



SQUAREX  
square exchange platform

# Whitepaper

Patented.

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release of finalized whitepaper

squarex.io  
2017

# SQUAREX WHITEPAPER 2017

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# Executive Summary

3.4% of cases of fraud cases registered in the market are in the sector of construction. Due to the non-transparency of construction technologies, losses are borne by all participants: investors, developers and end-buyers. Low availability of capital, excessive inefficient control in the hands of some market participants, delays in payments to other participants, insurance and obsolete fraud protection mechanisms increase the price of real estate, while non-transparent processes reduce its quality.

This document describes a decentralized ecosystem based on blockchain, beneficial for all participants of the real estate market. It is based on the technology of blockchain and smart-contracts, designed to eliminate fraud in development and provide a comprehensive solution that will significantly increase the investment attractiveness of the property, its quality and accessibility to everyone.

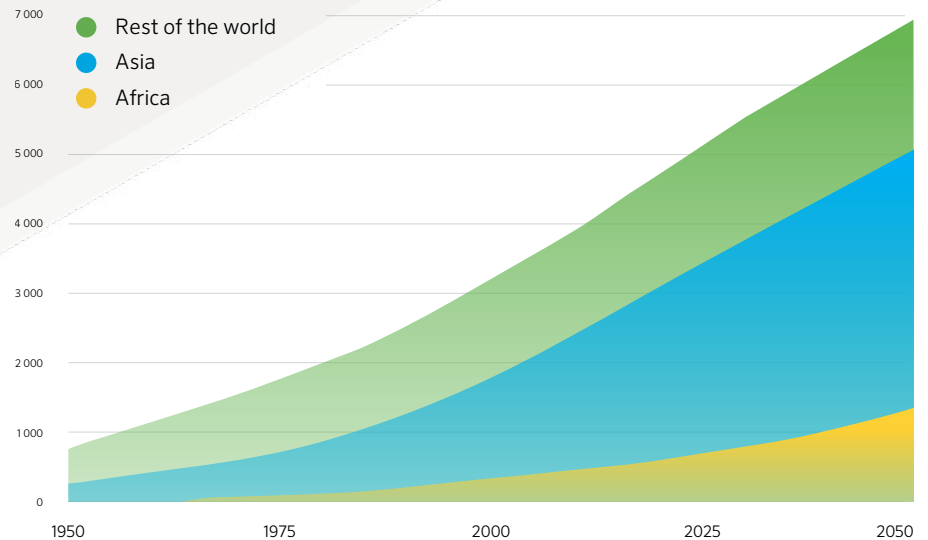
This ecosystem opens a new era in global construction, in which society takes an active, creative and authorial position in the creation and implementation of the best architectural construction projects.

**\$15**  
trillion

# Opportunities in the Real Estate Market

## Global real estate market in the next ten years

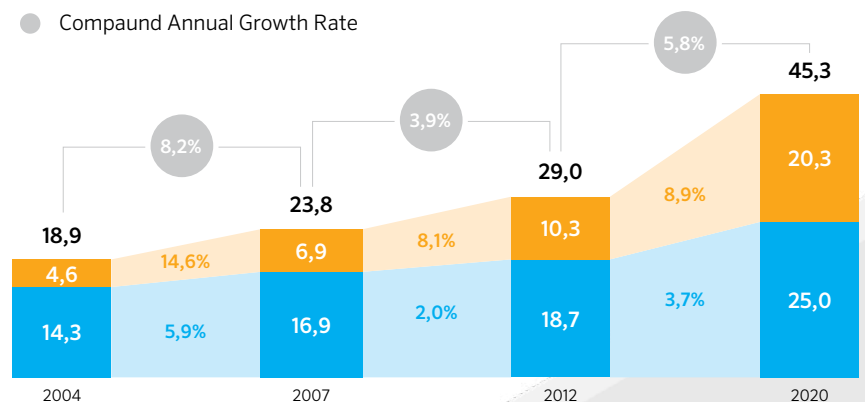
Global real estate market turnover is expected to almost double reaching US\$15 trillion, compared to US\$8.7 trillion in 2012.



**Figure 1.** World Urban Population from 1950 to 2050, *mln*.

According to the UN study<sup>1</sup>, demographic shifts will fundamentally affect real estate demand. Urban population will increase by 75% – from 3.6 billion in 2010 to 6.3 billion by 2050.

The analysis conducted by PwC<sup>2</sup> states that during the period of 2012-2020 only the global institutional-grade real estate market will on average grow by 5.8% a year (fig. 2). Growth of the world population and GDP per capita will facilitate market expansion.



