

# QUANTOR

## WHITEPAPER

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Citizens, residents (including tax ones) of the following countries is prohibited to participate in the token sale. These countries are the USA (including individual states, the District of Columbia, the Virgin Island of the United States, together referred to as the «USA»), China, Canada, South Korea, Vietnam, Singapore, Ecuador, Guatemala, and Bangladesh. If citizens or residents (including tax ones) of the aforementioned countries purchase QNT tokens by entering the Quantor's administration misleading with respect to their citizenship or residency, including while passing the KYC procedures, in this case, the responsibility for the acquisition, use and further disposal of QNT tokens lies on their holders. Please note the similar conditions in the "Terms and conditions" document. You must comply with all provisions regarding restrictions for citizens, residents (including tax ones), affiliates of the aforementioned countries, as set out in both the Whitepaper and the Terms and conditions.

Purchased tokens cannot be offered or distributed as well as cannot be resold or otherwise alienated by their holders to persons of aforementioned countries.

The QNT token is not a digital currency, security, commodity, or any other kind of financial instrument (as well as a derivative financial instrument). The QNT token is not exchange-listed commodity or asset, including the exchange of such commodities or assets in the cryptocurrency exchanges. At the present time, Quantor does not consider the possibility of the QNT token's listing into the exchanges, including crypto-currency exchanges, and does not take appropriate actions in this direction. Following the results of the token sale, based on the expediency of the project development, Quantor can probably consider the possibility of the QNT token's listing into the exchanges, however, Quantor does not guarantee the implementation of this opportunity. This statement is not an unconditional plan and confirmation of the Quantor's decision regarding the listing of the QNT token into the exchanges. If the decision is made, it will be announced additionally on the project's web pages.

This Whitepaper is not a prospectus or a proposal, and its purpose is not to serve as securities offer or request for investments in the form of securities in any jurisdiction. However, in spite of the above, legislation of certain jurisdictions may, now or in future, recognize QNT tokens as securities. Quantor does not accept any liability for such recognition and/or any legal and other consequences of such recognition for potential owners of QNT tokens.

If, in the future, Quantor will need to obtain any licenses, permits of the authorized regulators of the relevant jurisdictions to carry out its activities related to the project, and to work with residents and/or citizens of certain jurisdictions, Quantor will take all necessary actions to obtain the appropriate licenses and/or permits.

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Further, all examples of calculation of income and profits used in this Whitepaper were provided only for demonstration purposes or for demonstrating the industry's averages. For the avoidance of doubt, nothing contained in this Whitepaper is or may be relied upon as a guarantee, promise, representation or undertaking as a promise or guarantee of future profit resulting from the purchase of the QNT token.

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# 1. Introduction

Computer technologies create an additional factor of reliability and efficiency in investing by minimizing the risks of the human factor in making investment decisions. The Quantor platform will combine the educational online platform and a marketplace of investment algorithms for crypto investors.

Quantor strives to bring the advantages of quantitative methods of asset management in a decentralized and classical economy through the development of the ecosystem of talented developers of quantitative investment strategies using latest computer technologies.

The platform will offer integration, testing, and verification of developed trading algorithms on the platform using blockchain technologies, formation, and provision of the capital flow, as well as educational and information solutions for developers and investors.

The main goal of Quantor is to make modern investment technologies available to a wide range of investors.



## 2. The Market

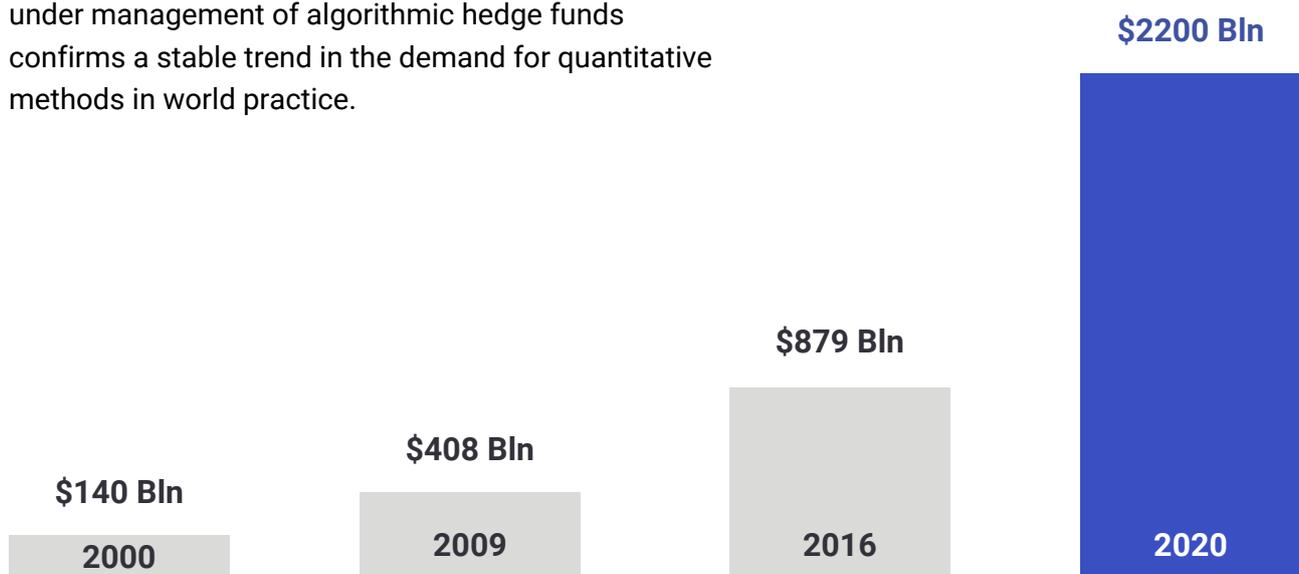
### 2.1 Development of Financial Technologies (FinTech)

The global fintech market continues to rapidly evolve in several directions:

- development and adaptation of blockchain technologies to existing market services;
- development of payment services and platforms;
- crowdfunding/crowdfunding technologies, including token sale;
- development of investment technologies (Invest FinTech), including algorithmic trading and robo-advising;

#### The dynamics of the growth of assets

under management of algorithmic hedge funds confirms a stable trend in the demand for quantitative methods in world practice.



