WEALTHMAN

Whitepaper

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ABSTRACT

Wealth Management industry faces efficiency crisis while dealing with mass affluent clients as well as assets registered on blockchain. In both cases, there exist sound reasons such as high costs of professional services, conflict of interest between an investor and asset manager in survival conditions, inability by courts to influence records on blockchain. This document outlines a Decentralized Wealth Management Platform Wealth-Man designed to address inefficiency inherent to the industry. The platform aims at restricting the access to the investor's digital assets by asset manager and minimizing human participation in the management process. Main business function of the platform is provision of the protocol for launching asset management service. It makes possible to provide human-driven asset management, robo-advising, inheritance contracts services etc.

INTRODUCTION

1.1. Legal notice

Legal regulation of crypto-currencies and crypto-assets is constantly changing, and varies from country to country, thus a reader of this document may encounter legal restrictions on starting a service based on WealthMan solution, as well as acquiring tokens issued by WealthMan DAO. In case of such legal restrictions, please contact our team to carry out the adaptation of the solution in accordance with your local legislation.

1.2. The dawn of crypto assets

Blockchain is a distributed ledger that protects information from unwanted alterations hindsight and allows execution of smart-contracts1. This valuable feature entices governments to transfer asset registers to blockchain [Georgia, Sweden, Illinois] and to legalize crypto assets, making safe to transfer the property rights in the execution environment of blockchain. At the same time, companies are being registered in the form of DAO [DAO], which are essentially programs, not legal entities as before. These trends led to the emergence of tokenized form of every considerable asset class and created a task of managing such assets.

1.3. Wealth management types: Robo-Advisor and Human-driven

Investment management process includes the following sequential procedures [Bowen]:
• Risk profiling: Comprehensive analysis of needs and objectives of the client2
• Portfolio construction: Determining the structure of the client investment portfolio that matches his investment objectives and risk profile" of the structure of the investment portfolio
• Acceptance: Approval of the investment portfolio with the investor, and adjustments as needed
• Execution: Allocating assets in portfolio initially and later rebalancing assets to match the constructed portfolio structure
• Reporting

The types of wealth management services differ by whether the stage of approval occurs:

Type of wealth management	Approval of the investment portfolio with the investor	Without approval of the investment portfolio with the investor
Human-driven	**Advisory service**	**Discretionary service**
Computer-controlled	**Robo-advisor**	**Robo-advisor**

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1   Smart-contracts are software applications that can be executed in a blockchain 2.0 environment. Some examples: https://github.com/ethereum/wiki/wiki/White-Paper#applications
2   The content of the test is under control of special legal requirement like MiFID and others.

Business process of asset management
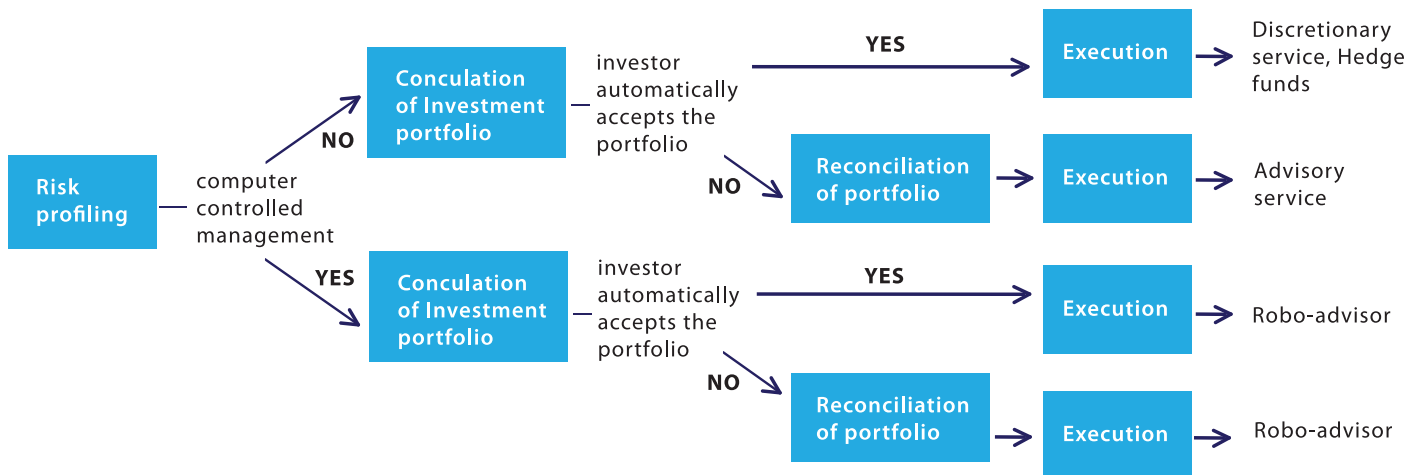
A robo-advisor is a digital instrument, which provides an automated, algorithm-driven wealth management service with little to no human supervision. Typically, robo-advisor collects information about client's goals and financials via online survey. Then, robo-advisor analyzes the market data and automatically manages the client's assets in accordance to client's investment goals.

The first robo-advisor has been developed in 2008 in the US. Shortly after, online applications for automatic compilation of the investment portfolio became popular in Europe, Australia and Canada. Since then, the number of robo-advisors and the amount of assets under management (AUM) has been growing rapidly. By the year 2017 the number of available robo-advisor services reached 100, while AUM amounted for $224 billion. To date, the largest robo-advisors operating in US are:

- Vanguard Personal Advisor Services ($100 billion AUM)
- Schwab ($10.2 billion AUM)
- Betterment ($10 billion AUM)
- Personal Capital ($5 billion AUM)
- Wealthfront ($7.5 billion AUM)

Source: Statista

There are several reasons for the dawn of robo-advisors:

1. Emergence of mass-affluent investors.

Until the second half of the 20th century traditional wealth management market had a limited number of high net worth clients. By the end of the 20th century differentiation of incomes of the world population began to decrease. As a result, mass-affluent investor class has emerged. At the same time, the number of qualified specialists did not increase proportionally and the cost of their services did not fall at the rate sufficient to match the increased inflow of the new investors in need of asset management services. As a result, the cost of professional services has increased.

Robo-advisors have been introduced as a low-cost alternative to conventional advisors. By eliminating human labor, online solutions can offer the same services at a lower cost. Most robo-advisors charge an annual fee of 0.2% to 0.5% of client's net assets value (NAV). Human wealth management typical fee range is 1-2% NAV, and overall management fee could be even higher due to asset management commissions.

2. Lower capital requirements.

It takes significantly less capital to get started with robo-advisers ($5,000 is a standard baseline). One of the most popular robo-advisors, Betterment, has no minimum account requirement at all. On the contrary, the minimum value of liquid assets required to retain a professional wealth manager typically starts from $5 million.

Previously and to a large extent today, the role of low-cost asset management was performed by funds. That is, when many investors pool their capital together and transfer management rights to one or a group of professionals. However, this form of management gives the same exposure for all investors. Since investors have different investment goals and risk profile, this uniform approach does not yield optimal risk/return for each investor.

3. Accessibility of the service.

Robo-advisors are also more accessible, being available 24/7 as long as the user has an Internet connection.