**Figure 2.** Global institutional-grade real estate volume, \$ trn.

3. United Nations, Department of Economic and Social Affairs, Population Division (2012). World Urbanization Prospects: The 2011 Revision

4. <https://www.pwc.com/gx/en/asset-management/publications/pdfs/real-estate-2020-pwc.pdf>

# 3,4%

of all reported fraud cases are in construction

## Potential regions where SquarEx plans to start its operations

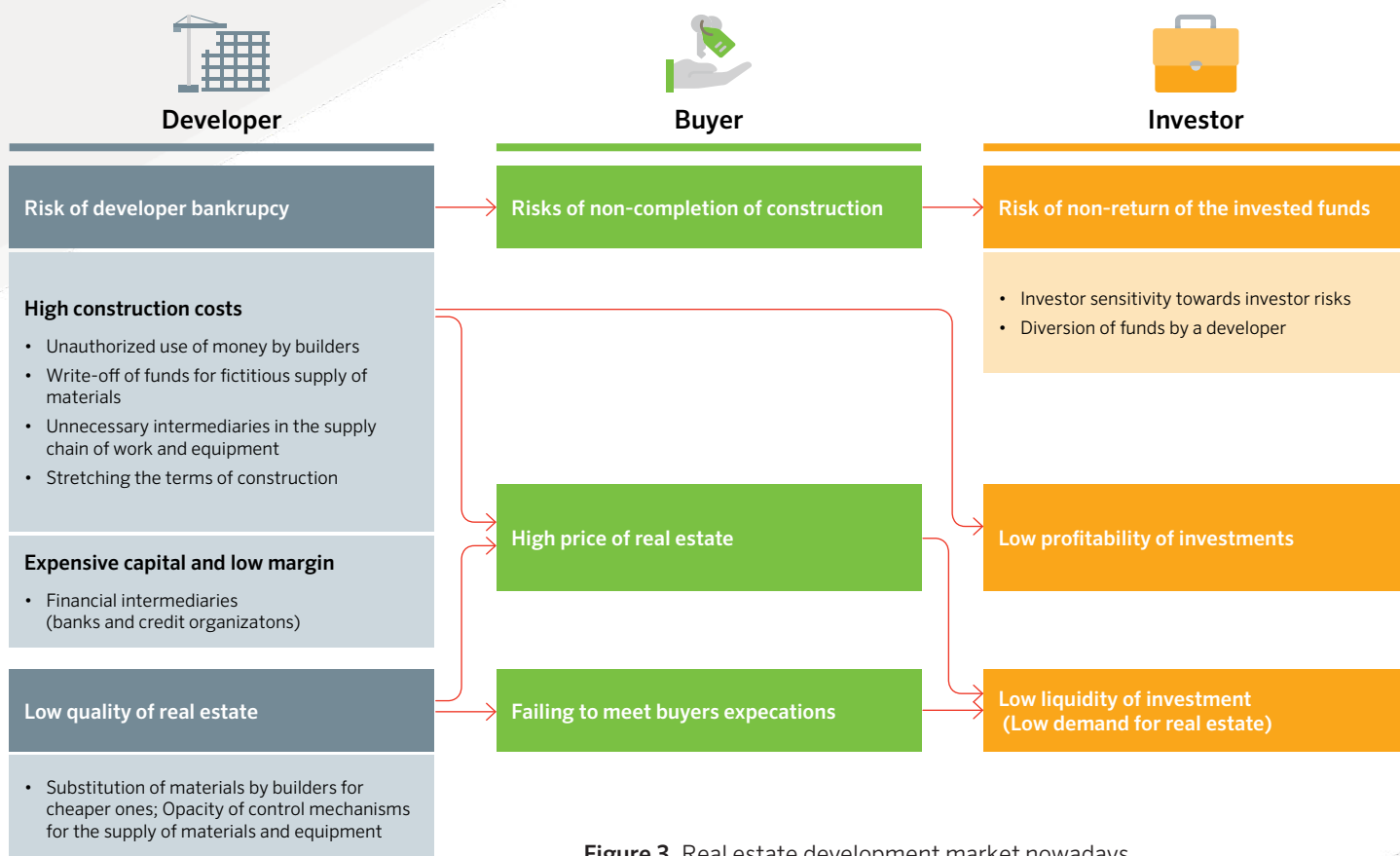
The key benefits and technological basis of SquarEx product determine the following criteria for regions of product development:

- Loyal attitude of the State to crypto-currency and crypto-assets;
- Documental simplicity in registration of construction and real estate transactions;
- Disadvantages in the existing mechanisms of construction; weak legal protection against fraud.

The research conducted by SquarEx team has identified the following countries as the most promising: Japan, Hong Kong, Taiwan, UAE (Dubai), Baltic States, France, Switzerland, Austria, Italy, Czech Republic, USA and Russia.

## Problems in the Market

According to ACFE research<sup>3</sup>, 3.4% of all reported fraud cases are in construction. Together with real estate market cases, this figure reaches around 5% of all fraud cases in the world.



**Figure 3.** Real estate development market nowadays

Opportunities for fraud schemes are highlighted in figure 3. The following are typical types of fraud:

- Unauthorized use of money by builders;
- Write-off of funds for fictitious supply of materials;
- Unnecessary intermediaries in the supply chain of work and equipment;
- Substitution of materials by builders for cheaper ones;
- Opacity of control mechanisms for the supply of materials and equipment;
- Stretching the terms of construction;
- Discrepancy of ready-made real estate to the declared project.

1. Association of Certified Fraud Examiners, Report to the Nations on Occupational Fraud and Abuse: 2013 Global Fraud Study, <http://www.acfe.com/rtnn.aspx>

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Imperfection, non-transparency of construction control and management mechanisms lead to high construction costs. High cost, together with expensive capital, affect the price of real estate on the market, and create risks for buyers.

