount of liquidity of various instruments, it is planned to introduce trading of deliverable futures and options for the most liquid of them in the future.

HOW BIG IS THE MARKET FOR CURRENCIES THAT DO NOT HAVE A PAIR TO THE DOLLAR (CRYPTOCURRENCIES)?

LIQNET cryptocurrency exchangehas been already working in a public beta mode. At the moment, we can state that only on LIQNET the volume of cryptocurrency trading is $1 million per day - even without a fiat gateway, through which you can deposit classic currencies on the exchange.

The fiat gateway is under development Aer its implementation, the trading volume will certainly grow.

ICO STRATEGY

ICO PROCEDURE

The LIQNET project attracts investments by issuing its own LEN token and holding an Initial Coin Offering (ICO). The emission of the token is limited and has zero inftation, it complies with the popular ERC20 standard, and is emitted by a smart contract. Both contracts are limited emissioned and can work with other tokens, burning of tokens function is also included.

Total capital raising during ICO is up to 3 500 000 Usd. You can buy tokens by sending ETH to smart contract address published. Clients will get tokens to the address, where he had sent ETH from. Users can use tokens for any transactions right after purchasing.

From 22 June till 21 July 2021 investors will get +15% bonus tokens. From 21 July till 20 August they will get +7.5% bonus tokens.
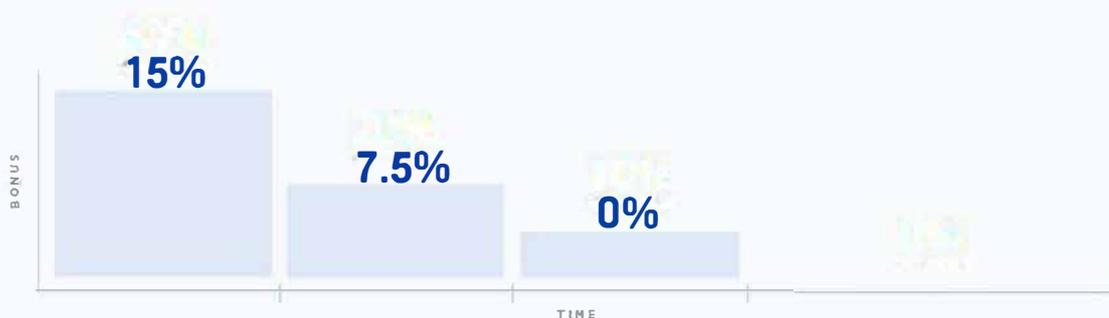
The sum of the funds collected during the ICO will influence the timeline of the development of the project's com ponents.

STRATEGY IN CASE INSUFFICIENT FUNDS ARE ATTRACTED DURING THE ICO

If 95% of the Hard cap is collected - development of the acquiring service will be postponed until enough money is earned on exchange's fees.

If 90% of the Hard cap is collected - development of the online wa llet will a lso be postponed until enough money is earned on exchange's fees.

If 40% - 90% of the Hard cap is co llected -the share of the circu lating capital will be proportiona lly decreased from 65% to 50%, and the share of the other RM items will be proportionally increased.

If all tokens will be sold during ICO, additional financial rounds can be organized (ICO, IEO, IDO). Maximum tokens are limited by 3 500 000.

HOW THE INVESTMENTS WILL BE SPENT

The table is shown for 100% of Hard cap •

Project expenses types	Share of spent funds
1. **Circulating capital,** because to supp ly the execution of orders, assets must be placed on platforms that generate liquidity	65%
2. **Registration of subsidiaries** to have access to cryptocurrency p lat-forms in closed jurisdictions	5%
3. Connection of currency gateways	0,5%

Project expenses types	Share of spent funds
4. **Connection of additional payment systems** that allow to accept payments made with MasterCard, Visa, and Union Pay. It is a lso possible to add PayPal and other sim ilar systems	3%
5. **Equipment-** purchase of spaces in data centers, equipment, and required software and subscription to its technical support, visits of the company's specialists to data centers to set up the systems safely	2%
6. **Connection and wstomization of professional trading apps** -own desktop app, MultiCharts, MT4, MTS, and others	2%
7. **iOS and Android ap pswith** a full personal account and with extensive trading capabilities	1%
8. **Online wallet** with the ability to exchange cryptocurrencies and fiat money with a push of a button and with the integration of the simp lified service of cryptocurrency investing using paid and free built-in strategies, development of m obile apps	5%
9. **Acquiring service** - developm ent, connection of maps, im provem ent of the payments receiving app, payment termina l, etc , development of iOS and Android acquiring apps (the app is installed on a smartphone, it can scan QR codes and a llows to accept payments for goods and services in cryp tocu rrenci es)	5%
10. **LEN to DEX & DeFi Bridge**	4%
11. **Participation of the team in international conferences** on specific subjects (fintech, the b lockchain, bitcoin, inform ation security, engineering development)	0,5%
12. **Improvement of speed, quality control, and information sewrity of devel opment processes** of existing and additional components of the service by purchasing products of third-party com panies, hiring design studios and testing teams	2%
13. **Marketing and advertising** - to reach target audiences, widen the presence and increase popu larity in various regions, study regional specif-ics, get form al independent assessments of trust for and stability of the company	5%
TOTAL	**100%**

Addition changes can be done according to market conjuncture.