CHALLENGE

One's stable future largely depends on financial well-being, so it is beneficial to use professional services of a trusted asset management to manage one's portfolio of assets.. Trust implies confidence in the competence and integrity of the asset manager and the broker, depository and the registrar, and the ability of the judiciary to recover the illegally appropriated assets. Trusted relationships can be created with the help of blockchain technology. On the contrary, trust has been diminishing for a long time in a traditional relationships as well as now with the crypto assets management with the increasing number of evident adverse events. Thus, it can be concluded that both crypto and traditional wealth management market are facing the following issues:

- Inefficiency of the judicial system in the fair protection of the register;
- Conflict of interest between wealth manager and investor;
- Lack of data on the effectiveness of individual asset management;
- High minimum investment requirements;
- Negative impact of a human factor.

2.1. Inefficiency of the judicial system in the fair protection of the register

- **Inability of the judiciary to recover stolen crypto assets**

Blockchain security methods use public key cryptography. It means that key pair is being used: one that is public and one that is private and only known to the owner. Only private key holders may have access to assets registered on blockchain. The public key is designed to verify that the holder of the private key sent a message/transaction.

- **Therefore, the investor has two options for purchasing investment portfolio when working with a financial advisor:**

  1. Execute transactions himself.

  The option is tend to be laborious for investor. More importantly, it creates an opportunity for the investor to violate an agreement to pay remuneration to the asset manager, since he does not have access to the investor's assets.

  2. Hand over the private key to assets to the manager or third party responsible for execution.

  The option faces inefficiency of modern judicial system. The latter fails in protecting against theft of crypto assets by asset managers, since only the owner of the private key can make changes to the blockchain-based registry. In the long-run, probably, the Global Court will be formed and special rights may be granted to make entries in the decentralized register. However, today the courts are localized and bailiffs do not have private keys. Therefore, they cannot alter the records in the decentralized registry.

- **The failure of the judiciary to confront the politically motivated blocking and confiscation of assets**

In order to satisfy the regulator's requirements, wealth management company can suspend its service for the client and unconscionably block/confiscate assets. Such events occur because of the centralization of the register of assets, and such center is under control of the executives and the judiciary.

Summing up, investors avoid the risks of confiscation by buying crypto assets. At the same time, wealth managers have no technical solutions to offer service so as to satisfy simultaneously the client needs for convenience and safety.

2.2. Conflict of interest between wealth manager and investor

Investors are used to believe that the wealth manager act in customers' best interests. However, several findings show that conflicts of interest occur [FSA] because of financial distress or lust for money [Greg].

Financial distress

Reasons of distress are very different - regulatory pressure, failed management of own capital, dependence on distressed affiliated parent or subsidiary financial structures (See Table 1).

Table 1. Distribution of the volume of the asset management market by AUM, %

Country	Affiliated wealth management service	Individual financial advisors
United Kingdom	80%	20%
Switzerland	87%	13%
United States	95%	5%

Source: The Boston Consulting Group

Financially distressed wealth management company faces a choice, whether it goes bankrupt or survives at expense of its clients. This is usually expressed in two ways: by raising debt capital from investors and via the sale of toxic assets to investors.

Until now, the regulator [FSA] has sought to resolve such a conflict by subjecting asset managers to certain requirements, restrictions and guidelines, aiming to maintain the integrity of the financial system.
Technically, there are two key processes in which the asset manager can harm the investor:

- **execution of transactions**

Execution process may require investor to transfer his private key to the asset manager, which potentially leads to fraud [Judiciary].
That is why Discretionary service as well as other kinds of services, which involve the need to transfer private key to execute transactions are unsafe.

- **allowance for uncoordinated submission of binding orders for the transaction**

Omitting the portfolio approval stage with the investor means that the investor has no opportunity to prevent the purchase of "toxic assets". Since the release of a new asset in Ethereum takes no more than 20 lines of code, the costs of creating a new crypto assets will be many orders of magnitude lower than the value of assets under management. The right of the asset manager to give binding orders for the purchase of assets carries the same risk of losing funds by the investor, as the transfer of the private key to the asset manager.

Unsecured sites of the business process of asset management
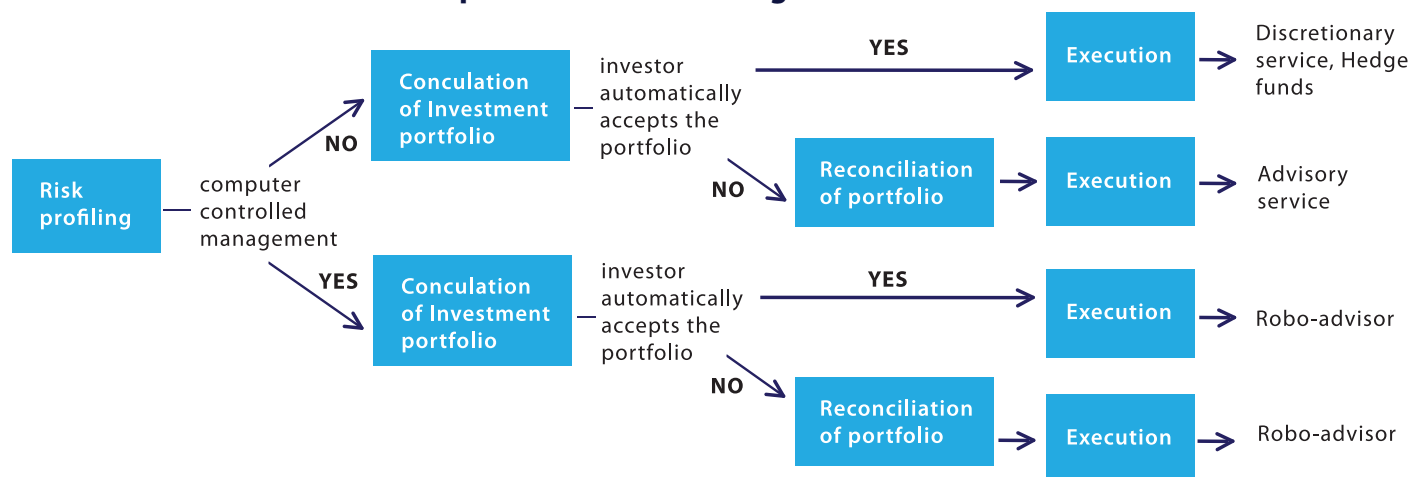
Smart contracts open up the possibility to replace legal protection with a technological one when it comes to a potential conflict of interest.

2.3. Lack of data on the effectiveness of individual asset management

Traditionally, measurement of asset management quality was provided by Fitch IMQ ratings [IMQR], Moody's MQ ratings and some less-known providers. However, they generally rate funds only.

Individual asset management assumes that the client always has his own defined parameters of investment terms, profitability, risk, investment currency etc. For this type of individual management, the market regulator did not compile a methodology for assessing the conformity of results to pre-set management objectives and no requirements to information disclosure. That is why wealth management companies seek to convince in their competence through the disclosure of parameters, such as:

- Period of time they exist;
- Credibility of managers;
- Volume of assets under management;
- nvestment methodology.

Equally, robo-advisors do not have independent testing and efficiency control.

As a result, clients of asset management companies cannot see the correlation between the results of management and the goals. Previous finding [Pwc] shows that 55% of high net worth individuals are concerned about loss of the money. This demonstrates an excellent opportunity for the emergence of results-oriented marketing.

2.4 High minimum investment requirements

Qualitative human-based wealth management has a very high barrier of entry. Usually, a person must have at least $5 million[1] in liquid assets to be eligible for a traditional wealth management service. This is due to high compensation of asset managers, which, in turn, influences the level of fees.