Substitution of materials by builders for cheaper ones, inadequate and non-transparent mechanisms for controlling the supply of materials and equipment are the causes of poor quality of complete real estate.

Risks of non-completion of construction, high price of real estate and low quality lead to distrust and dissatisfaction of buyers.

All of this together creates the risk of non-return of the invested funds of investors and minimizes profitability of investments.

The lack of legally legitimate liquidity mechanisms in the real estate market together with the risks of non-return of funds invested and low profit make real estate an illiquid, investment-unattractive class of assets for a mass investor..

# Existing Solutions

## History

The cases of fraud in the course of construction and real estate transactions have been solved to this day mainly through state rulemaking, judicial mechanisms, and the institutions of professional lawyers and appraisers.

However, the success of single positive cases does not solve the systemic problem of the industry. State regulation instruments are not flexible enough for the real estate market, the legal system of many countries is inefficient and does not provide a comprehensive solution to the problem of fraud.

### SUCH SOLUTION IS PROVIDED BY TECHNOLOGIES FOR BUILDING TRUST – BLOCKCHAIN AND SMART-CONTRACTS.

Smart-contracts allow to prevent risks of misuse of investors' funds. They nullify any construction risks by programming the construction processes and writing off funds to contractors, decentralizing the processes and creating construction solutions under the control of the interested buyer community.

Blockchain as a global decentralized registry provides: transparency of project information, decisions, permits, contracts with contractors, schedules, orders and accounts. This is an ideal solution for reducing the risks of theft and falsification in construction.

Together, these tools provide a system of checks and counterweights that exclude collusion between the participants in the construction process.

Today's decisions on blockchain in real estate are aimed at creating a safe registry and preventing the illegal transfer of property rights.

<b>Ubitquity</b>	in development	Real estate
<b>Velox</b>	In development	Real estate, registry
<b>REX</b>	concept	registry
<b>ChromaWay</b>	In development	registry
<b>BitFury</b>	no information	registry
<b>Bitland</b>	In development	Real estate, registry
<b>Propy</b>	In development	Real estate registry

To date, decentralized solutions for construction do not yet exist.

Moreover, many platforms and marketplaces for buying and investing in real estate conduct ICOs with heavy violations of international law. This creates big risk for token-holders, the implementation of which not only can stop the operation of platforms, but also harm the buyers of their tokens.

Today, there is no single integrated solution that will increase the efficiency of construction, while reducing the cost of real estate and improving the quality and availability of finished housing.

# SquarEx Vision

## DISCLAIMER

### Two visions, what they mean and why such separation is necessary

Reading the current White Paper you will see that some of its sections and sub-sections are divided into two parts: “Intermediate Vision” and “Final Vision”.

We exist in an environment where every day new technologies and mechanisms appear and bold ideas that change our life and business processes are put into practice.

Because of its conservative nature, the legal doctrine of many countries, as well as established financial institutions, cannot always react quickly to these changes, and sometimes such a reaction is negative.

The project founders and the team, whose goal is to develop the project, understand that a blockchain-project related to the real sector of the economy cannot exist in a vacuum, act without any regard for its environment and existing legal regulations. We do not want to put people who believe in our project and ideals to such risk.

Therefore, in this document we define a conceptual division of project components into “Intermediate Vision” and “Final Vision”.

**Final vision** is a vision of the team about the development of the project in the future, in the form that, according to the founders and the team, will be able to provide the greatest degree of satisfaction for all ecosystem participants and allow the most effective implementation of the principles underlying this ecosystem.

Stemming from the analysis of existing legal regulation, the implementation of the Final Vision during the first stages of the project life may be difficult or impossible in many jurisdictions. The Final Vision is based on the assumptions of the founders and the project team that law enforcement practice will develop along the path of favoring the implementation of the project, which will allow to achieve the goals set in full.

The text under the “Final vision” titled section describes the processes, in the form in which founders and the project team would like to see them. If any process falls into “Final Vision” components, this in no way means that its creation and implementation will not necessarily be implemented. On the contrary, the Final Vision serves as our guiding star that will help the project to stay on its course.

However, it should be perceived as an abstract model, in relation to which there are no guarantees of implementation. The implementation of the Final Vision depends on such a large number of variables that the finalization of the Final Vision processes should be regarded at the moment as purely presumable and possible only if the current regulation is positively changed and / or if there is an opportunity to obtain licenses that will require a lot of time and resources from the project.



**Intermediate Vision** is a vision of the team about the development of the project in the near future. It includes an IT solution for ecosystem participants that the team will finish developing by the end of the ICO, which can be used by Ecosystem members, as well as a vision of the implementation of the ecosystem components that can be initiated after the ICO is over.

The vision of the implementation of the components of the ecosystem relies both on the existing legal regulation, and on the assumptions about its development in the near future.

However, its implementation will also depend on the status of legal regulation of smart-contracts, project tokens, the circulation of crypto-currencies, the technical and legal implementation of settlements, and the development of law enforcement practices in these industries in individual jurisdictions.

The project team will solve tasks assigned to the Intermediate Vision consistently and individually with respect to each jurisdiction. The text under the “Intermediate vision” titled section describes the processes in respect of which the team, acting in good faith and reasonably, will seek their implementation in the first place.