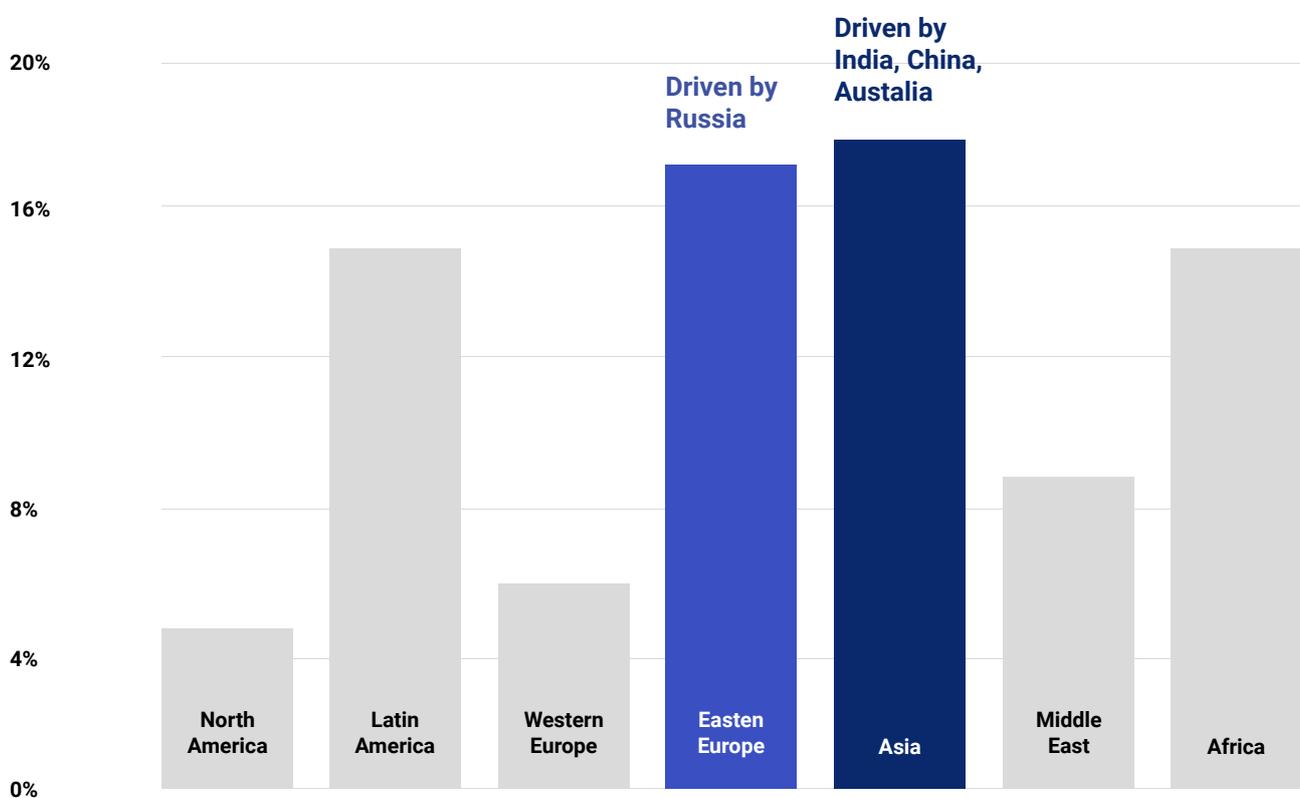
The diagram shows the growth in volumes in the period of 2000-2016.  
The reference: Hedge Fund Research.



## 2.2 Development of the online education (EdTech)

The world is actively developing online learning technologies (eLearning), which allow knowledge to be obtained remotely.

Taking into account the world trends, the training of specialists, and the development of projects in the field of Invest FinTech can be built in the form of a comprehensive solution, including online and offline training programs involving experts from investment and financial companies.



The introduction of online learning will allow getting beyond territorial boundaries in the search and training of talented developers of trading algorithms, allowing a know-how conveyor of continuous creation of new effective investment solutions for investors.



## 2.3 The Cryptocurrency Market

The number of instruments traded on crypto-exchanges has exceeded 1000. According to analysts, the total capitalization of the market will exceed \$5 trillion by 2025.

New investment IT and blockchain technologies are actively developing around the world. Based on high-quality technical background, distributed teams from different countries with the participation of international experts create projects and issue tokens that attract interest and resources to a wide audience of crypto-investors all over the world.

Blockchain technology contributed to the emergence of a completely new form of financial markets and changed the role of investors in the new decentralized economy.

Since, most likely, the penetration of algorithmic trading in the cryptocurrency markets will reach values comparable to the classical financial industry, which is related to the development of the crypto-exchange infrastructure and the growing capitalization of the crypto-currency markets, institutional investors will be increasingly interested in the new perspective sector. This, in its turn, will certainly become a powerful impulse for an increase in the volume of crypto assets under management by algorithmic funds.



**BTC**  
Bitcoin



**ETH**  
Ethereum



**XRP**  
Ripple



**ADA**  
Cardano



**LTC**  
Litecoin



**MIOTA**  
IOTA



## 3. Problems of the industry

### 3.1 Training of the InvestTech experts

**The cost of specialized offline programs is very high:**

UC Berkeley (Master of Financial Engineering)  
**is about \$69k;**

CQF (Certificate in Quantitative Finance)  
**is about 12.5 thousand pounds.**

InvestTech industry continues to get more complicated, so there is a large growing demand and competition for talented specialists from investment companies and hedge funds.

### 3.2 Problems of private traders and investors

The growth of availability of financial markets attracts a large number of individual quants (algorithmic traders) who face the following problems:

- A variety of specializations requires acquiring knowledge and skills in different disciplines: financial markets, programming skills, statistics, financial engineering;
- It is difficult for investors who want to provide funds under management to find profitable trading algorithms.
- Lack of resources and necessary infrastructure results in limited experience and losses of capita;
- Lack of mentoring and support of experts;

A significant weakness of the existing social trading platforms is the presence of many inexperienced traders who receive temporary positive results, raising investors' capital. The platforms are open to investors, bear risks of accumulating of inefficient and high risky trading strategies based on random factors. Such platforms allow non-professional investors to provide funds under management to unqualified traders whose positive trading performance are of an occasional and short-term nature.



## 4. The solution is the Quantor platform

Quantor is a blockchain-powered ecosystem that emerged as a response to a fundamental shift in investment industry: brings together tech savvy developers and researchers with PhD students from research institutions to develop cutting edge trading solutions - trading algorithms for managing investors capital.

On all-in-one platform members are powered by forefront technologies, outstanding knowledge and streamlined peer-to-peer connection: diversity and inclusion are driving enormous outcome along with its prime driver which is technology.

Quantor spreads experience and technologies of classical financial markets and machine learning to the cryptocurrency space, combining the long-term financial experience of the team with new blockchain technologies and quantitative finance.

### **Quantor is an ecosystem that provides access to:**

- Learn algorithmic trading & quantitative finance;
- Testing platform for developing trading algorithms;
- Marketplace of trading algorithms for crypto investors;

Quantor will make investment solutions based on ML and AI, which allow the performance of investment algorithms to be analyzed, revealing the hidden risks of investment strategies and giving an audit assessment of the risks.

A comprehensive audit of trading algorithms using AI technologies will allow the riskiest algorithms to be defined, the likely loss of the capital of the certain algorithm to be predicted, as well as signs of the manager's incompetence to be revealed.



**Quantor solves the problem of obtaining the necessary knowledge and skills of applying computer technologies for investments, providing:**



Educational materials of the best universities and industry experts;



Ready-to-use investment tools and applications;



Access to testing platform for developing trading algorithms ;



Professional publications and market research.



### The Quantor customers are:

- Private investors who want to find reliable and advanced solutions for capital allocation ;
- Traders who want to put quantitative trading methods into the investment practice;
- Specialists and PhD students with technical background who want to apply their knowledge in quantitative investment;
- Investment companies seeking to find new investment solutions, algorithms, and talented developers;
- Holders of cryptocurrency assets, looking for diversification of assets in order to reduce risks and increase return.

## 4.1 The purpose and advantages of the platform

The main goal of platform is to make computer and algorithmic investment technologies available to a wide range of investors. The platform will increase the availability of modern innovative technologies to retail investors.

The effectiveness of trading algorithms in managing assets is proved by investment industry. The real problem is that it's complicated for investors to develop robust trading algorithm for personal asset management.

Quantor builds an ecosystem where many people across the globe are able to develop trading algorithms and place them on marketplace for investors.

The wisdom of the crowd effect is a key factor to overcome limitations of one developer in creating new trading algorithms if his previous one became not profitable. More developers and critical amount of required information in one place, more chances to create new and robust trading strategy in ecosystem.

Once we have the constant process of developing trading algorithms by motivated and talented developers, we can overcome the issue of limited number of robust algorithms available for investors.