In most case, individual investors require professional wealth management services in order to meet their financial objectives. At the same time, the market of wealth management services is targeted towards HNWI and UHNWI with high value of AUM, leaving the segment of investors with lower AUM underserved, including mass-affluent clientele.

2.5 Negative impact of human factor

The studies [HF] of negative impact of the human factor identify the following types of negative human factors in the management process:

- skills-based errors,
- decision errors,
- errors of perception,
- conscious violations.

These factors are unavoidable whenever a human is involved in the asset management. The good news is that the investment process is largely algorithmic. Moreover, the transition to automated asset management has been already underway. The only barrier in this process is the capital intensity of programming.

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1   According to https://www.supermoney.com/reviews/wealth-management on 15.12.2017, minimum accounts were following: Goldman Sachs - 10 mln.usd, J.P.Morgan - 5 mln.usd, BNY Mellon Wealth Management - 2 mln.UBS Wealth Management - 0,5 mln. usd, Credit Suiss - 3 mln. usd.

WEALTHMAN SOLUTION

The goal of Wealthman is to create an alternative platform for provision of wealth management service for digital assets, containing the useful set of features for such types of services as advisory service and robo-advisors. We are placing particular emphasis on situations where there is no trust of investor in wealth manager's competency and honesty, infrastructure security, and where low costs and speed of high-tech wealth management service deployment are important. Wealthman does this by building a decentralized application on top of blockchain protocol that capable to execute algorithms written on Wealthman's proprietary built-in high-level programming language. The application allows any user to start a secure advisory service or easily develop a decentralized robot-advisor. Such services can be configured with arbitrary rules for calculating the structure of the investment portfolio on the basis of a constantly updated and insured data set, transaction execution rules and remuneration terms.

The program skeleton of the Betterment service can be written in 90 lines, and a simple advisory service could be launched in 15 minutes. Discretionary service can also be built on the platform, with a much higher safety than the one secured with legal paper document as it benefits from the added safety of a smart contract. Although this type of service can not be classified as safe, the investor's smart contract allows you to mitigate the risk by limiting the set of crypto assets, from which the manager can form an investment portfolio.

Several key valueable features of the platform:

Feature	Functions	Value
Obligatory approval of the investment portfolio or algorithm code change with the investor	Protection of the investor from deceit by the asset manager	Asset security
Opportunity of investor to limit the set of assets from which the investment portfolio is formed	Protection of the investor from deceit by the asset manager	Asset security
Execution of transactions by a decentralized broker program, which retains access to assets only to the investor	Protection of the investor from deceit by the asset manager	Asset security
Inaccessibility of the code of the robo-advisor algorithm to the investor and third parties	Protection of intellectual property of asset manager	Intellectual property security
Result-dependent ranking of wealth managers and robo-advisors	Understanding who will better help achieve financial goals. Allows a quality manager to save on the costs of marketing.	Quality of management Cost Savings

Environment for easy development and execution of advanced robo-advisors	Low costs for programming of robo-advisors	Cost Savings
Decentralized calculation, storage, transactions execution, and data provision	Elimination of capital risks caused by centralization	Asset security

3.1. WealthMan long term vision

In our long-term vision WealthMan is the most intelligent, safest and fastest platform for wealth management that gains accepted industry-wide. It is our belief that decentralized autonomous robo-advisors based on smart contracts will dislodge centralized robo-advisors and human-driven wealth management service. Registers of global assets will be decentralized. Thus, the decentralized robo-advisors will dominate the market of wealth management services.
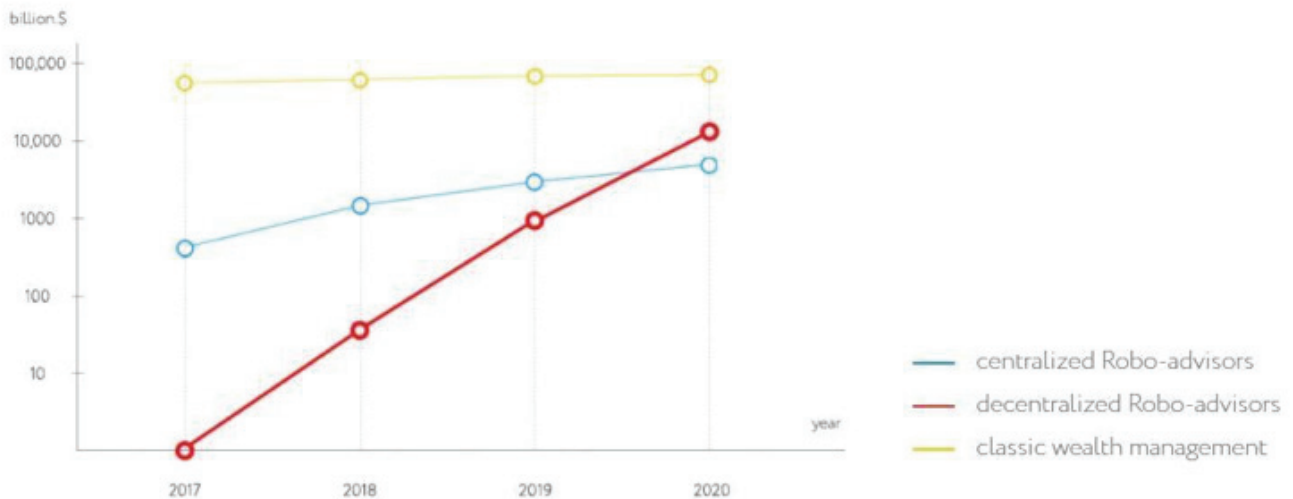
3.2. WealthMan Market Overview

By 2016, approximately $120 trillion of clients' funds were managed by traditional wealth managers[1]. One of the industry's problem is that the ever-changing and increasing regulations, digital footprint and cybersecurity costs represent increasing financial burden on wealth management firms for keeping up with day-to-day activities[2]. The vast majority (73%) of investors have relationships with multiple wealth managers[3], which serves as an indication of sector being highly competitive and client-driven.

Centralized robo-advisors are automated investment services that leverage technology to lower account minimums and reduce annual advisory fees. The investments offered are tailored to the client's risk profile typically based on a questionnaire. Robo-advisors outperform traditional WM for transparent fees and differentiate themselves through a range of added services that can include a 24-hour automated support desk, access to a human advisor, tax optimization, and portfolio rebalancing.

According to Statista[4], over 250 robo-advisors manage $126 billions. Recently traditional wealth management firms like Charles Schwab and Vanguard launched their robo-advisors, dropping service fees to 0,3% per AUM per year. That caused many market entrants to shut down, while the other have faced increased payback period to client for up to 6 years[5]. D2C robo-advisors, with its inherent heavy costs, will have to partner with, or get consolidated by traditional wealth management firms to gain cost-effective access to new customers.