The project team at the time of the ICO offers the market an existing ready-made IT solution of the Intermediate Vision for the SquarEx ecosystem members, and during the ICO sells the SQEX tokens of the SquarEx ecosystem that represent the internal accounting unit of the ecosystem. Such internal accounting unit can be acquired by any person who wishes to take an active part in the work of the ecosystem. The team expects that in order to implement the Final Vision, it will carry out an additional sale of the shares of a company, which will own the intellectual property and IT solution of SquarEx to professional investors in the Private Equity market, .

It should be noted that, given the rapid change in law enforcement practices, neither the processes related to the Intermediate Vision nor the processes related to the Final Vision can be guaranteed from the point of view of their one hundred percent and fully-functional implementation in each of the jurisdictions.

However, the project team will make every effort to consistently achieve such implementation and expansion of the project to the largest number of territories. However, it is possible that due to objective circumstances, any of the processes will be modified depending on the requirements of the legislation.

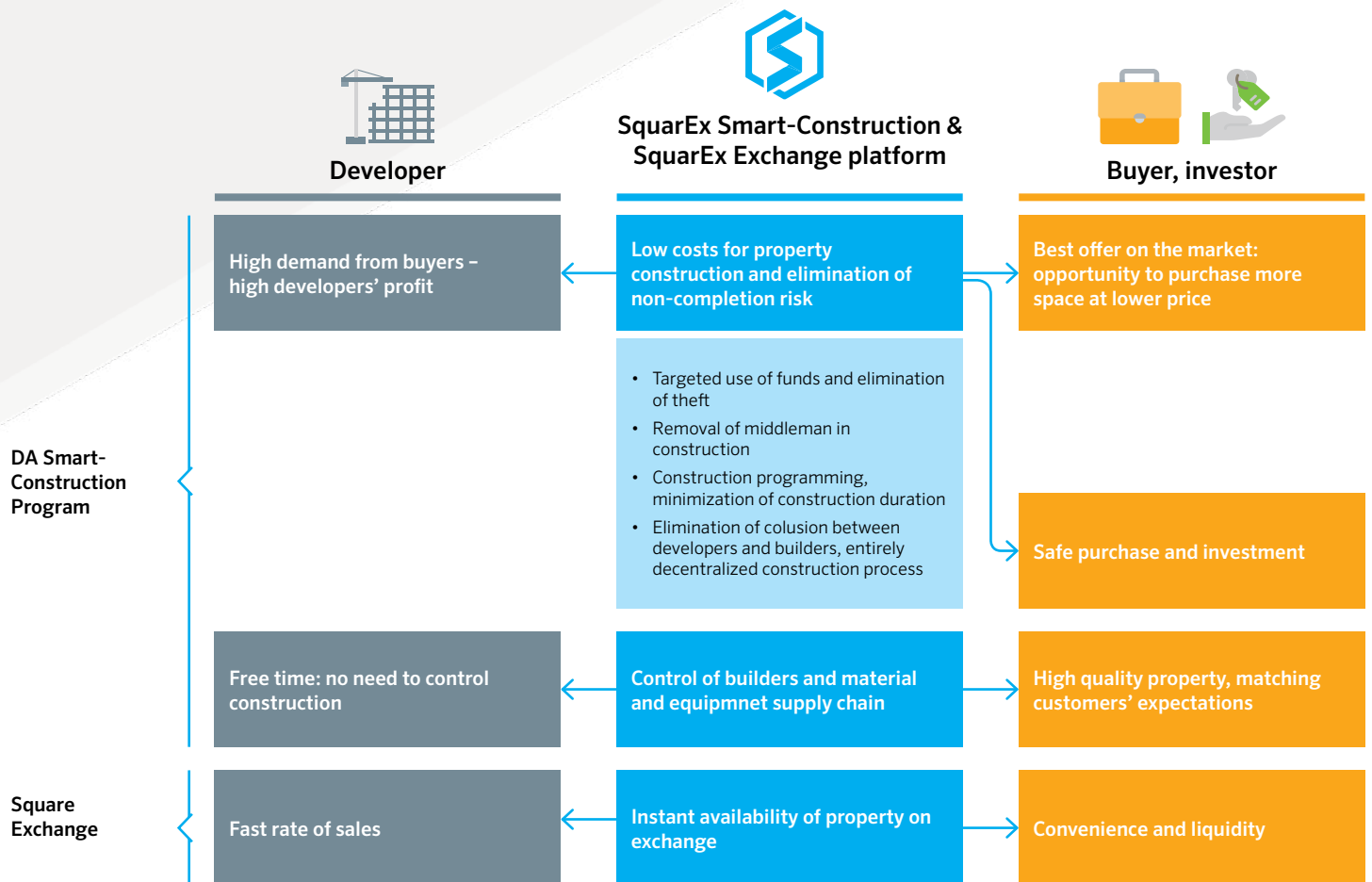
Thus, the project team warns potential purchasers of the SQEX token that the purchase of the token is a high-risk transaction that is carried out by each buyer at their own risk and based on their own analysis of the feasibility of the project. The narrative described below is not an offer, guarantee of a team or legal assurance about the possibility of implementing all processes in each jurisdiction in strict accordance with the description.