LiQNET

LEN TOKEN DESCRIPTION

TECHNICAL DESCRIPTION

- Token ticker symbol: LEN
- Standard: ERC20
- Maximum tokens issued: 3 500 000
- Price of one LEN token: $1
- Purchase options: Ether (ETH)

During ICO tokens are made automatically by Crowd sale smart contract.
Link to the ICO website https//liqnet io After the registration, the address of the smart contract will be available to the participants.
T okens destruction mechanism • tokens used in the system are destroyed using the instruction given in the smart contract.

BENEFITS FOR THE TOKEN HOLDERS

On the developing cryptocurrencies market, the LIQNET's ICO may be one of the few options for investors to enter the cryptocurrency services and exchanges market through a finished elaborated project.
Our ICO stands out from the majority of the others because it is not just an idea. It is a rea l product ready for launch. It will be able to increase its competitive advantages and allow us to develop exponentially with the he lp of tokenization.

TOKEN OPPORTUNITIES

What LEN holders will get:

1. Up to 50% of trading commissions used for buyback of tokens.

2. Up to 5% of trading commissions will be sent to token holders for holding.

3. Market capitalization of tokens in hold will decrease 100% of monthly commission for trading.

4. Tokens can be used to pay 50% commission for trading. (For Example commission is 1$, token can be exchanged to 0.5$ trading commission).

1% or more token holders will get service to vote on main actual decisions:

- Tokens and crypto-currencies being chosen for listing;
- Additional places for collecting liquidity and connecting to them;
- Specialized questions can be asked and discussed with holders of big portfolio of tokens (more than 1% of total tokens issued).

LEN tokens accepted as a payment for the fees discounts and bought out by the platform to avoid excess demand will be destroyed and won't participate in voting. This way the amount of available tokens decreases. The platform allows to use the purchased LEN tokens and offers the ability to get discounts and the right to vote to the holders on the way the funds received by the system are allocated. The voting is not and can't be considered as the right to manage the company. It is an additional method of determining the direction of the development of the platform that takes the opinions of the users into account. The voting is a way to collect information that helps to determine what is the most relevant and demanded functionality that needs to be developed.

The White Paper regulates the terms of additional possibilities.

MARKET PROSPECTS

Lately, information about the cryptocurrencies market appears more and more often in various sources starting from posts in social networks and ending with articles in reputable news media. Despite that, up until recently this field of modern society hasn't been the subject of detailed analysis by large consulting companies, investment banks, or renowned universities — those establishments whose function is to analyze new prospective fields of economics.

The situation started to change drastically in 2016–2017, when bitcoin with its large capitalization begun to update historical highs monthly thus attracting capitals of investors from all over the world.

Picture 8. BTC/USD exchange rate

Among reputable global organizations, which at the time of this review have publications in the field of cryptocurrencies, are:
1) Cambridge University — «Global Cryptocurrency Benchmarking Study 2017»
2) Gartner — research and consulting company specializing in the IT markets. Gartner has released many articles on the blockchain, the main of which are «Practical Blockchain: A Gartner Trend Insight Report» and «Blockchain: Managing Business Expectations»

In this review, we discuss the publications mentioned above.

THE BLOCKCHAIN

The blockchain technology is based on the distributed computer network with cryptographic-based security and a particular protocol of network nodes interactions — accumulation of information in a block and its further verification by all nodes.
The blockchain is the core of all cryptocurrencies, so the prospects of its development directly influence the future of the whole market. In its research, Gartner has conducted a SWOT analysis (Table 4) that was aimed at defining the prospects of the technology's development:

Strengths	Weaknesses
• Distributed monitoring and recovery system • Decentralized network • Open source • Security and modern cryptography • Known nature of an assets source • Creation of an own asset • Dynamic and versatile exchange of value	• Insufficient compatibility of ledgers • Consumers lack knowledge of the product • Lack of control of intra-ledger and inter-ledger • Restrictions in the code of program models of smart contracts • Management of wallets and keys • Poor toolset and user experience of developers • Lack of skills • Endless growth • Lack of trust for new technologies
Opportunities	Threats
• Decreasing of transactional costs • Increasing speed and efficiency of business processes • Decrease of the number of thefts • Reduction of the systematic risk • Democratisation of the monetary system • Possibility of creation of new business models	• Legal barriers • Governmental rejection • Technical failures • Institutional barriers • Forks of blockchains • Conflicts of ledgers • Low level of management

Table 4. SWOT analysis of blockchain

Conspicuously, the obstacles to the technology's development mostly pertain to the low level of understanding of the technology itself — for example, it is one of the reasons for the governmental rejection of the technology.