## 4.2 Creating know-how conveyor on the platform

The development of trading algorithms, as well as the training of algorithm developers, requires a non-standard approach and teaching methods. The practice of successful algorithmic hedge funds testifies that high profitability and reliability indicators are based on a sufficient set of theoretical knowledge and practical skills, on an interdisciplinary approach and long-term experimental work. These criteria create a conveyor of different hypotheses, which can be the basis for creating new efficient algorithms. This concept allows the developer of algorithms to be considered as the main value in the Quantor ecosystem.

Consequently, there is a need to create an appropriate infrastructure, including online courses of experts and industry practitioners, as well as an access to the support of mentors who can quickly close the gaps in knowledge of the quant, to provide assistance and support on mutually beneficial terms. In addition to access to knowledge, an objective evaluation of the developer's current experience is required using an effective testing system aimed at identifying the weak sides in the knowledge of the quant and forming an individual training program on the basis of the results obtained.

Existing quant training programs are not designed to prepare algorithmic traders. We are considering an alternative training model used to build educational programs in the field of entrepreneurship, developed at Carnegie Mellon University. The model is a funnel consisting of several stages. Each new stage involves a more in-depth study of the subject, which helps to reduce the number of users disinterested in the further learning.



### The main stages of the educational process:



Exciting of interest through the introduction program;



At this stage, the point of no return occurs when the student chooses one of the following career paths:



Students with increased interest in algorithmic trading can pass on to studying basic subjects or a basic program;

- To become an independent algorithmic trader;
- To find a job in investment industry;
- To refuse the quant career.



The next stage involves taking certain advanced courses from an advanced program;

The funnel model allows the users most inclined towards algorithmic trading to be attracted, and also the best of them to be selected from all over the world, using online learning technologies. Based on the principles of education unidirectionality, which is used by universities such as the City University of New York (CUNY), it is possible to implement a program of support for the best quants exempted from tuition fees and compensation. It is planned to create an endowment fund to finance the best quants and algorithms developed by them.

As a rule, a successful algorithmic team consists of several people performing the functions of a quant, a trader and programmer. Therefore, the training course on Quantor can be a balanced training program in these fields, and advanced teaching materials will give the opportunity to choose a specialization. A training program may include, but is not limited to, a technological block (the basis of exchange and financial protocols, the infrastructure of direct (DMA) access), a block of programming and the trading software (design and development of data processing programs, placing orders, risk management, and portfolio formation), a block of financial mathematics (financial engineering and quantitative analysis), a block of algorithmic trading (the basis for developing trading algorithms).



Theoretical training materials will be prepared with the participation of specialists from technical universities, and practical workshops and consultations will be conducted by experts of algorithmic trading, by specialists in coding trading strategies and programming. Thus, Quantor can become an incubator of high-class specialists and algorithmic teams.

**The goal of Quantor is to create a know-how conveyor to create profitable and reliable algorithms that can become more promising alternative investment tools in a decentralized economy.**

## 4.3 The advantages for quants

**Quantor will provide the following solutions:**

- Testing platform for development and testing trading algorithms on cryptocurrency markets.
- Blockchain verification of trading algorithms performance on Quantor marketplace.
- Contests for developers where top best developers will be rewarded on monthly basis;
- Online academy:
  - online courses at various universities and experts;
  - ready-to-use tools and advanced applications;
  - specialized courses in the field of financial engineering and algorithmic trading;
  - testing and assessment of users' knowledge.

The algorithms' performance (backtesting, paper-trading, and live trading) can be presented on Quantor Marketplace for raising additional funds under management for developer.

Quantor will be able to work as an incubator for developers, providing access to data and infrastructure for development and testing trading algorithms.



In the case of a successful token sale, Quantor reserves funds in form of various cryptocurrencies and tokens. These funds will be provided under management to best trading algorithms if a certain set of requirements is satisfied, for example, after taking quants - developers of the algorithms the minimum set of required courses and successfully backtesting and paper-trading algorithms.

The use of blockchain technology and smart contracts will ensure reliable protection of the developers' rights and exclude theft of intellectual property or fraud.

## 4.4 The advantages for investors

The main advantages of the platform for investors will be:

- The blockchain technology is used to store algorithms' performance in Ethereum blockchain to make algorithm's performance 100% transparent.

The results of all stages of developing trading algorithms will be available in blockchain for external investor' audit. The background of developer professional certificates he/she

- accomplished will be also available for review in blockchain before an investor make decision what algorithm he wants to invest in.
- Smart-contracts will be used to automate relationship and interaction between investors and quants (distribution of profits);

Recommendations on portfolio/portfolios of trading algorithms based on machine learning methods depending on the investor's risk profile;



The platform will become a marketplace where investors who does not have special knowledge can use innovative investment solutions made by top experts on the platform.

Computer technology creates an additional factor of reliability and efficiency. The use of computer technology in the investment industry takes on particular importance when the minimization of the risks related to the human factor in making investment decisions is concerned.

In the case of open platforms that allow managers and traders to attract investors' capital, the problem of investment risks related to human factors and technological risks remain unchanged.

The reasonability of using trading algorithms in the management of investors' capital is the only possible way to leveling the risks related the human factor.

Hosting of trading algorithms on the Quantor platform will allow the mechanism of interaction of the smart contract with each algorithm to be implemented. This solution has significant advantages of monitoring, which has no analogues. The interaction of the algorithm with the smart contract allows any changes and modifications to the parameters of the investment strategy included in the algorithm to be registered while retaining the intellectual know-how of the algorithm developer and providing investors with a guarantee that the management of their assets is used in accordance with the logic of the chosen trading algorithm.

The location of the trading algorithm on the VPS hosting of the Quantor platform will allow to partially eliminate risks associated to a technical part of the overall process.