## Final Vision SquarEx. SquarEx Solution

The SquarEx solution assumes the creation of an Ecosystem of circulation of square meters of constructed and finished buildings with an exceptional architecture, an exceptional ecology, high investment attractiveness and affordable cost.

To enter the ecosystem of SquarEx, architectural projects must undergo a due diligence procedure, which eliminates risky projects. Auditors conducting the procedure are selected by Branch-Curators. In the Final Vision, Branch-Curator can be any holder of tokens who blocked their own tokens and who is interested in the Branch development process

After that, projects can place their tokens during the Initial Square Offering on the SquarEx Exchange. In the Final Vision Initial Square Offering is the process of placing square meters of construction projects on the SquarEx Exchange.



**Figure 4.** Final Vision: benefits of each participant in the SquarEx ecosystem

If the architectural project tokens are allowed to be located in the ecosystem, this automatically means minimal risks of non-completion of construction, low cost of space and high quality of finished real estate.

## Final Vision: How does the project implementation in the ecosystem minimize the risks?

1. The construction project is divided into construction stages costing from \$100,000 in SQEX tokens and successfully held an auction of contractors. As a result of the auction, a contractor is identified for each stage, who blocks the number of SQEX tokens in the amount of 30% of the cost of the work (determined by the Branch-Curators). The contractor is deprived of these tokens, in case he refused to perform the work, or failed to perform them. Such a fine is sent to the construction budget. This mechanism excludes construction fraud and the impact of moderate inflation on the project.
2. The construction project is built exclusively under the control of the community and investors – using the decentralized construction program SquarEx based on the Ethereum blockchain-platform. The community through the program controls the targeted expenditure of funds according to the project estimate, the gradual write-off of funds during construction. The decentralization of control excludes collusion of the developer and builders or delay in payment to the executors. This programming of the payment process reduces the construction time.
3. For all suppliers of construction works, materials, and equipment, the procedure for identifying a legal entity and identifying the counterparty is conducted. KYC (know your customer) with the recording of identification information in the blockchain excludes unnecessary intermediaries and substitution of cheaper analogs by suppliers of construction materials.
4. Exchange circulation of tokens per square meter on SquarEx Exchange makes the purchase of real estate comfortable, and the area becomes liquid. The liquidity of square meters combined with the best price offer on the market and the maximum quality, makes the property in the ecosystem attractive to investment. The availability of smart mortgage mechanisms and leasing of square meters makes such real estate available to everyone.

## Final Vision SquarEx. Token SQEX

In the final vision, SquarEx is a global decentralized ecosystem on the Ethereum blockchain launching smart-contracts in the real estate market, the SQEX token of which is a single means of payment within the ecosystem and is essentially an ETH analog for the Development and Real Estate market.

Imagine that you own a SQEX accounting unit which allows you to:

- › **If you are a buyer** – to purchase real estate of the highest quality, at the best price, anywhere in the world, without physical presence, in 1 click of a computer mouse. Create savings in square meters, get square meters with mortgages and leasing, be able to sell your meters and mortgage contracts on the exchange at any point in time.
- › **If you are not a professional in the construction market**, indirectly, through the community be involved in the creation of some of the most high-quality beautiful buildings on the planet Earth.
- › **If you are an investor** – to invest with maximum security the cryptocurrency in the architectural concept, take part in controlling your investment spending, see the construction process in a 3D model, estimate the profit from the investment in advance, have access to the exchange where you can sell square meters at any time, focusing on the height of demand. And at the same time, to know that your investments benefit humanity.



- › **If you are a developer** – to upload your project to the SquarEx platform and receive a ready-made, high-quality and affordable object upon completion – a property that you can profitably sell. At the same time, without the need to spend time controlling the participants in the construction process – a decentralized construction program and SquarEx participants will do everything for you.
- › **If you just have a taste and understand architecture** – you can download the project to the ecosystem on the platform, as a result, get the realization of your vision – the finished building and square meters in the property.
- › **If you are not a professional in the construction market** – be involved in creating the most high-quality buildings on the planet, with an architecture to appreciate.
- › **If you are a builder** – get access to the base of orders for construction work with the certainty that the work will be paid. The write-off of resources is controlled by a decentralized construction smart program, for which there is no benefit to delay payment for your work.