1   2016 Credit Suisse Global Wealth Report
2   2016 World Wealth Report, Capgemini
3   EY global wealth management survey 2016
4   https://www.statista.com/outlook/337/100/robo-advisors/worldwide#takeaway
5   2017 BURNMARK Digital Wealth Report

Assets under management

billion.$

100,000

10,000

1000

100

10

2017   2018   2019   2020

year

— centralized Robo-advisors
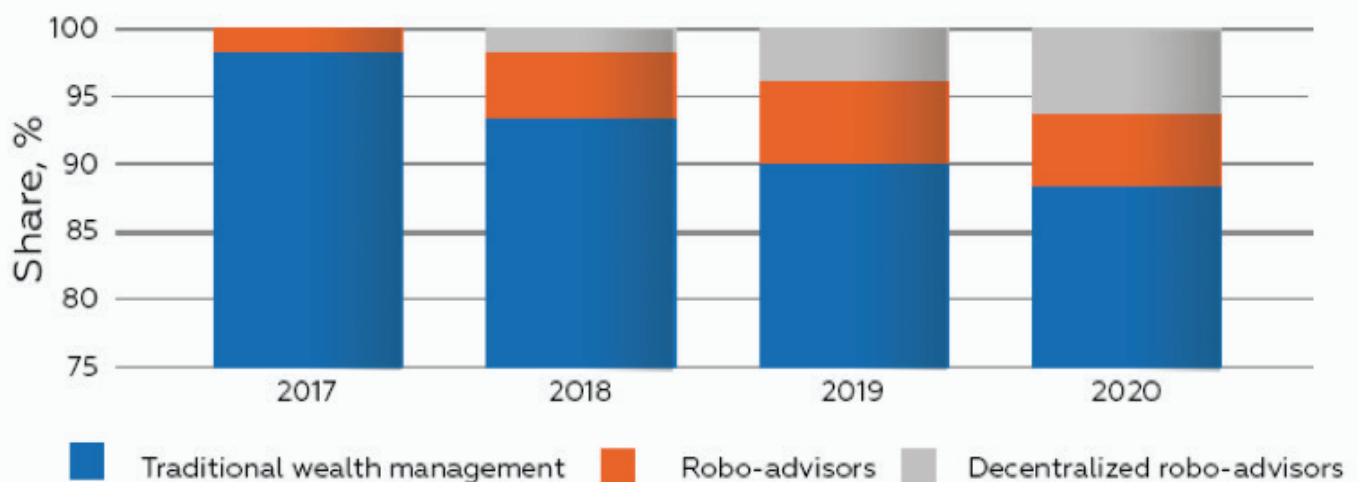— decentralized Robo-advisors
— classic wealth management

source: Statista, Deloitte and WealthMan research"

According to a IBM report titled "Leading the Pack in Blockchain Banking: Trailblazers Set the Pace": [3]
- Banking and financial markets are adopting the technology "dramatically faster than initially expected";
- By 2018 91% of surveyed banks will invest in blockchain to shield against growing start-ups;
- A total of 15% of banks surveyed expect to have a commercial blockchain solution in 2017;

7 in 10 trailblazers see blockchains as a mean of creating new business models and accessing new markets.

Robo-advisors market share growth

Share, %

100
95
90
85
80
75

2017   2018   2019   2020

■ Traditional wealth management   ■ Robo-advisors   ■ Decentralized robo-advisors

Today, robo-advisers have gained only a miniscule share of assets under management, however, they offer investors a beneficial value proposition with a price reduction of as much as 70% for some services and its rate of growth is both rapid and accelerating. "Digital" wealth-management assets, including those at traditional firms, are projected to reach between $55 billion and $60 billion. According to estimates by Deloitte, by 2020 the world market of automated asset management can reach $3.7 trillion, and by 2025 - $ 16 trillion. [2]

Much of the initial uptake and interest in robo-advice is coming from the mass-affluent market segment, which has traditionally been underserved.

In order to determine the best markets to offer WealthMan services, the following criteria were considered:

• Level of savings per capita;

• Level of acceptance of cryptocurrency. We measured it by the number of Bitcoin and Ethereum nodes.

The analysis above shows that it would be preferable to start provision of platform service from the following countries: United States (especially California and New York states), Canada, United Kingdom, Germany, Singapore, Hong Kong.

3.3.   WealthMan Architecture

Glossary

User - participant of the Wealthman platform, that have one of the roles: Investor, Wealth Manager, Token Holder, Data provider and Development team

Wealth manager - individual or team who intends to provide individual asset management services personally or through the provision of an assets portfolio rebalancing algorithm.

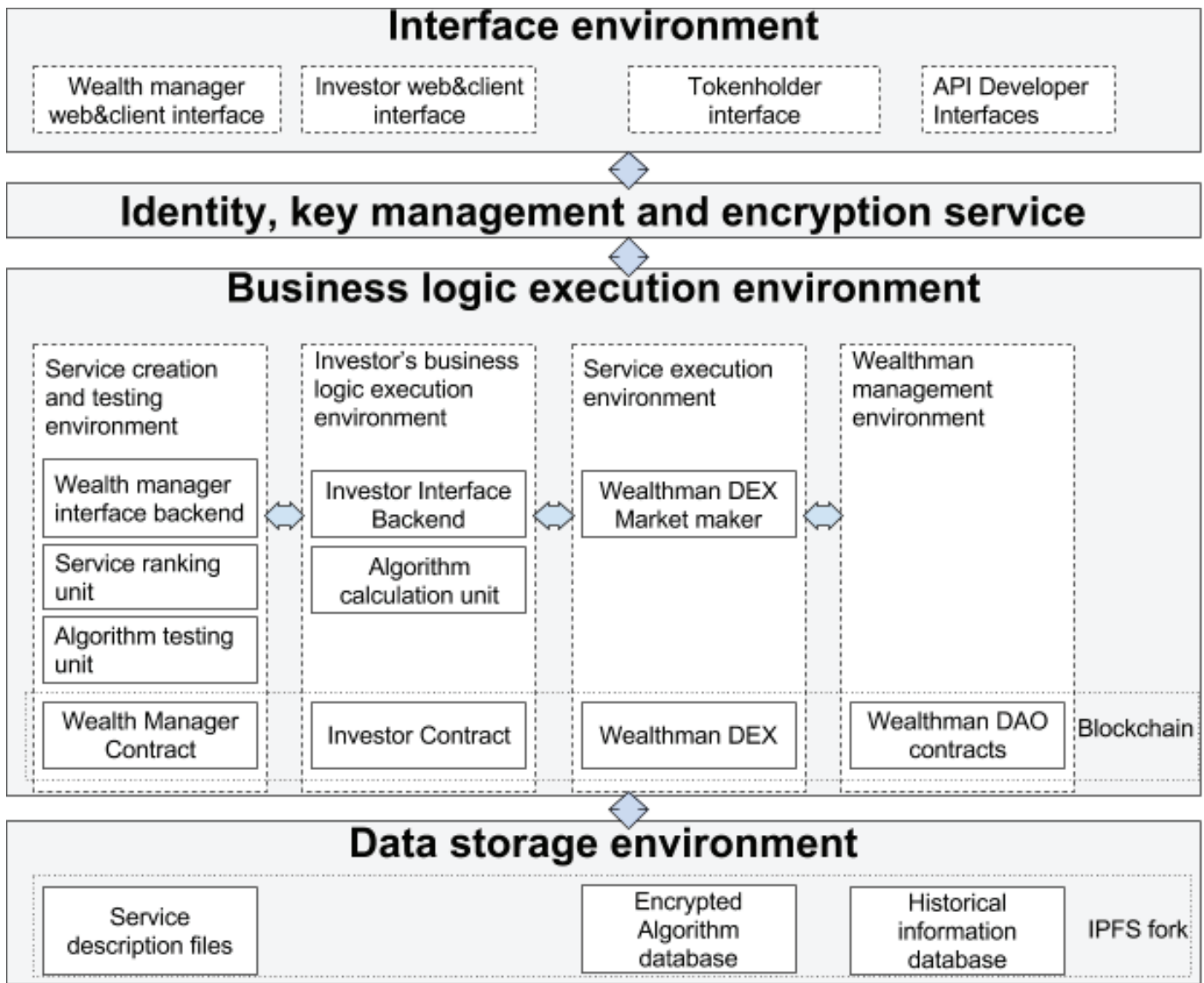**Token Holder** - anyone who holds AWM tokens, issued by Wealthman DAO.