This is common for every new technology that is aimed at changing existing foundations of society. At the dawn of its development, Internet has faced similar problems. On the other hand, the prospects that blockchain offers are capable of drastically improving the current situation in the world and first of all in the monetary field.
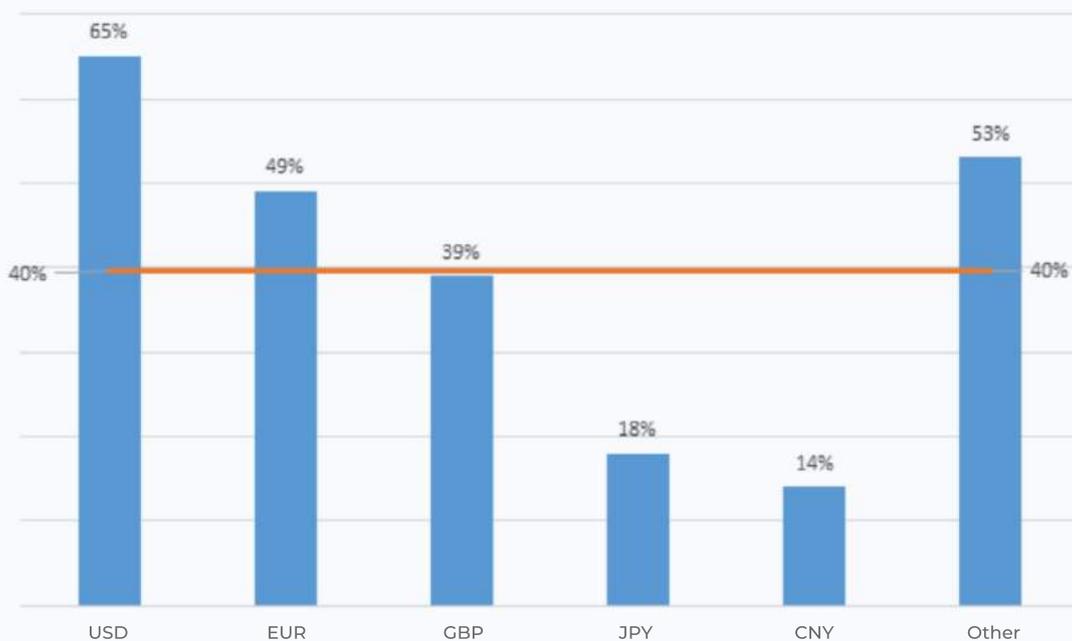
THE EXCHANGES

Today, the process of conversion of one cryptocurrency into another or into a national currency is done in two ways:

1) through payment systems wallets (an analog of traditional bank conversion operations);

2) through specialized platforms where these tools are traded — the exchanges.

The process is similar to how national currencies are now converted into each other.

Additionally, many exchanges already offer the ability to do conversion operations between fiat money and cryptocurrencies.


Picture 9. Percentage of exchanges that support national currencies trading [3]

According to the research by Cambridge University, the geography of exchanges variates around the world.
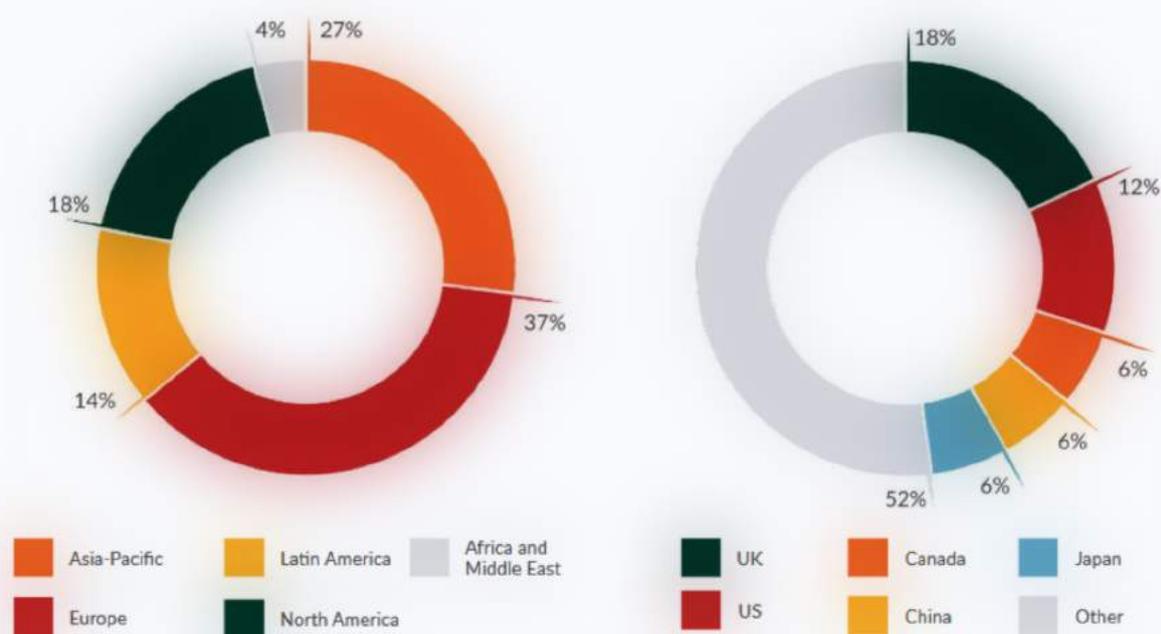
*Picture 10. Geographical spread of exchanges [3]*