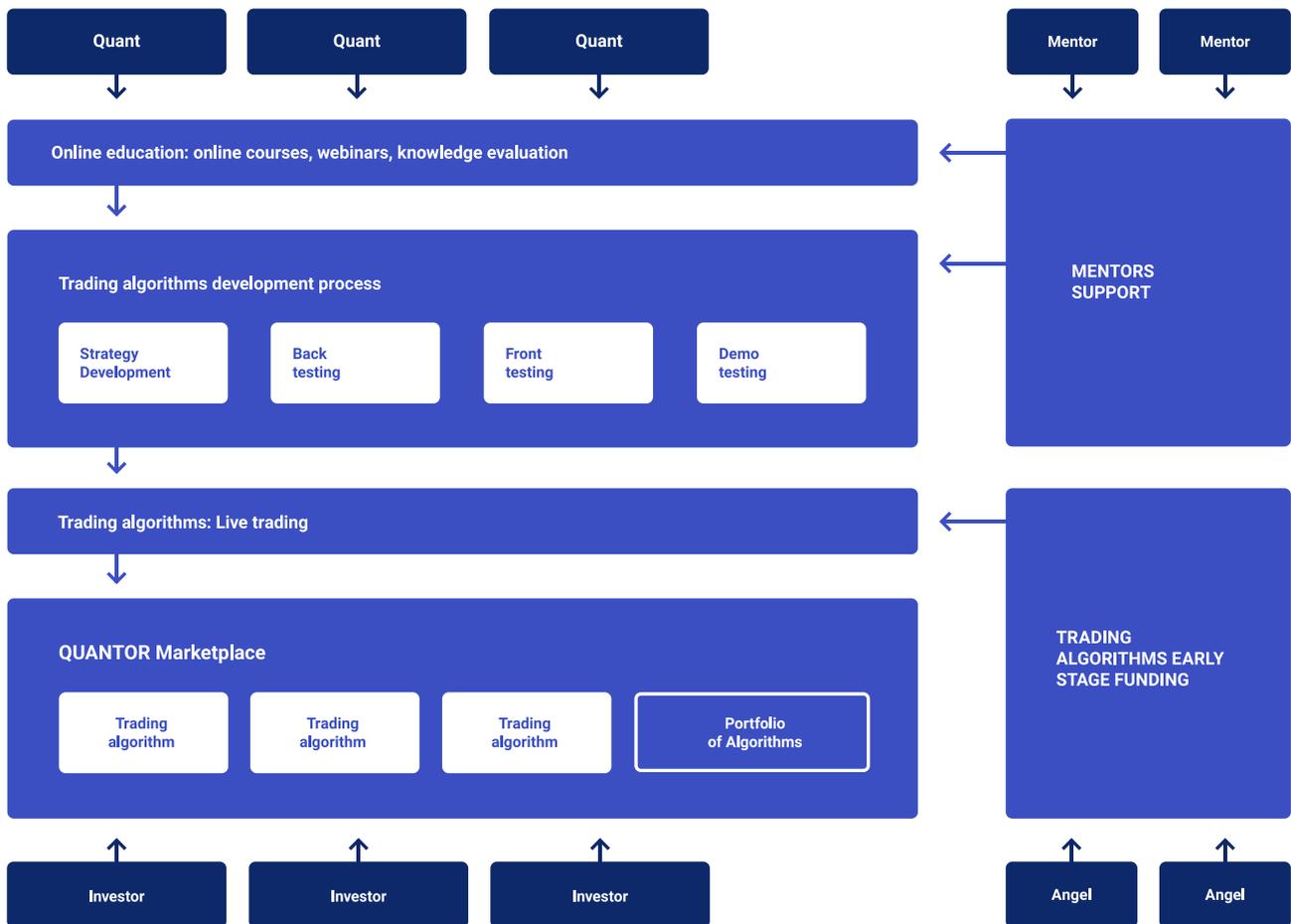


## 5. Quantor Ecosystem

### 5.1 Roles of ecosystem participants

The platform provides four roles for users: mentor, quant-developer, angel-investor, and investor:

- Mentor is an expert in a certain field of mathematics, statistics or quantitative finance, and algorithmic trading, offering training opportunities (online courses, webinars, individual consultations, tests, and workshops) to other platform participants, both on paid and free basis;
- Quant-developer is a specialist who develops investment algorithms both independently and in a group with other quants in order to provide them to potential investors and to receive additional funds under management by using developed trading algorithms;
- Angel-investor is an investor who participates in financing trading algorithm at the early stage, receiving a share of the future return on the use of the algorithm in managing investors capital;
- The investor is a user who provides funds under management to trading algorithms available on the platform or for financing any activities and purchases (courses, training materials) on the platform.



A variety of relationships can be formed between the participants of the Quantor ecosystem (users of the platform), providing the raising of various mutual interests and payments. The blockchain technology will make it possible to effectively document and control the mutual obligations of the participants, significantly simplifying their relationships and ensuring the quality of the platform services.



## 5.2 Relationships between investors and quants

Development, testing, and implementation of profitable and robust trading algorithms require a significant amount of time. For this, the following concept of relationships is possible: quant, angel-investor, investor:

- Quant develops and tests the algorithm;
- The angel-investor takes the risk of investing a minimum amount of capital to test the algorithm on live trading mode;
- Investors invest in algorithms that have generated positive return on real markets.

The trading algorithm has the risk of potential inefficiency, like any financial instrument. Stable and long-term profitability on sufficient amounts of capital is the most important criterion for investing in a particular algorithm. Nevertheless, investment at the initial stage is the only and necessary condition for its verification. This stage of testing has the greatest risk for the investor.

A possible solution is a progressive system of risk and returns distribution. Investing large sums of capital should be related to a lower level of risk, but the maximum risk should be compensated by a higher level of potential income. Traditionally, the venture industry invests capital only in case of the successfully developed project after the seed stage of investing. The maximum risks of the initial stage are assumed by angels, who take a greater share of the risk in return for a larger share in the company.

In a similar way, the angel on the Quantor platform, in case of investing in the algorithm at an early stage, has the right to receive a greater reward for greater risk. The share of income from capital management can be distributed between the investor and the manager in various proportions, for example, 80/20 or in a different ratio.

Taking into account the role of the angel in the process of investing the first capital and further investing large sums from an unlimited number of investors, the angel can claim to receive a percentage of profit from the use of the algorithm, as the developer of the algorithm.

For example, after creating and passing all the stages of the algorithm development and testing, except for testing the algorithm on real money, the angel can invest the first \$10,000 in the trading algorithm for a period of 12 months.

### **In exchange for this risk, the angel will receive:**

- 80% of the income from the profit from the sum of own invested funds (provided that the profit is gained by this algorithm);
- The right to 5-10% of the income when managing the capital of all investors who subsequently invest in this algorithm (provided that investors invest and gain profit of this algorithm).

A specific model of payment for management will be established and fixed in a smart contract. An investor, choosing an algorithm for investing, will accept a certain model of relations and payment for management. The Quantor platform, in its turn, will be able to receive part of the management fee in the form of commissions.



## 6. Business-model and monetization

On the Quantor platform, various models of monetization will be implemented, which will make its revenues more sustainable due to the diversification of sources and types of income.

### 6.1 Commission business-model.

**The Quantor platform will receive:**

- Commission (percentage of profit) for asset management using trading algorithms created on the platform and selected by investors to use;
- Commission for each online course, webinar, individual consultations sold on the platform;
- Commissions from sales of ready-to-use tools on the platform;
- In the future, it is possible to receive part of the commission of brokerage companies and cryptocurrency exchanges for transactions made by users of Quantor platform.
- Management fee for using trading algorithms on the platform.

Also, certification and testing will be implemented on the platform to confirm the appropriate level of user knowledge on a paid or free basis.



## 6.2 Subscription model

- A part of the income will be brought by the subscription model for access to certain services, for example, to unlimited access to content or analytical services on the platform.
- Access to cloud hosting of trading algorithms.
- Access to comprehensive historical data of trading instruments on the platform.
- A subscription model can be used with payment for a month, quarter, six months, year.

## 6.3 Additional income

Ecosystem and infrastructure of the Quantor platform will be expanded and updated, new services will appear such as:

- trading algorithm's ratings;
- indexes and portfolios of the best algorithms on the platform;
- products for monitoring the status of portfolios;
- providing trading signals and notifications.

The platform will also allow its users to earn a profit: commissions for products and solutions sold on the platform, publications of materials and posts, blogging, the attraction of new users to the platform (Referral Program).



## 7. Roadmap and plans

The creation of the platform and community of Quantor includes various aspects, including technologies, content, promotion, possible regulations and licenses in various jurisdictions and many other challenges. The Quantor team defined a plan that describes the main stages of the development of the platform based on the results of the token-sale. Since the platform consists of several parts (marketplace and educational platform), the development of each of them will take place in parallel with the development of other elements. At the same time, within one part each next stage is based on the results of previous stages of development.

The main items of expenditure of the capital received from the token-sale will be the development of platform elements and expanding project team and marketing. To comply with the requirements and regulations, it may also be necessary to purchase licenses and permits in certain jurisdictions. At the same time, Quantor will use required licenses, cooperation with payment systems, user identification systems and other technical solutions.

Some solutions, such as the technology of analysis, rating, and selection of investment algorithms, which play an important role on the platform marketplace, will be developed using own resources, while others (for example, ready-to-use tools and applications) can be developed and purchased for use on the platform. In the process of development, an ecosystem will be formed, including various solutions and technologies for interaction necessary for users.