Data provider - any Token Holder that is accepted to provide at least one data series to wealth managers.

Development team (Team, Developer) - team that develop Wealthman platform.

Service - individual asset management service provided by wealth manager in any form.

WealthMan consists of the following modules:

• Interface environment;

• Identify, key management and encryption service;

• Business logic execution environment, which includes:

  - Service/Algorithm creation and testing environment;
  - Investor's business logic environment;
  - Service/Algorithm execution environment;
  - Wealthman management environment.

Interface environment

| Wealth manager web&client interface | Investor web&client interface | Tokenholder interface | API Developer Interfaces |

Identity, key management and encryption service

Business logic execution environment

Service creation and testing environment
- Wealth manager interface backend
- Service ranking unit
- Algorithm testing unit
- Wealth Manager Contract

Investor's business logic execution environment
- Investor Interface Backend
- Algorithm calculation unit
- Investor Contract

Service execution environment
- Wealthman DEX Market maker
- Wealthman DEX

Wealthman management environment
- Wealthman DAO contracts

Blockchain

Data storage environment

- Service description files
- Encrypted Algorithm database
- Historical information database

IPFS fork

Basic data types:

- List of Tokenholders
- Accepted data series
- Wealthman Remuneration settings
- Encrypted algorithm database
- Service description files (team description, ranking, etc)
- Historical information database
- Accepted algorithm code
- Service rank
- Wealth manager open keys
- Service offer settings (fees, termination rules)
- Investor open keys,
- Investor's portfolio calculation& execution parameters
- Investor assets transactions
- Portfolio Acceptance and execution status
- List of orders to buy/sell tokens
- User ID, Assets ID
- Queue of all orders to buy/sell tokens
- List of declined/ executed orders
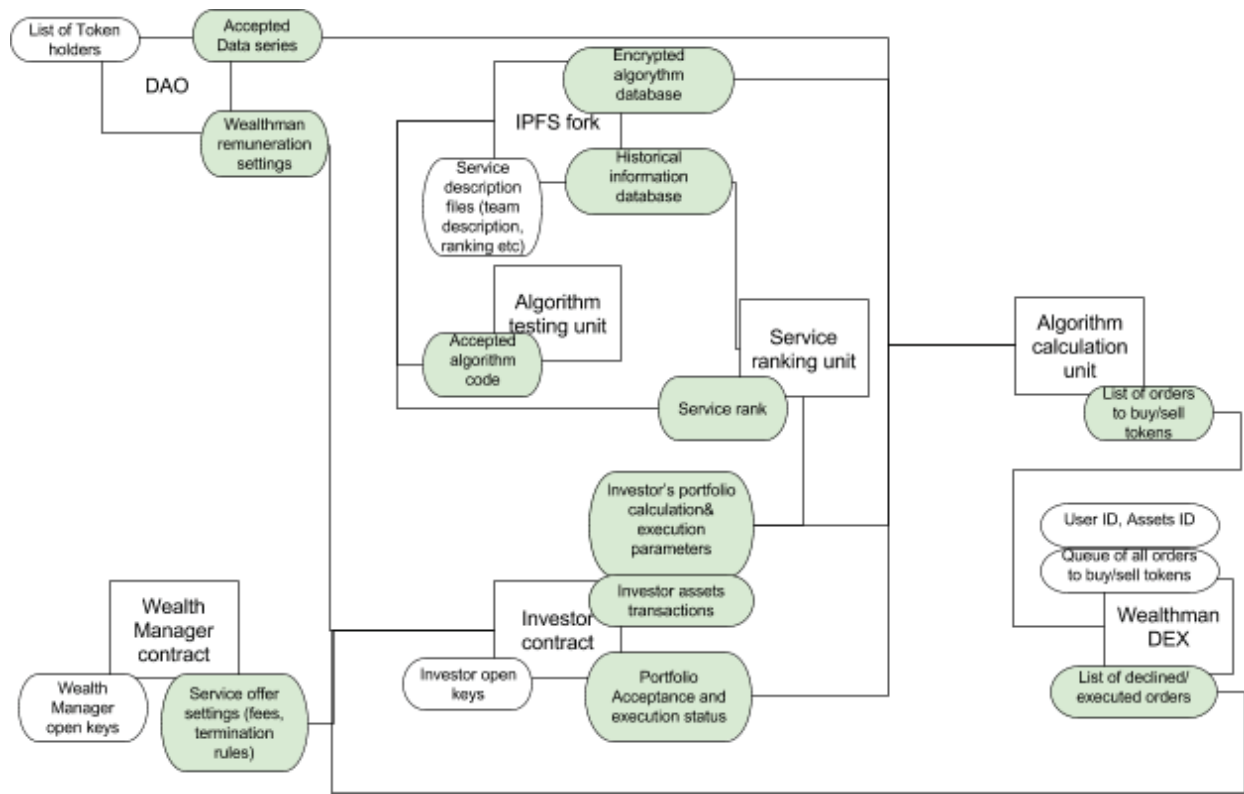
3.4. Interface Environment

Interface Environment Includes a web UI and applications for mobile devices for both investor and wealth manager, desktop application for Algorithm development by wealth manager, API interface.

Interface for Investors is used to

- show multiple criteria for choosing right wealth manager, such as ranking, management costs, service description,
- show portfolio dynamic/statistics,
- show investment propositions from wealth manager, to form and send a message of it acceptance, (in advisory management mode)
- to withdraw assets.

Interface includes:

- Private key pair generation;
- Language localization depending on the IP address;
- List of wealth managers or algorithms that have passed the testing & ranking procedure with description of service provision conditions;
- Risk & goals profile function;
- Asset management reporting tool;
- View portfolio offered by wealth manager for acceptance (in advisory management mode);
- Function of concluding a smart contract for Service (Investor contract);
- Function of communication with the Investor contract (risk profile changes, portfolio acceptance, withdraw money, etc.).

Interface for Wealth Managers is used to

- show results of asset management in different sections,
- let wealth managers develop and upload new algorithms,
- change service description parameters (fees, team description, etc.),
- gain access to data series necessary for provision of service,
- send investment propositions and trade orders.

Interface includes:

- Private key pair generation;
- Language localization depending on the IP address;
- Algorithm development environment;
- Service provision reporting tool;
- Function of communication with the Investor contract and Wealth manager contract;
- Data acquisition unit.

Interface for Tokenholders, Data providers is used to:

- voting for settings or strategy changes by Tokenholders (by default, a simple majority of votes out of those who voted for a decision);
- offer a series of data for use by the wealth managers;

Interface includes:

- Private key pair generation;
- Language localization depending on the IP address;
- Interface for sending wealth managers inquiries to retrieve data;
- Voting and decision-making system interface.

API Developer Interface

In version 2.0 of WealthMan platform we will add Developer Interface (API) to provide an access to outside systems.

3.5. Identify, key management and encryption service

The module includes security components, such as identity information, key management services, encryption, gateway services of the distributed registry. It allows to manage investor's funds, keys, and other private information.

3.6. Service creation and testing environment

The module includes the Service ranking unit, the Algorithm testing unit, the Wealth Manager interface backend that supports Algorithm development environment.