#### IN THE FINAL VISION SQEX TOKEN – IS A COMMON TOKEN FOR MUTUAL SETTLEMENTS OF SQUAREX ECOSYSTEM PARTICIPANTS.

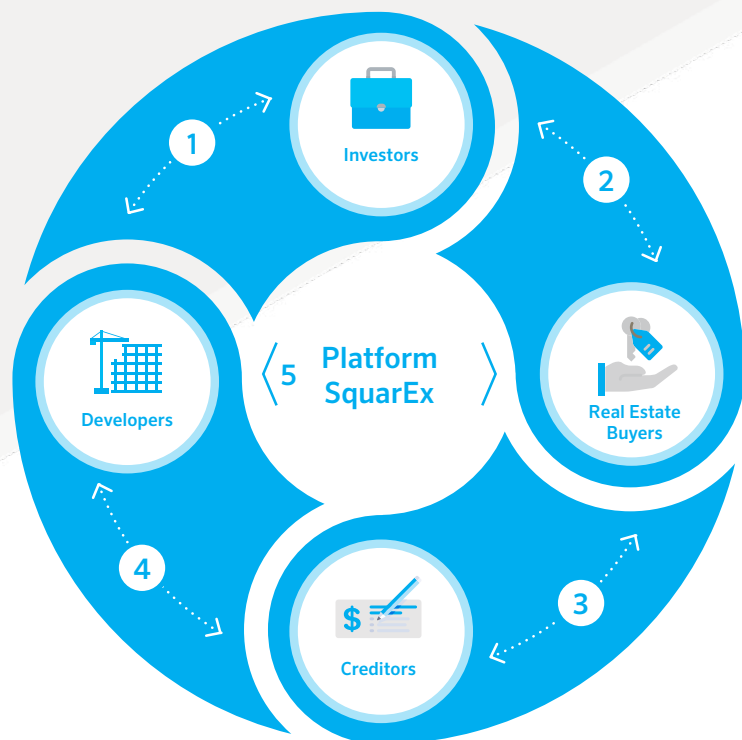
In the Final Vision, the SQEX token is used for:

- › Payment of the cost of placing an application for Initial Square Offer (ISO), including the cost of due diligence of the application, the cost of digitizing a construction project (creation of a smart construction contract);
- › Acquisition of square meters of projects in the course of ISO on the DEX SquarEx exchange;
- › Mortgage and leasing payments;
- › Participation in the auction of builders and auditors;
- › Settlement of penalty payments for poor quality audit and poor performance of construction work.

In the Final Vision, the demand for the SQEX token is determined by:

1. The use of token as the sole means of payment in transactions on the SquarEx platform (purchase / sale of square meters, mutual settlements between construction participants);
2. The use of the token to form the provision of the participants in the construction process when taking part in construction and related works. Blocking the bundle of tokens for participation in the works removes them from circulation for the duration of the construction works.

## Final Vision SquarEx. How square meters circulate in SquarEx ecosystem



**Figure 5.** The turnover of properties within SquarEx ecosystem

Figure 5 illustrates the turnover of squares within the ecosystem, which in the Final Vision takes place as follows:

- Initiator of the development project can issue and allocate project tokens in SquarEx ecosystem to investor ①; and creditor ④ during the Initial Square Offering (ISO) on SquarEx Exchange.
- Investors will be able to resell project tokens to real estate buyers ②.
- Creditors will be able to lend tokens to buyers in a form of a mortgage and get interest ③.
- Buyers will be able to exchange project tokens for realty/apartments/houses when the construction is finished ⑤.
- Tokens that are not used, are exchanged for money. The latter are attracted through the sale of unused space by agents in the external market or within the ecosystem – on the basis of the auction mechanism.

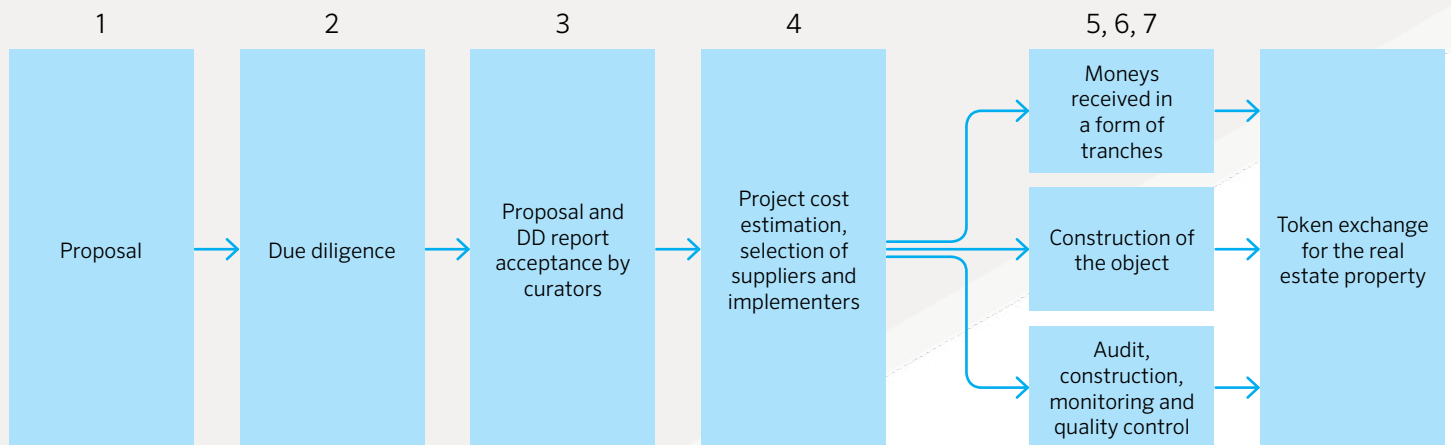
Project tokens giving the right to receive square meters in many jurisdictions represent Security, and the implementation of the Final Vision involves the registration of a license for the Square Exchange.