### 7.1 Current status of the project

At the moment, the educational Quantor platform works successfully, providing access to online courses and materials to users from different countries. The project is a finalist of EdCrunch 2016 Pitch.Competition, Moscow, a participant of the First International Conference of Sberbank «More than learning: training of the digital world leaders» and a participant in the pre-accelerator program of the Internet Initiatives Development Fund. The project is included in the program of support for start-ups of Amazon - AWS Activate.

Since the spring of 2016, with the help of experts and partners, the open program from a set of open third party courses has been formed for quants on the platform. For the presentation educational courses and materials in English and Russian languages have been selected from various fields of mathematics, statistics, programming, finance, and investment, work on the system of assessment skills of developers is in progress. The placement of online courses of international experts has begun.



### **Backtesting: complete online course**

The focus is on discovering and avoiding various pitfalls during the backtesting process that may degrade performance forecasting.

**Ernest P. Chan**



### **Introduction to Quantitative Investment**

In this course, students study trading strategies from the popular academic literature and learn the fundamental mathematics and IT aspects...

**Dr. Haksun Li**



### **Алгоритмический трейдинг с использованием платформы StockSharp**

Платформа StockSharp это профессиональное решение для разработки торговых алгоритмов любой сложности.

## **7.2 Organizational Structure**

Organizational and legal structures of the platform and ecosystem of Quantor will be developed with the participation of professional lawyers and experts. The parent company of the project is QUANTOR LIMITED.

The company established under the Malta's legislating and having its registered office in East Gate Office, School Street, Msida, MSD1613, Malta.

The Quant (QNT) utility tokens will be issued in the jurisdiction of one of the countries supporting the development of cryptocurrency and blockchain technologies. The final choice can be made by the time the presale or token-sale is held.

Following the results of conducting a token-sale, affiliated and operating companies may be registered in different jurisdictions depending on the possibilities of development in prospective markets.



The Quantor tokenizer company will provide the opportunity to purchase Quant tokens to anyone who has passed the relevant procedures of KYC/AML (Know Your Customer/Anti-Money Laundering) and will perform all activities related to the creation and provision of tokens.

In the case that a potential Quant token buyer refuses to pass the KYC/AML procedure, or during the verification process, it will not be possible to uniquely identify a potential buyer or establish the origin of its funds, the purchase of Quant tokens will be denied to such a user. Owners of Quant-Tokens who want to exchange tokens for fiat money will be required to pass the KYC procedure.

The platform will accept and make payments only to customers who have previously been identified and comply with all procedures within the KYC/AML policy framework. Both cryptocurrency exchanges and private resellers and agents can be Quantor's counterparties. A company account can be opened in one of the banks that support the development of blockchain technology.

## 7.3 Development of the Quantor Ecosystem

As soon as the technological side of the platform is ready and filled with content, the Quantor team concentrates efforts on the development of the community. Investments in development will be carried out in parallel with the release of working versions of the product. The growth of the community means an increase in the number of end users (quants, experts, investors) and platform partners - brokerage, management and investment companies and banks, which in its turn can promote Quantor solutions to their users. The more there are active users on the platform, the more transactions there will be, thus, the greater will be the demand for tokens and project capitalization.

Measures to increase the Quantor user base will include marketing and promotion of the platform among the target audience, marketing and promotion of successful quants and algorithms, PR and GR, aimed at the spread of knowledge about the benefits of the development of new investment technologies in a decentralized economy.

The Quantor business model becomes successful in case of attracting a large number of users, and to do this it is necessary to create a high traffic and a proper promotion of the platform.

Considerable attention will be paid to marketing in an audience having knowledge of financial and cryptocurrency markets, among specialists and students with a technical background, as well as an audience of investors who keep their savings in the cryptocurrency.

To attract and motivate new users to create trading algorithms on the Quantor platform, competitions and contests will be held in which developers will be rewarded for the best trading algorithms.



**The rewards may include:**

- Payment for the use of the algorithm in management of investors' capital;
- Financing of the algorithm and distribution of profit between the platform and the quant.

The project plan includes the development of an effective legal framework for working in different countries and the registration of a legal entity (or persons) to comply with all the norms and requirements of regulators in different jurisdictions.



## 7.4 Roadmap and plans

### Quantor Development Milestones:

2016

**January 2016**

Start of the Quantor project.

**June 2016**

Launch beta version of Quantor website.

**October 2016**

a participant of the first international conference of Sberbank «More than learning: training of the digital world leaders.

**Spring 2016**

formed the first version of the training program from a set of open courses.

**August - September 2016**

Quantor became the finalist of EdCrunch 2016 Pitch Competition, Moscow.

2017

**Spring 2017**

Participant in pre-accelerated program of the Internet Initiatives Development Fund.

**Autumn 2017**

The project has been approved for the AWS Activate startups support program of Amazon.

**Winter 2017**

A beta version of the web platform for creating and selling online courses was launched.

**Summer 2017**

Work has begun on methodology of analyzing investment algorithms using ML technologies.