Wealth Manager interface backend

The unit supports Algorithm development environment which allows Wealth Managers to create their own algorithms.

Algorithm Testing Unit

Testing unit is designed to test newly uploaded algorithms. Testing is carried out on the basis of historical data. The purpose of testing is to identify intentional or accidental errors in the code and conditions in the algorithm that can obviously lead to losses or to conversion of funds to illiquid assets. If the test is successful, then the algorithm becomes available on the platform. Testing Algorithm will be open sourced to allow Wealth Managers and investors be sure they can trust the results.

Service ranking unit

Ranking unit calculate estimates of the quality of asset management. Rank measures the level of achieving of the investor's goals by Wealth Manager.

Wealth Manager Contract is used to:

- Recording of the algorithm hash;
- Recording the terms & conditions of service offer (remuneration, rating, etc.);

Conditions for the implementation of the smart contract:

- Terms of sale of service (e.g. 2% annually of the net assets under management and 20% of the profit);
- Terms of distribution of manager's earnings (WealthMan platform remuneration, blockchain fees, data feed fees, etc.);
- Investor contracts ID;
- Wealth Manager ID;
- Algorithm hash, and PGP open key to algorithm.

3.7. Investor business logic environment

The Investor business logic environment is used to allow Investor purchase Wealth manager's competence and manage assets in secure way. It consist of the Investor interface backend, Algorithm calculation unit and Investor contract.

Investor interface backend

The unit is used to prepare and deploy Investor contract that regulate relationships between Investor and Wealth Manager.

Algorithm calculation unit

The unit is used to calculate the new optimal structure of the investment portfolio in robo-advisor mode, as well as trade orders to bring the current structure to the optimal.

Investor contract

This Smart contract is used to:

- Keep assets;
- Form a task to calculate and rebalance investment portfolio;
- Record investment proposition from Wealth Manager;
- Record status of acceptance of investment portfolio by Investor;
- Keep records of management results and management costs (e.g. calculation costs to ledger, data feed costs, and wealth manager remuneration for algorithm);
- Re-profiling of the investor.

Conditions for the implementation of the smart contract:
- Remuneration parameters of Service;
- Fees (Wealthman remuneration, blockchain fees, data feed fees, etc.);
- Portfolio rebalancing period;
- Duration of the contract;
- Investor profile parameters;
- Access to investor's portfolio assets;
- Period and conditions for the recalculation of the investment portfolio;
- Investor ID;
- Wealth Manager ID;
- Current status of the trade orders execution;
- Current income statistics of the selected algorithm;
- Current structure of assets.

3.8. The Service execution environment

The Service execution environment is used to execute orders for exchange of crypto assets. It consist of Wealthman DEX market maker and Wealthman DEX.

Wealthman DEX market maker

The unit is used to provide liquidity Wealthman DEX.

Although, any person can trade in the Wealthman DEX, at the initial stage, there will be few arbitrageurs and bidders who can provide enough liquidity for Wealthman DEX. Therefore, the role of the provider of liquidity is assumed by Dex Market Maker.

Dex Market Maker is an ordinary DEX participant. It is a centralized robot that, by a series of simple transactions, drags assets from centralized exchanges to a secure environment of Wealthman DEX:

- acquisition of necessary assets on centralized exchanges;
- transferring the purchased assets into a safe environment Wealthman DEX;
- setting up a bid and ask quotes in Wealthman DEX;
- withdrawal of the sold assets from the safe environment of Wealthman DEX to a centralized exchange for the restoration of limits.

Wealthman DEX

The unit is used to exchange tokens in a secure way. Initially, we plan to use existing decentralized crypto-exchanges as the basis for the execution of transactions.

After implementation plan is complete, we will develop our own decentralized exchange contract on the basis of blockchain-based smart contract, in order to make it cheaper to execute transactions. The most basic transaction types will be supported at the core level, which include:

- custom token creation, deletion;
- token transfer both inside and outside,
- placing the order for the exchange of assets in the queue,
- execution of matched bid and ask orders.

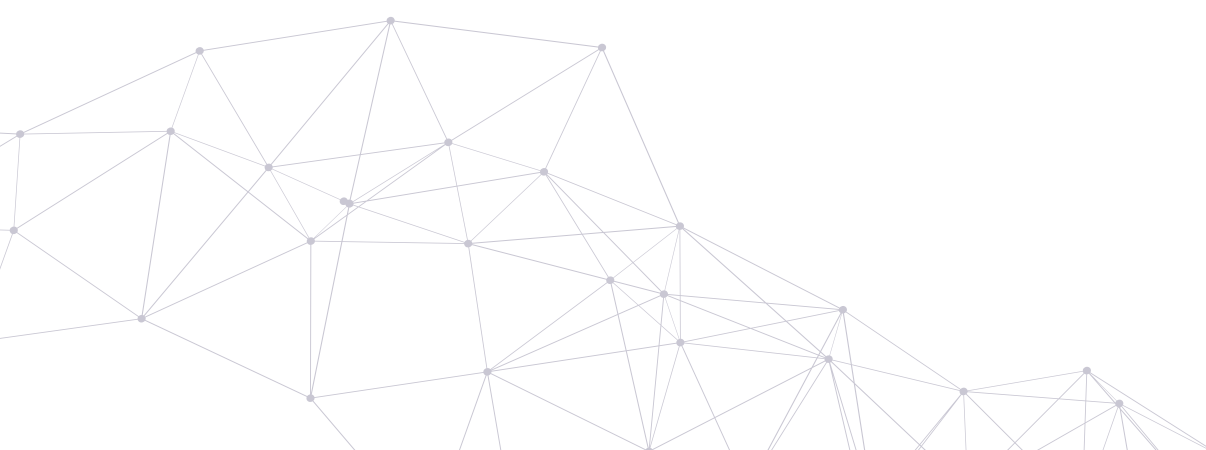Next optional key development points of Wealthman DEX:

1. Front-end for Wealthman DEX participants;
2. National (or alternative crypto) currency are transferred directly from one user's payment account to the others payment account without any intermediate party.
3. Support for alternative cryptocurrencies;
4. Decentralized arbitrator system as primary protection mechanism;
5. Open source license;
6. Fraud reports as protection against bank chargebacks and crime (stolen payment account).

3.9. Wealthman management environment

AWM Tokenholders and Development Team (hereinafter referred to as Team) control Wealthman through WealthMan DAO. It is a smart contract, in which all functions run on top of Ethereum,

WealthMan DAO is used to:

- manage of platform settings (remuneration, the level of the data provider's pledge, etc.);
- maintain list of accepted series of data;
- mint AWM tokens during token generation event;
- burn AWM tokens;
- store funds and tokens and transmits them based on the code
  (e.g. lock AWM tokens of Data Provider).