The interest of regular consumers strengthens the current state of the market among other things. While wishing to benefit from making transactions in cryptocurrencies somehow, they open their cryptocurrency wallets.
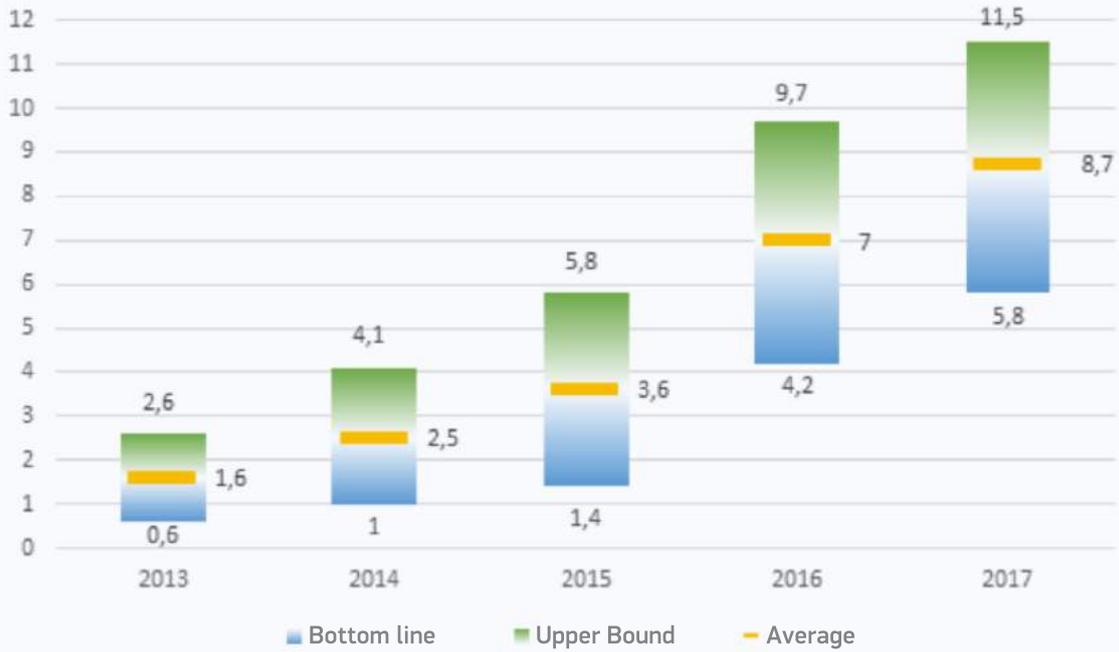

Picture 11. Assessment of the number of active wallets, million [2]

The growth of the number of active wallets by more than five times confirms that cryptocurrencies are in demand of the society. Today, the maximum possible amount of active wallets is 11,5 million — this makes up around 0,15% of Earth's population. Nevertheless, only in the bitcoin network the maximum amount of wallets is 2^{160}, which will allow everyone to have their cryptocurrency wallet.

Even now, the amounts of 80% of international transactions are higher than $100 (and in 34% of cases exceed $1000). At the same time, average transaction amount in the B2B sector exceeds $1800.
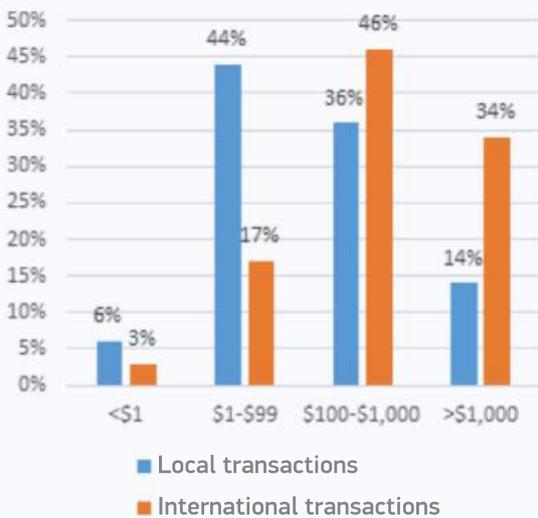
*Picture 12. Distribution of amounts of transactions [2]*
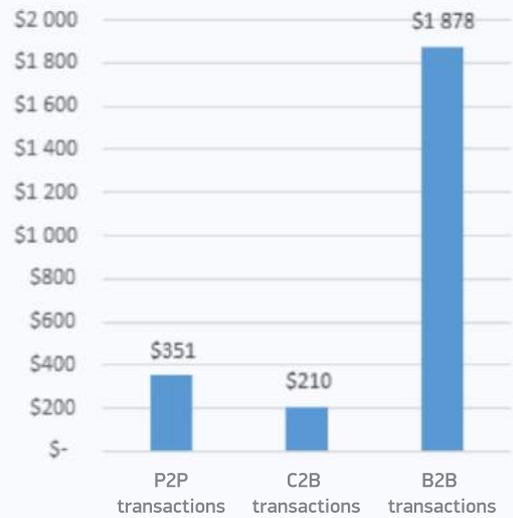
Picture 13. Average amount of transactions [2]

THE MINING

One of the critical components of the cryptocurrency market is mining. Miners are the ones who are doing the verification of blocks, in other words, confirm the correctness of transactions that are included in them.