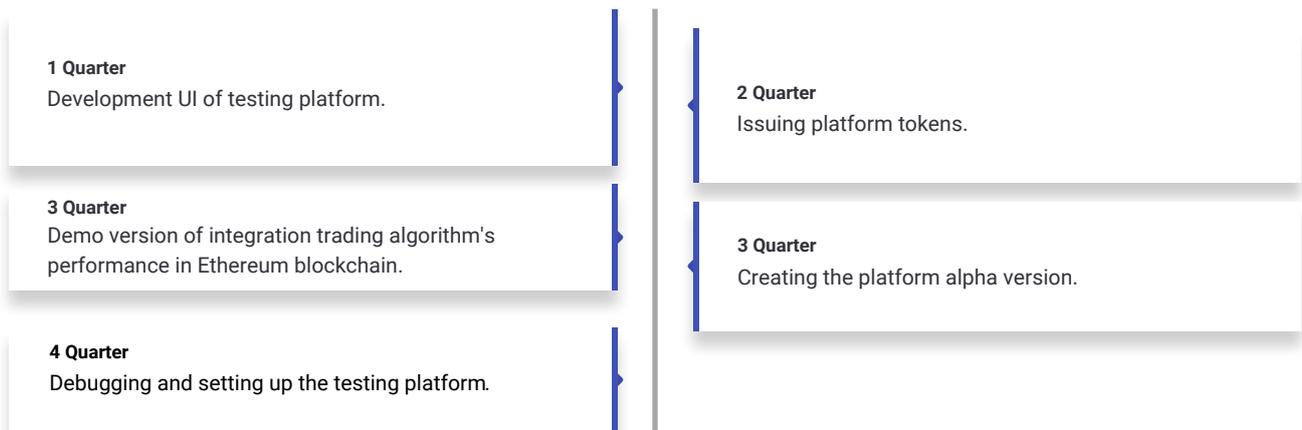
2 Quarter  
Conducting the pre-sale



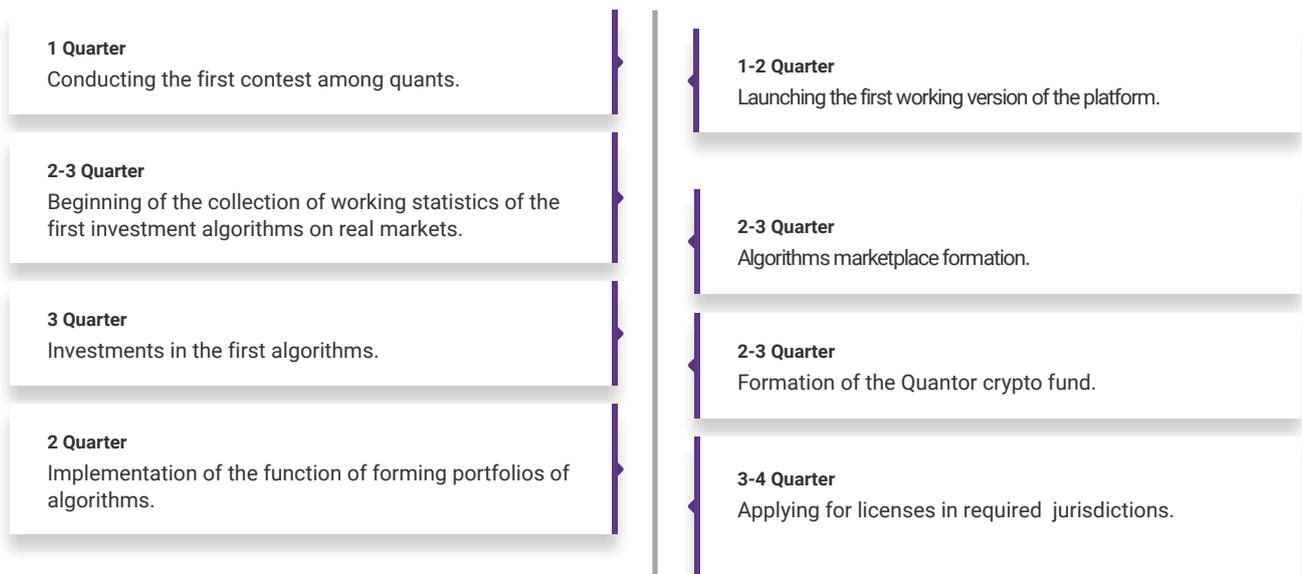
3 Quarter  
Conducting the token-sale



The Quantor v. 1.0 platform



2019



2020

1-2 Quarter

Creation of a bridge between investors' capital and the platform



## 8. Economics and distribution of tokens

### 8.1 Use of tokens

Quant (QNT) tokens will be issued in order to create an efficient economy of the Quantor ecosystem facilitating the development of the project and a blockchain community that establishes transparent and fair relations between all ecosystem participants - experts, quants, and investors.

Owners of tokens will be able to actively participate in development of the ecosystem. Holders of QNT tokens will receive an access to various services and capabilities of the platform, depending on the number of tokens owned by the user. The listing and circulation of QNT tokens on crypto-exchanges will allow users to freely buy, sell, and exchange tokens.

Tokens will be accounted for and transferred through a distributed Ethereum network, excluding compromise and double consumption of tokens. At the same time, Ethereum network will charge a small commission for executing transactions, which can be compensated for by users of the platform.

#### **Tokens can be used:**

- for access to trading algorithms on the platform;
- for purchase and sale of internal platform services and products;
- as an internal mean of investment in trading algorithms.

Quantor will make the purchase and use of QNT tokens simple and convenient. Quantor will allow users not only buy and spend QNT tokens but also earn them as a reward for provided services. Tokens can be used to pay for other services, including a future service of analyzing and forming portfolios and indexes of algorithms on the platform.

The price for access to courses, workshops, and trading algorithms will be presented in QNT tokens.



Since there is a limited capacity of trading algorithms, Quantor will develop and apply different levels of access to trading algorithms depending on the number of tokens owned by the user. Determining the levels of access to algorithms will depend on the performance of particular trading algorithm and amount of capital under management of this algorithm.

If a Quantor hedge (crypto) fund is created on the basis of the best trading algorithms, the platform will receive the management fee and success fee traditional for the asset management business, depending on the value of the assets under management and the profitability of the fund.

In this case, several funds with different composition of assets and algorithms can be created according to different levels of risk for different types of investors.

Quant (QNT) tokens can be listed on the cryptocurrency exchanges and freely traded or exchanged for other tokens or crypto-currencies.

Participating in the purchasing of tokens, investors and quants will become the creators of a high-tech ecosystem that develops a new direction of the investment industry and improves the quality of capital management, based on effective motivation for all participants in the ecosystem.



## 8.2 Economic justification

According to the theory of monetarism, the founder of which is Milton Friedman, the Nobel laureate in economics, the amount of money in circulation is the determining factor of economic development. His ideas laid the foundation for many state programs in the 80s of the XX century.

The theory of Friedman served as a basis for the actions of the FED in the course of the global financial crisis of 2007-2008. Within the framework of the theory, it is believed that inflation is almost entirely related to an increase in the money supply. The faster the money supply increases, the higher the inflation level will be. Having the neoclassical quantitative theory of money as a theoretical basis, monetarism is focused on the development of a new version of this theory and proposals for improving macroeconomic policies. According to the views of monetarists, money is the main sphere that determines the movement and development of production.

Demand for money has a constant tendency to increase (which is determined, in particular, by the propensity to save), and in order to ensure the consistency between the demand for money and their supply, it is necessary to implement a course for a gradual increase of money in circulation.

State regulation should be limited to control over monetary circulation.

The formal form of the quantitative theory of money is expressed in the following equation:  $M \cdot V = P \cdot Y$ , where  $M$  is the amount of money in circulation,  $V$  is the velocity of circulation of money, (the average frequency with which the monetary unit is used to purchase new goods and services for a certain period of time),  $P$  - price level,  $Y$  - real output.

The members of the equation on the left side describe the behavior of money used in making transactions, where the velocity of circulation of money with which it circulates in the economy, shows how many times in a certain period of time the coin passes from hand to hand. On the right side of the equation:  $Y$  – is the physical volume of goods and services;  $P$  – is the price level or the average price at which each unit of the product is sold; Thus  $P \cdot Y$  – is the value of production expressed in terms of money.

If the amount of money (money in circulation) can be expressed as  $M = K \cdot C$ , where  $K$  is the number of monetary units,  $C$  is the value of the monetary unit, then  $C = P \cdot Y / (V \cdot K)$ .



If we apply this equation to tokens and the Quantor economy, where QNT token will be used to pay for services and transactions on the platform, it becomes clear that  $C$  (the value of a QNT token) is directly proportional to  $P$  (platform prices),  $Y$  (the volume of services sold on the platform) and inversely proportional to  $V$  - the velocity of circulation of tokens and  $K$  is the number of tokens in circulation.

The development of the platform will promote the growth of the cost of QNT tokens, as in the process of development, Quantor will increase the number and variety of services implemented on the platform by attracting new service providers and users - service consumers, allocating the necessary resources for marketing and promotion.

Creating additional opportunities for privilege users - owners of significant tokens, for example, such as increased levels of access to platform services and tools, the possibility to participate in taking important decisions concerning the development of the platform and investment decisions, various discounts, cashback and other opportunities, thereby stimulating holding of tokens, the platform will restrain the velocity of circulation of tokens.

Quantor will be able to influence the number of tokens in circulation, if necessary, taking decisions on buying out and «burning» a part of tokens, based on the decision of the authorized collegiate body of Quantor, consisting of top management, founders, and holders of large packets of tokens.

The initial number of issued tokens, taking into account the findings of studies on the velocity of circulation of money in developed countries, will be established on the basis of the calculated in the financial model volume of services implemented on the Quantor platform. In the future, the platform will support the number of tokens in circulation in accordance with the volume of services actually implemented on the platform.

For example, if the volume of services implemented on the platform is about \$ 7-10 million per year, then the total cost of services necessary to serve this volume of services and tokens in circulation may be at the level of \$3-5 million, and taking into account part of the tokens saved by the investors, the total value of issued tokens may be at the level of \$7-10 million.