TIMELINE

June 2017 Decentralized Wealth Management R&D	Functions
March 2018 ICO Period Active platform development	• Pre-ICO fundraising • Release of the platform's alpha version (frontend - for the investors and wealth managers, backend - algorithm testing and execution, data flow) • Testing platform • Development of application for algorithm writing and testing by wealth managers • Attracting wealth managers to the wealth management platform • Online tutorials on how to use the platform's tools to program algorithms
October 2018	• ICO fundraising • Release of the platform's beta version • modules of portfolio forming and balancing are operational; • Launch of the PR and Ad campaign for platform service • Attracting market participants to the platform
December 2018	• Release of the sustainable version of the platform with centralized robo-advising + wealth manager advising were all components – calculations, execution, data storage – are centralized;
January 2019	• **Release of the 3.0 version of the platform** • decentralization of calculations
July 2019	• **Release of the 4.0 version of the platform** decentralization of calculations; • decentralization of execution;
April 2020	• **Release of the 4.0 version of the platform** • decentralization of data storage and data provision • new kinds of contracts
Future	• WealthMan taking advantage of conventional assets being digitized • Step by step approaching long-term vision • All modules are fully operational

WEALTHMAN TOKENS

5.1. AWM token

AWM token is a ERC20 token issued by Wealthman DAO and is used as

- the only mean to pay Wealthman DAO for its service;
- the only token that is accepted as collateral from the data provider. The collateral serves to cover risks in case of disruption of the continuity and correctness of the supplied data to asset managers;
- the only mean of settlements for the supply of data between the participants of the platform.

5.2. AWM token growth prospect

The price of utility token is tend to be equal to sum that is determined by the formula:

1 utility token price $=\sum_{i=1}^{n} CF_i/((365/DAYS_i)*N)$,

where CF_i - cash flow from i-th service, measured in chosen currency, e.g. bitcoin or ether;

$DAYS_i$ - number of days that the token should be in the hands of buyers and sellers of the i-th service, in order for the service to work properly (the norm of the stock of tokens in days);

N - number of estimated utility tokens in circulation.

The impact of the Wealthman platform participants on each component of the value of the token to increase its market price:

- WealthMan DAO monthly burn 61,6858% AWM tokens remained as a profit from operations;
- Payment for Wealthman services assumes a time of storage of tokens in Wealthman DAO of about 15 days,
- Tokens of the data provider, which are the collateral of uninterrupted delivery and correctness of data, are frozen by the contract for a period of 60 days + the entire period of the service,

By default, Wealthman earn 20% of all Wealth Managers service fees received from Investors (can later be changed by Tokenholders) and 20% of all Data provider service fees received from Wealth Managers. Wealth Managers average market service fees:

- 2% from Assets under management annually;
- 20% from Investor's net profit annually.

Where to get AWM tokens?

AWM tokens will be available for purchase during the Crowdfunding period and can be sold/purchased on exchanges that support ERC20 tokens (such as Poloniex).

AWM tokens can't be mined or minted after ICO is finished and closed.

5.3. WealthMan Crowdfunding

Private placement token generation		Pre-ICO		ICO	
TIMING*					
Start date	28.08.2017	Start date	15.03.2018	Start date	15.10.2018
Finish date	05.03.2018	Finish date	15.04.2018	Finish date	15.11.2018
PRICE					
AWM/ETH	2250	AWM/ETH	1500	AWM/ETH	1000
MAXIMUM OFFER SIZE					
AWM tokens	450000	AWM tokens	3000000	AWM tokens	152800000**

*   According to law framework, specific dates are connected to development of Wealthman platform. That is why dates are approximate and are object of a separate statement. Specific dates will be reported by official press releases.

**   Maximum number of tokens could be less but could not be more. All unallocated tokens will be burned.

5.4. Token distribution

There were change of token distribution parameters from the previous version of White Paper. Changes are related to the need to increase the option program of the software development team. The changes were accepted unanimously by all the AWM tokenholders at the time of the disclosure of this Whitepaper.

65% of all AWM tokens are sold to the Investors during the ICO.
34% are distributed on option program to WealthMan team.
1% is distributed to Bounty participants, marketing, advisers.
Half of all team tokens are frozen for 5 months from the ICO end date.

5.5. Fund allocation structure

PRE-ICO allocation structure:
- Marketing (promotion ICO, community expansion) 30%
- R&D (programming, advisers, team expansion) 56%
- Operational costs (legal, state fees, office, etc.) 14%

ICO Token (AWM) allocation structure:
- Marketing (promotion, community expansion) 30%
- R&D (including team expanding, advisers, etc.) 24%
- Operational costs (legal, office, taxes, etc.) 20%
- Infrastructure 6%.

WEALTHMAN TEAM

Andrei Huseu

CEO of WealthMan

Managing partner of Wealth Management group «Mera Capital».

Degree: Master in Finance

Olga Pershina

CFO

More than 10 years of professional experience in stock markets and investment banking. Deep knowledge of capital market and asset management, hands-on trader and portfolio manager.

Extensive experience in building end-to-end business processes for various companies and projects. Specialist in the field of internal control and risk management.

Adviser in ICO, IPO, M&A, Private equity deals. Has done business with companies that operate in sectors such as finance, energetics and IT.Some examples are "MNTO INSET", "KIT Finance", "SMART Securities", "Mera Capital", etc.

Education: Graduated from "Baltic State University Voenmech".

Alexander Bayov

Head of strategy

15 years of professional development in the spheres of Finance, Audit & Consulting, Mergers & Acquisitions, Private Equity & Venture Capital, Asset and Operational management both in financial and real sectors, B2B Sales and Marketing, State governance, Diplomatic Service & Government relationships, Development, Construction and Production of innovative construction materials, Energy & Power.

In wealth & asset management fields enriched his experience and competence and advised his clients either on full-time basis or as independent financial partner/advisor in Belgravia Wealth management, Castle Family Office and several international banks and private equity and venture capital funds from late 2007, including the extraordinary Russian-Cuban Investment Fund (RCIF) Group. Among other companies EY, MCD Partner, Union Group, Build-in-Vest, Mettem (multidimensional production group of companies) are worth mentioning.

Member of the Board of Equal Capital House and their selective portfolio of high-tech ventures.

Advisor on investment and innovation to CEO of IRVEN Benchmarking Group.

Representative in the North-Western region of Eurasian Finance Alliance.

One of the guest-experts in Integration Club of investors.

Master degrees in Economics, Finance and Civil Law. Currently in his MBA degree studies.

Denis Kus

Software engineer manager

Over 7 years of experience in the software and technology industry. Leadership and management experience.

5 years in the development of highly loaded services and systems (C++,Python,Toolkit, MapReduce)

Experience in the development of web services and rest systems (JS, Java, ReactJS).

Managed the development of systems for unmanned aerial vehicles, GIS systems, simulator systems.
Experience in the development of road map projects (JSC Sistema), marketing strategies and product promotion (Transas, Azimut)

Vlad Tanasescu

Software developer

Engineer in Computer Science from the Swiss Federal Institute of Technology in Lausanne, agile programmer (UML, scrum, JUnit, Jenkins), learning oriented with working knowledge of multiple languages but fluent in Java, Python and C++.

Experience in spatial data handling, geo and location-based technologies, as well as ERP.

Scientific background in natural language processing, data science and machine learning.

Web programming working and teaching experience (HTML, CSS, PHP, MVC, jQuery, REST principles).

Eugene Matyushkin

Legal team lead

Eugene has experience in corporate and financial law of more than 3 years. Passed internships in the Ministry of Justice and the Maltov and Partners Law Firm.

He has extensive experience in representation of the interests of legal entities in the Arbitration Courts and state bodies, participating and organizing of scientific and practical conferences, legal educational projects and advanced training courses.

Sphere of interests: corporate procedures, legal support of business, M&A.

Education: Law Institute of Siberian Federal University, Krasnoyarsk, RU.

Alexander Pougatchevski

International coordinator

Experience in high tech research and analytics, financial management, and project management. Member of International Business Association of Guelph-Humber University (Canada). Involvement in foresight studies of quantum technologies in association with SafeNet (National Technological Initiative), development of Eurasian Quantum Road.