Mining is actively gaining momentum while taking new forms and reaching new scales (cloud mining, mining hotels, modernization of old facilities into large mining farms).
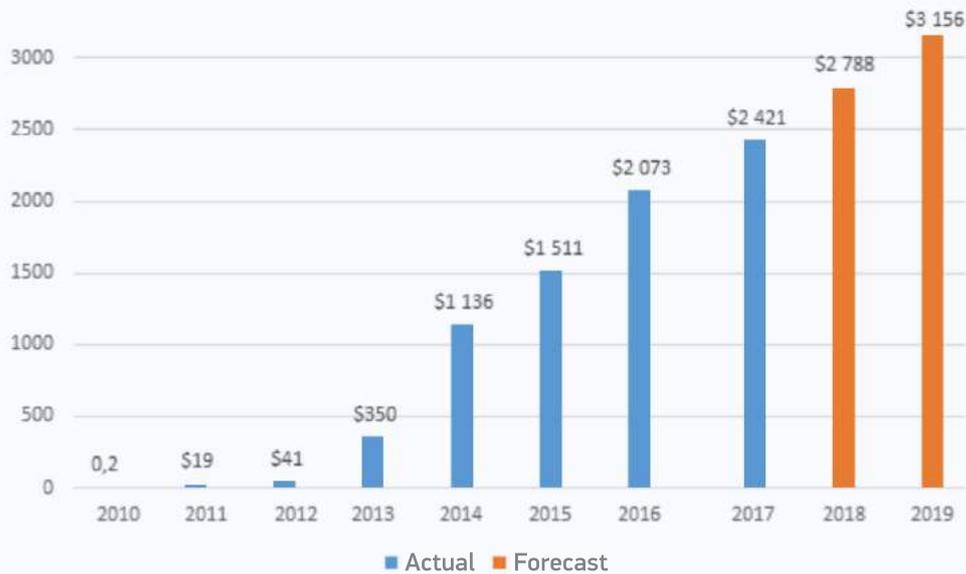
Picture 14. Accrued revenues from mining, $ million [2, own calculations]

It appears that profits of people working on verification of transactions in the blockchain network are growing steadily, which attracts more and more new players.

CONCLUSION

The market of cryptocurrency exchange is tightly bound to the cryptocurrencies themselves. It is at the early stage of its development. Nevertheless, the growth potential is vast.

The growth can be linked to the development of their applicability in real life, the improvement of the technology itself, the increase of their legal status, and to the allowance of them as a payment tool on international and national markets. Any positive information and any novelty positively affect the growth of popularity and acceptance of cryptocurrencies.

Studying the cryptocurrencies market helps to understand that even with the immense potential, the level of uncertainty around the new payment and investment tool is still high. It can be seen already now that people tend to a freer money circulation and a more democratic monetary policy. Cryptocurrencies allow to cut costs, which every economic agent faces every day.

The process of the development of the cryptocurrencies market that was started 7 - 8 years ago actively transforms existing socioeconomic foundations of society by considerably simplifying interactions between economic agents in P2P, C2B and B2B sectors. The growth of the industry's capitalization confirms that people vote with their money for its development.

SOURCES

1. https://coinspot.io/charts/
2. https://www.jbs.cam.ac.uk/fileadmin/user_upload/research/ce tres/alternative-finance/downloads/2017-global-cryptocurrency-benchmarking-study.pdf
3. https://www.gartner.com/doc/3628617
4. https://www.gartner.com/doc/3607117

COMPETITIVE ENVIRONMENT

Several categories represent the competitive environment of LIQNET :

1. **Classic cryptocurrency exchanges** with which LIQNET works as a client by using the LEN mechanism. It connects to them through an API and executes a significant number of trading operations thus increasing the competitor's turnover and pays fees for every operation, therefore, making profits for the competitor. Below is a summary table with information on the nine largest cryptocurrency exchange

№	Name	Volume, $	Share, %	Jurisdiction	# of Trading pairs	Year appeared	Withdraw in fiat	Average Fee, %	Mobile app	Security	Known to be hacked
1	Binance	130 031 432 970	24%	Hongkong	242	2017	–	0,10%	Android, IOS	two-factor authentication	–
2	Bitfinex	88 542 727 203	16,3%	Hongkong	57	2012	+	Maker 0 — 0,1%, Taker 0,1 — 0,2%	—	two-factor authentication	+
3	Okex	73 129 298 100	13,6%	Hongkong	274	2017	+	0,10%	iOS, Android	+	–
4	LiveCoin	71 877 321 123	13,4%	Russia	282	2014	+	Торговая комиссия от 0,02 до 0,18%	—	two-factor authentication	–
5	Huobi	46 228 934 670	8,6%	China	125	2013	+	0,20%	Android, IOS	two-factor authentication	–
6	GDAX	41 180 160 900	7,7%	USA, CA	9	2016	+	Maker 0%, Taker 0,25 — 0%	—	verification type depends on access level	–
7	Poloniex	34 789 708 470	6,5	●	102	2014	–	Maker 0 — 0,15%, Taker 0,05 — 0,25%	—	two-factor authentication	+
8	Bitstamp	25 401 687 000	4,7%	●	11	2011	+	●	—	two-factor authentication, has a license	+
9	HitBTC	19 604 343 090	3,6%	Estonia	328	2013	+	●	—	two-factor authentication	+

● Legal address: Wilmington, Delaware (USA). In fact, the office is located near Boston

● Legal address: Wilmington, Delaware,(USA). Actual address is near Boston

● Bitstamp collects a trading fee from every successful deal made on the market. The amount of the fee is based on 30 day history of transactions. New accounts have the lowest rating of 0.5%.