## 8.3 Prospects and metrics

Based on the current capitalization and dynamics of the cryptocurrency market, it is possible to forecast a further increase in the number of market participants on the platform. According to experts' estimates given in the paragraph 2.3 of the White Paper, in the coming years, the growth of the cryptocurrency market capitalization will continue and might reach from several hundred billions to several trillion US dollars.

In view of these estimates, a financial model of the Quantor platform has been prepared, which predicts the main indicators of functioning the ecosystem. At the same time, three main scenarios for the project implementation are calculated: Basic, Conservative and Optimistic. The Basic scenario provides raising about \$5 million, Conservative one - about \$2.5 million, and Optimistic one - about \$ 10 million.

The calculations show that in the case of implementation of the conservative scenario, the raised funds will be sufficient to build the platform and ensure break-even point of the project, and in the case of the optimistic scenario, the incomes and profits of the platform will increase in proportion to the invested funds.

The total number of issued QNT tokens will be limited. Therefore, with an increase of the volume of services implemented on the platform - trading algorithms, the cost of the token will grow in proportion to the increase in the volume of such services.

If necessary, the authorized body of Quantor, which may include the founders and top management of the platform, as well as holders of large packets of tokens, may take decisions on buying off a certain number of tokens for the purpose of «burning» (liquidation), which will also positively impact the increase of the cost of tokens.



## 8.4 Distribution of tokens and raised funds

The funds from the sale of QNT tokens will be used for development of the platform, payment for legal and consulting services, marketing campaign, development and expanding of the ecosystem, including the involvement of quants, industry experts, and external partners, as well as the motivation of the project team, entry into international markets, support of developers and contributors that will create products on the platform. A part of raised funds can be reserved for possible legal cases.

The maximum number of Quant (QNT) tokens to be issued is 2,000,000,000.  
The base cost of one QNT token without discounts is set at \$0.01.

The opportunity to sell out of issued tokens will be limited for a certain (lockup) period, which may depend on the time of receipt or purchase of tokens and the number of received or purchased tokens, but no more than 12 months from the date of receipt or purchase.

In the case of a successful token-sale, some of the raised funds can be reserved in the form of cryptocurrencies and tokens. The reserve fund is planned to be formed from resources received from the sale of tokens that exceeded \$10 million. In case of its formation, the resources of the reserve fund will be frozen by smart contracts and will be allocated in accordance with the stage of their use.



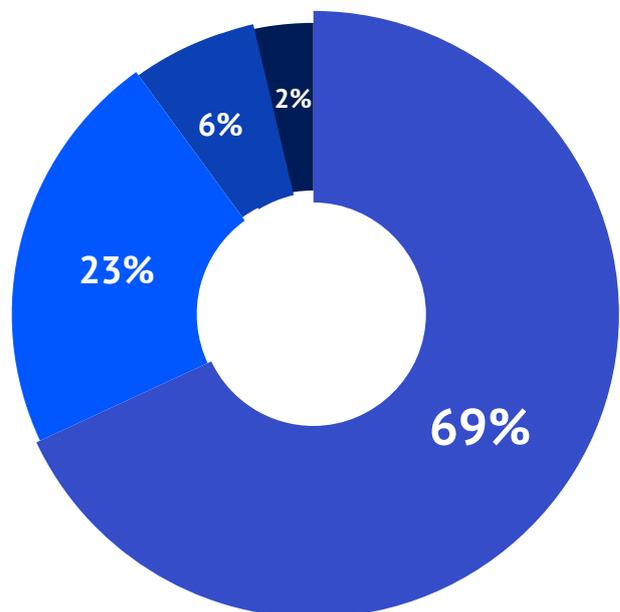
### The resources of the reserve fund can be used for the following purposes:

- The Quantor Stimulation Fund. It is planned to regularly encourage quants to develop new investment algorithms with the possibility of providing funds under management to the best of them. These solutions can be provided to the best quants and algorithms under particular set of requirements, for example, after taking the particular set of required courses, passing successful backtesting and paper-trading stages of testing trading algorithms;
- The reserve fund. Reservation of the amount of raised funds for unexpected expenses and legal cases.
- Creation of a resource for investing in the crypto fund of the Quantor platform at a later stage of development.

### The distribution of tokens.

In the case of the implementation of the Base scenario, the tokens will be distributed as follows:

Placing on the market	<b>69%</b>
Quantor team and founders	<b>23%</b>
Advisors and experts	<b>6%</b>
«Bounty» - campaign and promotion	<b>2%</b>

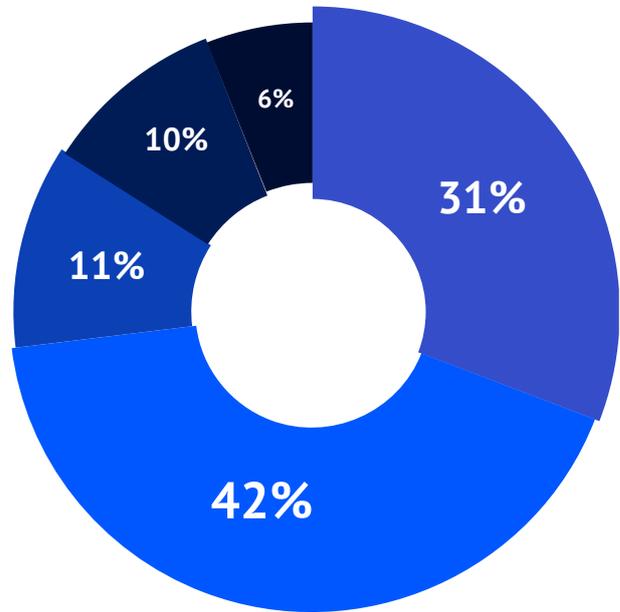




## The distribution of raised funds.

In accordance with the Base scenario, the raised funds will be distributed as follows:

Platform development about	<b>31%</b>
Sales and marketing about	<b>42%</b>
Payment for labor of management	<b>11%</b>
Bonuses for partners and team	<b>10%</b>
Other expenses	<b>6%</b>



The distribution of tokens can be changed depending on the platform development needs and the results of the implementation of the tokens.

## 8.5 Issue and turnover of tokens

It will be possible to buy Quant-tokens during several phases (pre-sale and token-sale) in several ways, among which there is the purchase of tokens for ETH.

The tokens will not be sold to residents of the countries where issue and sale of tokens are prohibited. The listing and circulation of Quant tokens on crypto-exchanges, in the future, will allow users to purchase, sell and exchange tokens freely.



## Pre-sale

**Beginning:** 28 May, 2018

**End:** 15 August, 2018

**Number of available tokens:**  
100,000,000 QNT

**Supply for Pre-ICO Round 1:**  
30,000,000 QNT

**Supply for Pre-ICO Round 2:**  
70,000,000 QNT

**Accepted currencies:** ETH

**Minimum amount for purchase in Round 1:**  
77,500 QNT

**Token Price for Pre-Sale Round 1:**  
1 QNT = 0.0065 USD

**Token Price for Pre-Sale Round 2:**  
1 QNT = 0.008 USD

**Minimum amount for purchase in Round 2:**  
62,500 QNT

**Soft Cap for Pre-Sale:** 195,000 USD

**Hard Cap for for Pre-Sale:** 755,000 USD

## Token-sale

**Beginning:**  
1st September, 2018

**End:**  
30th November, 2018

**Number of tokens available:**  
1,280,000,000 QNT

**Target Cap for Main Token Sale:**  
10,000,000 USD

**Minimum amount for purchase:** 10,000 QNT  
during Main Token Sale

**Accepted currencies:** ETH

**Token Price for Main Token Sale:** 1 QNT = 0.01  
USD

**Soft Cap for Main Token Sale:** 2,500,000 USD

**Hard Cap for Main Token Sale:** 12,800,000 USD



## 9. Team\*

The Quantor team includes like-minded people and experts with the necessary experience for the success of the project. The team has a technical and investment background, which includes a successful investment and asset management experience in the financial markets. Experts, advisors and partners of the project add important competencies in specific segments of EdTech and FinTech, as well as practical experience of venture investment and work on the crypto-currency space.