The Final Vision presupposes a clear procedure for the verification of legal entities and individuals for all ecosystem participants entitled to purchase and issue tokens. This procedure prohibits the issue and placement of project Security tokens by other persons, except for companies that received a license for brokerage and dealer activities, and registered as SquarEx Branch.

The acquisition, sale and marketing of project tokens will be carried out only within SquarEx Branch on the SquarEx Exchange, and only for the ecosystem – the SQEX token.



## Final Vision SquarEx: How Initial Square Offer process looks like



**Figure 6.** InitialSquareOffer, crowdfunding of investment for development and smart construction.

In the Final Vision, any SquarEx token holder can issue a proposal for crowd-funding a construction project in SquarEx, having provided the documents necessary for listing the project in SquarEx Branch (See “SquarEx Implementation: application for ISO”, will be disclosed soon).

After a scrupulous Due diligence, proposal is approved by curators and project budget calculation starts. During this procedure, a contractor for each stage of construction work is selected (see “SquarEx Final Vision Implementation: How contractor is selected”). Upon the completion of the stage, an auditor is selected (see “SquarEx: Final Vision Implementation: How Auditor is Selected”, will be disclosed soon).

In the Final Vision, after the budget is set, SquarEx IT-solution automatically creates a decentralized autonomous construction program launching Initial Square Offer – issue of project tokens and their placement on Square Exchange for initial buyers.

Each part of property under development is evaluated at a certain number of tokens – depending on several criteria: view from the windows, floor, commercial attractiveness etc.

### IN FINAL VISION: THE NUMBER OF TOKENS NEEDED TO PURCHASE A PROPERTY

- Price of one token (square meter token) = total value of the building divided by the number of square meters in the building.
- Number of tokens necessary to purchase a certain property is defined before ISO and remains the same until additional ISO changes it. That number is presumably equal to the area of the property, but can be multiplied by some factor according to its consumption qualities and attributes (for example, top floor properties are usually more expensive).
- The conversion of tokens into actual reality: one can only buy the entire property (flat, office, shop etc.) for tokens. In order to do so, one needs to have 100% of property’s value in tokens and book the object. After construction is finished, the booked object is transferred into buyer’s ownership.

After ISO is finished, project curators are defined for each stage of construction (see “SquarEx Final Vision Implementation: Project Curators”).

During the construction process, relevant auditors check the completion of each stage. Auditors report to curators. Project curators approve each tranche until the building is complete.

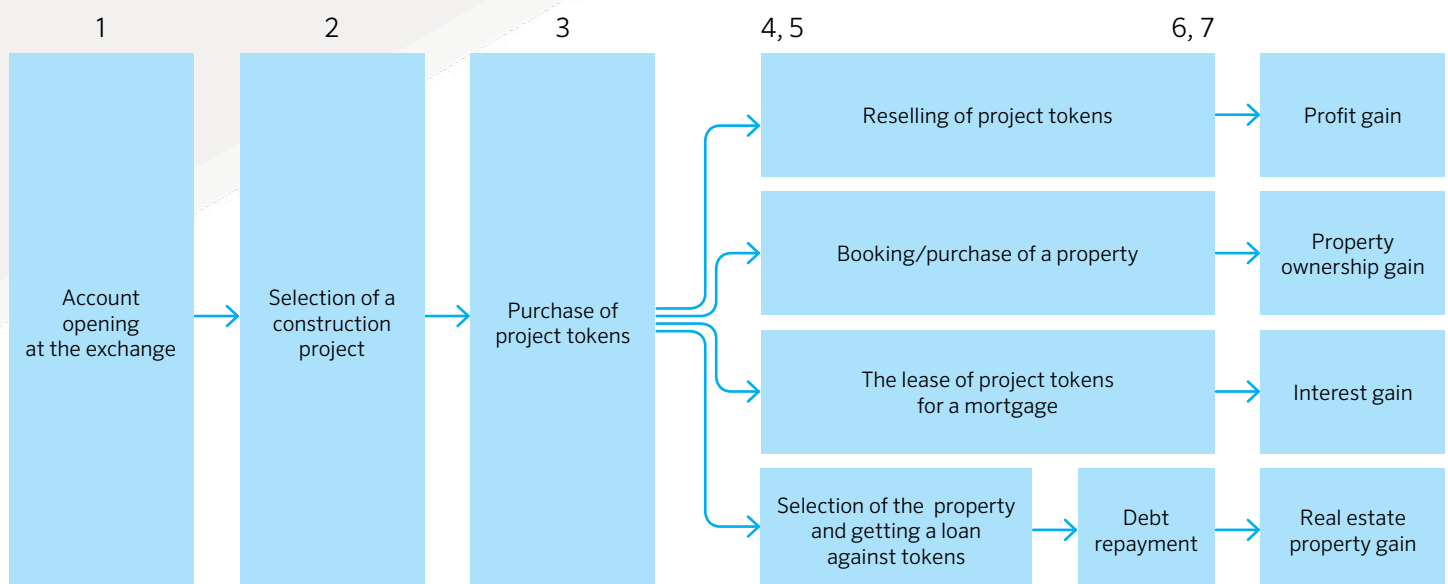
In the Final Vision, after the building is constructed, blocks of project tokens will be exchanged for property, under the discretion of their holders.