● 0,1% (Orders that get into the order book get a 0,01% discount)

Table 5. Top 9 cryptoexchanges

2. **Decentralized exchanges DEX**, which LIQNET has connection via LEN to DEX & De-Fi Bridge where Liqnet is registered as a client. Difference here is only volume of trade and trading orders, that can be executed by DEX per second.

3. **Forex brokers,** who are offering to trade the BTC-USD and other cryptocurrencies pairs. They are not considered direct competitors because they work with non-deliverable CFD contracts on the price difference. Cryptocurrency can be bought from them, but it can 't be withdrawn.

4. **B2BX project.** It is not an aggregator of real cryptocurrency liquidity. It would be more proper to consider it as an offer to brokers to imp lement trading of contracts on the difference between prices in BTC and ETH, an attempt to connect brokers and their clients, who trade to lower the brokers' risks of changing prices of cryptocurrencies. Because non-covered risks will have to be covered on the markets with an actual shipment of assets anyway, LIQNET will be the best solution for that. In other words, B2BX is not a com petitor, but LIQNET's potentia l client.

5. **Futures contracts from CME Group, CBOE** A futures contract on Bitcoin index put on the market is not a com-petitor to LIQNET If the possibility of an arbitrage appears, traders need a place to buy or sell the base asset. Because the index is ca lculated based on the data from four crypto exchanges, each of which is a supplier of liquidity, LIQNET is the optima l platform for that, because it provides the maximum volume of liquidity for the best price. Therefore, the issue of futures leads to the increase of the number of traders, who want to trade physical assets at the LIQNET platform

The analysis of the competition allows to tell that the cryptocurrencies trading m arket is at an early stage. Almost a ll significant com petitors offer access to trading only through a web terminal. And even though these system s improve over time, the lack of professional apps shows the relative youth of the market..

The cryptocurrencies exchange market has a global structure. The most prominent influence on it comes not from distribution am ong countries and regions, but from regu lations and opinions of governmenta l institutions on operations with cryptocurrencies. This determines the choice of jurisdiction, in which to register a сатрапу, but cryptocurrencies exchanging transactions don 't have any geographical bindings.

ROADMAP

2018-2019 - Trading core, concept of Exchange, MVP is done (LEN technology works).

January 2019 - Website rebranding and update.

Q2 2019 - Public API launch.

Q3 2019 - High continuous loads testing.

2020 - Professional WEB Terminal development, ICO preparation.

Q2 2020 - Private API testing, Liquidity Provider service development.

Q2-Q3 2020 - Meta Trader 5 connection and connection to LIQNET platform.

Q3 2020 - Alpha test of Liquidity Provider Gateway.

Q4 2020 - Meta Trader 5 connected to Liqnet.

Q4 2020 - First 10 connectors written to main exchanges (not all of them work at the moment. Reason - lack of working capital.

November 2020 - Digital security audit done.

December 2020 - LEN technology starts working, first 3 connectors start working on it.

January 2021 - LEN to DEX & DeFi Bridge development.

March 2021 - Alfa test stat of LEN to DEX & DeFi Bridge. 2 LEN DEX Connectors applied.

Q3 2021 - 5 exchanges adding to LEN functioning.

Q3 2021 - Appling to Master Card, Visa and Union Pay to be able to receive fiat money. Pay Pal and other

aggregators negotiations start.

Q3-Q4 2021 - Online wallet, connected to investor cabinet. Functions: receiving, storing, withdrawing funds,

automatic conversion.

Q4 2021 - Android and iOS trading applications development.

Q4 2021 - Private API & Liquidity Provider Gateway launch.

Q1 2022 - Internet acquiring launch. Connecting to automatic exchange to crypto currencies listed on Liqnet.

Q1 2022 - ExchangeAsA_Service launch – providing crypto exchange with liquidity on it for 3-rd part users. Basically

you can rent an exchange.

Q2 2022 - Trading acquiring launch.

Q2 2022 - Marginal trading providing. Futures trading launch.

Q2 2022 - CEX & DeFi crypto stacking launch. Integrating it into online wallet. (We start to publicly offer % loans to

increase our working capital).

Q2 2022 - ICO/IEO/IDO/etc trading platform launch to trade tokens.

Q3 2022 - 15-25 more exchanges connecting to LEN.

Q3 2022 - Additional trading terminals development.

Q3 2022 - Adding standard API connectors to give opportunity for typical trading crypto trading engines for

connecting to LiqvidityProviderGateway.

Q4 2022 - LEN to DEX & DeFi Bridge connectors to 5-10 most popular DEX sources.

LEGAL ASPECTS

This section contains quotes from the Token Sales Agreement. Every purchaser must read it. Full text of the document is available here:
https://liqnet.io/static/docs/token_sales_agreement_en.pdf

Ownership of the LEN tokens gives the right to use the platform and offers bonuses granted by the tokens with consideration of limitations and terms presented in this White Paper and the Token Sales Agreement. Ownership of the LEN tokens doesn't give any rights, explicit or implied, apart from the right to use LEN as a tool for interacting with the LIQNET platform, provided the ICO has been successful, and the platform has been launched.

By receiving the LEN tokens, you accept that owning them doesn't grant any ownership rights or any shares in the company, the right for a share of the company's future profits, intellectual property, or any other form of participation in the ownership of the company and its branches, except for the rights pertaining to using the platform and to the bonuses provided by the tokens in accordance with the limitations and terms given in this White Paper and the Token Sales Agreement.