### **Serge Bolshakov**

#### **Strategic management and business development, finance and investment**

Entrepreneur and manager with 20 years of business experience, including startups, and work in the field of investment and finance, including asset management experience of more than \$ 50 million. Serge has higher education in physics and economics, as well as professional qualification in the financial and strategic management field.



### **Vlad Buchnev**

#### **COO**

Vlad is a founder of Consentus Capital Management, Inc. The company was registered with the Commodity Futures Trading Commission (CFTC) as a Commodity Trading Adviser (CTA) in the US. Vlad was responsible for the trading within separately managed accounts. He was also actively involved in the development of algorithmic trading strategies that used in managed accounts services.



### **Aden Aliakberov**

#### **PR and marketing, bounty campaign**

Aden is a student at the Faculty of International & European Studies at King's College London, he actively participates in the public life of the University and the Conservative Party of Great Britain. He has an extensive experience in PR and marketing, including participation in successful political campaigns at the University and the Westminster constituency.



### **Klim Yadrinsev**

#### **Marketing, trading and interaction with exchanges**

Graduate of Brighton College (UK). Certified trader in the stock and derivatives markets. Student at University of London Economics. An expert enthusiast with a great understanding of marketing and human behavior.



### **Anastasia Everskova**

#### **Legal support of the project**

Private practice (IP, IT and LegalTech).

Education: International Law Institute, Moscow (2009), she has an economic and law backgrounds, strong experience in supporting international clients' services (GroupM, Dentsu/Aegis, IPG, a global media investment management groups); worked with offshore/onshore jurisdictions (Cyprus, Singapore, BVI, Gibraltar, Isle of Man) and supported some other ICO projects.



## Vasiliy Pimkin

### Blockchain and it development, programming of smart contracts

Expert and manager with vast experience in blockchain and web product development, business media and publishing.



## Maxim Bolshakov

### Programming, trading infrastructure and testing

Student of the Department of Statistics, specialty Data Science at the University of Warwick (Great Britain) with extensive experience and programming skills, including development of trading algorithms and testing systems.

## Advisers, Experts and Partners\*



## Ernest Chan

### Adviser

Dr. Ernest P. Chan is the Managing Member of QTS Capital Management, LLC. His career since 1994 has been focusing on the development of statistical models and advanced computer algorithms to find patterns and trends in large quantities of data. He has applied his expertise in statistical pattern recognition to projects ranging from textual retrieval at IBM Research, mining customer relationship data at Morgan Stanley, and statistical arbitrage trading strategy research at Credit Suisse, Mapleridge Capital Management, and other hedge funds.



## Haksun Li

### Adviser

Dr. Haksun Li is a founder and the CEO of NM LTD., an algorithmic trading research and mathematical modeling consulting company. He was a quantitative trader/quantitative analyst with multiple investment banks. Haksun has worked in New York, London, Tokyo, Singapore and Hong Kong. Dr. Haksun Li is the Vice Dean of the Big Data Finance and Investment Institute of Fudan University, China. He has a B.S. and M.S. in Pure and Financial Mathematics from the University of Chicago, an M.S. and a Phd. in Computer Science & Engineering from the University of Michigan, Ann Arbor.



## Kirill Ilinski

### Adviser

Kirill's career started in academia, with PhD in Mathematical Physics from Steklov Mathematical Institute of Russian Academy of Sciences. He is the author of the non-equilibrium arbitrage pricing theory which was covered in "Scientific American", "New Scientist" and other publications. This resulted in the monograph, "Physics of Finance", published by Wiley & Sons in 2000. After his career in academia Kirill worked as a deputy-head of exotics analytics at Chase Manhattan Bank and after the merger co-founded Debt-Equity Relative Value Group at JPMorgan. The group was responsible for hedging of the bank's Global Convertible business and was instrumental for developing models applied to hedge the bank's loan book. After leaving the bank in 2004 Kirill became one of founders of Fusion Group – diversified group of financial companies which comprises an institutional asset manager, wealth management company and retail financial advice consolidator in the UK. Kirill is a frequent speaker at industry conferences on the subject of tail protection, corporate hedging and quantitative volatility strategies.



## Mike van Rossum

### Adviser

Blockchain and crypto developer with a decade of broad experience in IT (OS, networking, operations). Mike is working on developing blockchain and trading systems. In his spare time he is focused on open source projects, like Gekko: A cryptocurrency trading bot and backtesting platform. Mike is currently working on "Easy Trading Connect" for ING while also doing work for Bitwala - a Berlin based Bitcoin startup (both on a remote basis).



## Joseph Wang

### Adviser

Chief Science Officer at Bitquant Research Laboratories. Almost a decade of experience in developing C++ quantitative finance libraries. A decade and half of working experience in developing a wide variety of commercial software. Over two decades of working experience developing scientific and academic software. Experience includes high performance grid computing, complex numerical supercomputing code, database programming, machine learning, and other systems. Developing quantitative finance models to model Chinese securities markets and the global bitcoin markets.



## Andrey Degtyruk

### Expert

Andrey has been involved in commercial products development for more than 8 years. His most experience comes from web development of highly loaded services, including large electronic trading platforms, and also cooperation with fintech companies: Rocket Internet and several IT startups.



## Alexander Klimenko

### Expert

Alexander graduated from Moscow Institute of Physics and Technology. Major works in the field of systems programming and cybernetics. Professor at the systems integration and management department of the MIPT. He was involved in FX market research and trading strategies development since 1995. His research interests have included development of the theory of Multidimensional Technical Analysis and practical implementation of technical tools for predicting price movements by using artificial neural networks technology.



## 10. Terms & Conditions

Quantor White Paper can be used for information purposes only and should not be considered as a public offer to sell shares or securities using the Quantor platform or any other related company.

**Before participating in the purchase of Quantor tokens, a user needs to get familiar with:**

- The provisions of the current version of White Paper and Technical Paper;
- General conditions – [Terms and Conditions](#);
- Conditions for token sale - [Tokens Sale Agreement](#).

**Please note:**

The user's participation in the purchase of Quantor tokens, as well as the fact of the purchase of tokens, means that the user has previously become acquainted with the provisions of the above documents, understands all the risks related to the purchase of tokens, and agrees to comply with all the conditions presented in the documents listed in this paragraph.

Quantor tokens do not imply either directly or indirectly, the generating any income from their ownership and use, the cost of Quantor tokens may, from time to time, decrease to zero, and a constant cost is not guaranteed. The risks of buying tokens, as well as the decision to purchase them, are borne by the participant.

The user bears the risks related to the refusal to read all basic terms and conditions and tokens sale agreement.

# QUANTOR



[Linkedin.com](https://www.linkedin.com)



[Tokens.quantor.co](https://tokens.quantor.co)



[Telegram.org](https://t.me)



[Twitter.com](https://twitter.com)



[Reddit.com](https://www.reddit.com)



[Google Plus](https://plus.google.com)



[Facebook](https://www.facebook.com)



[Youtube.com](https://www.youtube.com)



[Medium.com](https://www.medium.com)