Primary fields of activities: international finance, blockchain technologies, international marketing, international business development.

Irina Voronina

Project Manager

Irina started her career path as a junior specialist in Loans Dept. at the second biggest bank of Russia. Nearly a year after she changed her position to a senior specialist of Corporate Finance Dept. in a consultancy company. During more than 4,5 years of outstanding work Irina quickly grew into a Project Manager with 10 employees under her constant management. The most interesting projects were connected with some major players in the various industries (Nokian Tyres, Pirelli, Solopharm, Knauf, Atria PLC, Mir Upakovki, Russian shipyards, etc.).

In her work Irina focuses on the building relationship within the team and delivering objectives in a timely manner and beyond. Being in charge of WealthMan Irina is also responsible for development of the Token Economy.

Irina has a Degree in Financial management from Saint-Petersburg State University of Economics. She has passed several courses on personal and professional development. Currently in her CFA degree studies.

Daniel Grishin

Junior project manager

Professional project manager with high experience in ICO and Blockchain project management. Development of the economic model and structure of tokens placement.

Ekaterina Korolkevich

Lifestyle & IR Adviser

Kate has close to 20 years of diverse experience in business development and financial services with leading financial institutions in the USA, Russia, UK and selected European countries, global network of contacts and long-term relationships with institutional investors, hedge funds, private equity funds as well as HNWI and business leaders.

During these years she participated in a number of IPO, SPO and private placements on both, buy and sell sides, analyzing securities' investment attractiveness and organizing roadshows and selling the securities to institutional clients, globally.

Kate's current focus is on lifestyle projects in the commercial real estate, fashion, jewelry, wine & spirits, cosmetics and personal care, functional beverages and entertainment. She is a partner at Wine Alchemy and a host of YouTube series 'Wine Express Discovery'.

Kate Korolkevich holds MBA in Finance & Operations from Simon Business School, University of Rochester, NY, USA and MS & BS.

Paulius Stankevicius

Global PR Adviser

Stankevicius is a business consultancy firm providing global business insights and news. Stankevicius is a PR influencer and expert in digitization providing a wide range of digital services to diversified client base. Stankevicius has consulted Fortune 500 companies as well as international SMEs.

Stankevicius also provides corporate consulting including but not limited to import and export of precious commodities. Stankevicius has consulted Chinese, Hong Kong, Dubai, European and US investors. Stankevicius focuses on foreign investors' capital protection when it comes to foreign FOB & CIF trade deals of precious metals & minerals.

Kirill Razgulyaev

Blockchain and cryptography advisor

Fifteen years in strategic consulting, management software development, IT strategies, technology foresight for corporations and universities.

Center for science and technology foresight at ITMO University, Managing partner.

Cofounder in Quantum Communication Ltd., Managing partner.

Member of the Board of Directors of management company HEOTEX Ltd., Managing partner.

Member of the Board of Directors Institute of Regional Innovation Systems (IRIS).

Main fields of activities: developing business/IT strategies, cybersecurity, quantum blockchain, risk in software project management, foresights.

Degree: Master in Physics, Computer modeling of thermophysical.

Dmitriy Khan

Technical architecture advisor

Ten years in strategic consulting, product development, foresight research for government, corporations, universities.

Areas of activities: telecom, cybersecurity, quantum technologies, finance, international trade, foresights.

Cofounder of Neotech – the technology transfer company (2014).

Partner of the Institute of Regional Innovation System – research and consulting company (2008).

Cofounder, Deputy Director of the Center for science and technology foresight in ITMO University (2011).

Chairman of examination board of Faculty of Economics of St.Petersburg State University (since 2016)

Head of working group "Security in data transmitting, storage and computing" of Safenet of National Technology Initiative (since 2015)

Nikita Harchev

Strategy advisor

Over 10 years of experience in real estate and construction business. Nikita possesses consistent knowledge on construction processes and is savvy in state authority relations; in his continuous endeavors Nikita mastered safety management and cost control to perfection and became a seasoned specialist in license optimization and document design.

Has extensive and comprehensive experience in cooperation with such companies as Transneft, Rosneft, TANECO and state structures.

By building solid and lengthy relationships with his partners and clients Nikita earned excellent reputation in his field in Saint-Petersburg and Moscow. Is a graduate of "Moscow auto-road Institute"

Roman Lvov

Expert-Mentor, real estate-based assets advisor

Roman has Finance background and over 15 years of experience in both commercial and residential real estate development, project management and advisory capacity in the acquisition, financing and execution of major real estate projects.

Having worked with major Private Equity funds and Family Offices on a number of major real estate acquisitions, Mr. Lvov has gained a solid multi-disciplined approach to the structuring and execution of cross border development and financing strategies between Russian and multi-national funds, inward investors, financial institutions and professional service providers.

Mr. Lvov serves as Adjunct Professor of Economics at IE Business School (Spain) teaching Managerial Economics and Economic Environment and Country Analysis for the MBA student. He gained his Executive MBA degree at the same school. Roman also holds a Ph.D. degree in Economics from The St. Petersburg State Finance and Economics University. He is an active blockchain evangelist working on a number of ICOs around the globe.

Aleksandr Khoperskiy

Cybersecurity advisor

Researcher of the Center of Development in the project "Management System for Geographically Distributed Data Centers Protected by Quantum Communications" science and technology foresight in ITMO University

Initiator of joint projects with Indian companies in the field of telecom, security and finance with the participation of the state government of Jharkhand
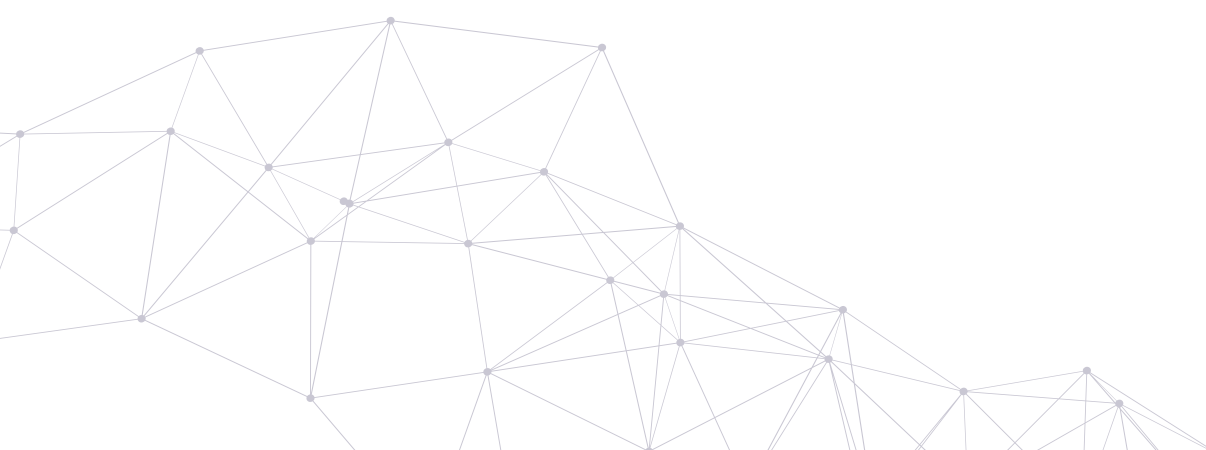
Speaking languages: Russian, English, French

Competence: cybersecurity, software development, fintech

Degree:

Master in Economic Policy, Saint-Petersburg State University

Bachelor in International Finance, Saint-Petersburg State University of Economics

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