A citizen or resident of the USA, Singapore, Canada, China, South Korea or any other jurisdiction that has legal regulation or restrictions of transactions with cryptocurrencies including investing can buy tokens only within personal responsibility. The company doesn't bear any risks that appear in the process of purchasing tokens or cryptocurrencies if such transactions don't comply with the legal norms of your jurisdiction.
The procedure of purchasing tokens, timing, and sale prices of the tokens, and our intended use of the tokens sale are determined in the White Paper.
The company reserves the right to request your papers before activating the account to comply with applicable laws or rules relative to the sale of tokens to you.

The company may deny access to LIQNET if it has doubts that the presented papers are authentic and up to date. A check of the data can be done not only before the creation of an account but also during the use of the platform per the AML/CFT policies.

We collect only the required information and never share it with any third-party except for our identity verification partner. Access to personal information is only granted to select LIQNET's employees who're responsible for overseeing the matters of identity control and verification. The company administers users' personal information and its processing.

By becoming a participant of the ICO and by using the services of LIQNET, you agree to provide us with information per our request and admit that we can decline to sell you the tokens until you provide the requested information and we determine that you are allowed to buy the tokens under applicable laws.
The company complies with the AML/CFT policies. The company won't tolerate the use of its services by a purchaser or tokens holder for money laundering. If the company suspects a client in abusing its services for money laundering, it reserves the right to freeze any funds connected to the tokens or privileges, request documents that confirm the source of income of such funds. If the legality of the income is established, all accounts and funds are unfrozen.

If applicable law provides this, a policy on combating the laundering of proceeds from crime and financing of terrorism, or ordered by a court decision or by order of an authorized state body, information may be provided for review to state regulatory and law enforcement agencies. The company also has the right to request additional information for customer identification and other information for compliance with AML / CFT at any time.
The purchase and receipt of tokens occur on behalf of a legal entity registered in Singapore.

RISKS

THE RISK ASSOCIATED WITH THE BLOCKCHAIN PROTOCOL

Since tokens and cryptocurrencies are based on the blockchain protocol, any error, bug or abandonment of this protocol can have a significant adverse effect on LIQNET and the LEN tokens.

Moreover, advances in cryptography or technological advances, such as the development of quantum computing, can pose risks to LIQNET and the LEN tokens, including the risks to the use of tokens in obtaining relevant services, by reducing the effectiveness of the encryption mechanisms that underlie the blockchain protocol.

FUNDAMENTAL RISKS OF THE CRYPTOCURRENCY MARKET

Trading cryptocurrencies and tokens is associated with various risks. LIQNET provides services only for the execution of operations with cryptocurrencies and does not advise on the nature of any particular transactions, their tax, and legal consequences.

Any person opening an account in LIQNET should understand that cryptocurrencies and tokens may not have particular legal status and form of protection or regulation by any government body. This means that the legality of owning and trading them is not always clear from a legal point of view. The legal status can vary depending on the decisions of state bodies. Participants are solely responsible for knowing and understanding how cryptocurrencies and various types of tokens will be treated, regulated and taxed under applicable law. Also, the possession of cryptocurrencies and tokens does not imply the right to convert them into any fiat currency. There is no guarantee that this will be possible in the future.

Due to the youth of the cryptocurrency market, no one should invest and use for trading the funds that he or she is not ready to lose entirely, because of high volatility of cryptocurrencies and highly speculative nature of the entire digital market increase the probability of partial or complete loss of funds.

Cryptocurrencies can be susceptible to rational and irrational factors, which can lead to sharp jumps in demand/-supply. The LIQNET platform does not guarantee any protection against any losses in the course of fluctuations of rates irrespective of their cause and acts only as an intermediary who unites buyers, sellers and third-party services for trading cryptocurrencies.

The number of cryptocurrencies on the market is tremendous. All of them have a different degree of liquidity. There is no guarantee that for any reason the market will be active for buying, selling or trading, and the required amount of liquidity will be available. Also, cryptocurrencies can appear and disappear from the market suddenly, and LIQNET does not give any forecasts or guarantees about their viability in the future. Any cryptocurrency can be excluded from the platform listing without prior notice or user consent.

Unlike bank accounts or accounts in other financial institutions, cryptocurrencies and tokens are not insured, unless you specifically insure them privately. We do not have a state or private insurer, who we could recommend for rendering similar services to you.

Advances in encryption or technological advances, such as the development of quantum computers, may pose a risk to cryptocurrencies, the LIQNET platform, and tokens, which may result in the theft or loss of cryptocurrencies and tokens.

The likelihood of the presence/occurrence of additional risks that are not disclosed in this statement remains. Each user should carefully evaluate whether his financial situation and temperament are appropriate for the risks in trading cryptocurrencies.

SECURITY RISKS

When buying, storing and using the LEN tokens, you understand and acknowledge the following risks:

- The risk of losing access to the LEN token due to the loss of a private key, a storage error or a purchase error of a private key or a combination of private keys that are necessary to monitor and recycle tokens stored in your wallet or other storage. Accordingly, the loss of this private key or keys will lead to the loss of the LEN tokens in the wallet. Any third party who has access to these keys, including access to the wallet or storage credentials that you use, can illegally obtain your LEN tokens.

- Any errors or malfunctions associated with the virtual wallet or storage that you have chosen to receive and store the LEN tokens, including your failure to maintain or use such a virtual wallet or storage properly, may also result in the loss of your LEN tokens.

- Failure to follow the procedures for the purchase and receipt of the LEN tokens, including the wrong email address you provided to receive tokens, can result in the loss of tokens.

PROJECT TEAM

Vyacheslav Kasatkin

Co-founder. Vyacheslav has 9 years of business experience in the funding and international projects management field. Also, he has been active in the cryptocurrency project field since 2013. Higher education with a degree in economics.

https://www.linkedin.com/in/viacheslav-kasatkin-6967a0156

Andrey Lazarev

Senior Developer. Andrey has 7 years of experience in the field of information technology, and he has worked as a developer on a number of large projects for OOO "Tehnologii bezopasnosti dorojnogo dvijeniia"(Russia). Andrey also has application servers within projects, database servers, and Linux servers (Ubuntu, OpenSuse, and AstraLinux) administration experience. It is also worth mentioning that Andrey participated in the several cryptocurrency projects' MVP development . Higher education with a degree in engineering.

https://www.linkedin.com/in/lazarev-andrey-6a7362148

LiQNET

LIQNET ICO TERMS

Arbitrage is multiple logically related transactions aimed at extracting profit from the difference in prices for identical or related assets at the same time in different markets (spatial arbitration) or in the same market at different times (temporary arbitration, ordinary exchange speculation).

Order book is a table of limit orders for the purchase and sale of assets on the stock or cryptocurrencies market. Each application contains the price (quotation) and the number of units of the asset.

Volatility is a statistical and financial indicator that characterizes the variance of a price.

Market depth is an assessment of the volume of transactions on a particular market, conducting which does not cause a change in prices.

Derivative is an agreement between two parties under which they assume an obligation or acquire the right to transfer a particular asset or amount of money within a specified time (or before its occurrence) at an agreed price. "Derivative" is a general name for a class of derivative financial instruments (examples of derivatives: futures, options).

Closed jurisdiction is any territory whose current legislation, in one way or another, creates restrictions on the activities of companies and individuals from other jurisdictions, in particular in the financial sphere, and in particular in the field of turnover of cryptocurrencies and related services. Closed jurisdictions may also include regions, access to which is limited due to the specifics of the market and the positions of those already operating in such a domain.

Clearing is an activity to define and set off mutual obligations of participants in the stock or cryptocurrency market.

Cryptocurrency acquiring is a technology that is a sort of acquiring and allows you to accept cryptocurrencies in online stores or real outlets.

Liquidity is the ability of assets to be quickly sold at a price close to the market price.

Volume of a trading position is the size of an order to buy or sell an asset.

Option is an agreement whereby the buyer of the option (potential buyer or potential seller of the underlying asset: commodity, security, cryptocurrency) receives the right, but not the obligation, to buy or sell the asset at a predetermined price at a specified time or period. In this case, the seller of the option must sell the asset accordingly or buy it from the option buyer per its terms.

Order is an order to buy/sell an asset at a price that is specified in advance, or at a better price.

Spread is the difference between the best prices of requests for sale (ask) and purchase (bid) of some asset at the same time.

Cross-section is a copy of the data for a period or at a particular point in time.

Fiat, fiduciary currencies are money, the nominal value of which is established and guaranteed by the state, regardless of the value of the material from which it is made, or their provision with a particular resource.

Futures is a contract between the seller and the buyer which provides for the delivery of a specific product, shares, services or cryptocurrencies in the future at a price fixed at the time of the conclusion of the futures. The parties bear obligations to the stock exchange up to the execution of the futures.

CFD-contract (contract for the price difference) is an agreement between two parties - the seller and the buyer - on transferring the difference between the current value of the asset at the time of entering into the contract/opening the position and its value at the end of the contract/closing position.

TradingView, Multicharts, MT5 (MetaTrader 5) are trading terminals from third-party developers.

LINKS

Official Site: https://liqnet.com
Support: https://liqnet.freshdesk.com; support@liqnet.com
ICO Site: https://liqnet.io
White Paper: https://liqnet.io/static/docs/Liqnet_WhitePaper_en.pdf
Token Sale Agreement: https://liqnet.io/static/docs/token_sales_agreement_en.pdf
International User Agreement: https://liqnet.com/pdf/international_user_agreement.pdf
Privacy Policy: https://liqnet.io/static/docs/international_privacy_policy.pdf
User Data Collection and Storage Policy: https://liqnet.com/pdf/cookie_policy.pdf
AML Policy: https://liqnet.io/static/docs/aml_policy.pdf
Rules for Working with Electronic Signatures: https://liqnet.com/pdf/e_sign.pdf

- **Facebook:** https://www.facebook.com/LiqNet.io
- **Twitter:** https://www.twitter.com/liqnet
- **Telegram:** http://t.me/liqnet
- **LinkedIn:** https://www.linkedin.com/groups/13591344/profile
- **Medium:** https://medium.com/@liqnet.io

The exchange may unilaterally change the proposed conditions in the event of external material circumstances affecting its functionability.
Changes in circumstances are considered significant when they have changed so much that if the parties could reasonably foresee this, the conditions would not have been presented to them at all or would have been presented on significantly different conditions.