### IMPORTANT: LEGAL PROCESS OF TOKEN EXCHANGE FOR PROPERTIES IN THE FINAL VISION

In line with our core values, we offer various legal smart-mechanisms guaranteeing fair exchange of tokens for properties.

In the Final Vision, we see the whole process being regulated by smart-contracts. Ownership registration is administrated through a decentralized SquarEx Title Registry.

### Process of decentralized square exchange in SquarEx Final vision



**Figure 7.** Final Vision: acquisition of real estate and related transactions.

In the Final Vision of SquarEx ecosystem, project token buyers invest money into realty price growth. In the Final Vision investors will be able to buy project tokens at early stage of construction and gain profit from the resell of tokens to end-buyers of properties. They will also be able to lend project tokens to the end-buyers under a mortgage and gain profit in a form of interest.

In the Final Vision, end-buyers of real estate will be able to buy property during the construction of the building.

In the Final Vision, the end-buyers of real estate will be able to buy property during construction of the building either for their own money or by taking a mortgage.

To buy project tokens one needs to:

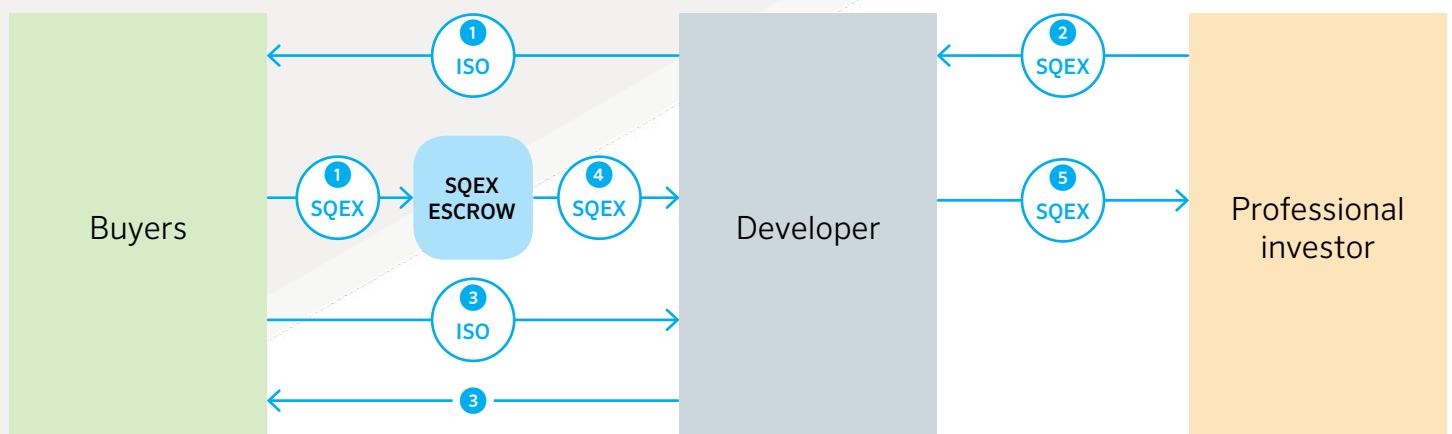
1. Open an account on SquarEx Exchange;
2. Chose a construction project of interest in SquarEx Branch;
3. Purchase project tokens.

Afterwards in the Final Vision, token holders will be able to use tokens at their own discretion:

- > To resell tokens on exchange platform to gain profit;
- > To exchange project tokens for property when the construction is finished or book an object before construction is over and conduct exchange when it's finished;
- > To apply and get mortgage before construction is over and use the property (to live or rent out) while paying the loan back;
- > Lease the tokens and gain profit in a form of a loan interest.

## SquarEx Intermediate Vision. SquarEx Solution

In the Intermediate Vision, SquarEx is a platform that connects professional investors and real estate buyers.



**Figure 8.** SQUAREX Intermediate Vision Implementation.

Intermediate Vision of the SquarEx ecosystem is an IT-solution in which:

- > The developer uploads legal, technical and economic documentation of the project on the platform.
- > The project undergoes Due Diligence in the SquarEx Branch by auditors, approved by the Branch-Curator and qualified investor.

The cost is being calculated: the project is divided into stages, builders are selected for each stage. They block SQEX tokens as a security deposit guaranteeing the execution of work. For each stage an auditor is chosen, who also blocks a certain number of SQEX tokens as a confirmation of their liability.

Once the project cost has been generated, the platform automatically creates a building smart-contract, issues construction project tokens<sup>1</sup>, and sells project token-coupons to customers for the SQEX tokens in the course of ISO. SQEX tokens, obtained from the sale of project token-coupons, is sent to the digital escrow account, where it is stored until the building is completed ①. The collected funds are not used for the construction of the project.

It is assumed that the buyers of the project token-coupons buy such tokens for the purpose of subsequent purchase of housing at a discount, for personal use at a bargain price. Thus, the activity of users and their entrepreneurial qualities allow them to achieve their goals.

In parallel with the placement of the project token-coupons, the platform opens an investment smart-contract for which professional investors (or one professional investor) can direct their investments in the form of SQEX tokens. Construction of the building begins on the basis of the collection of the entire budget. Investments in the form of SQEX tokens are sent to builders by tranches

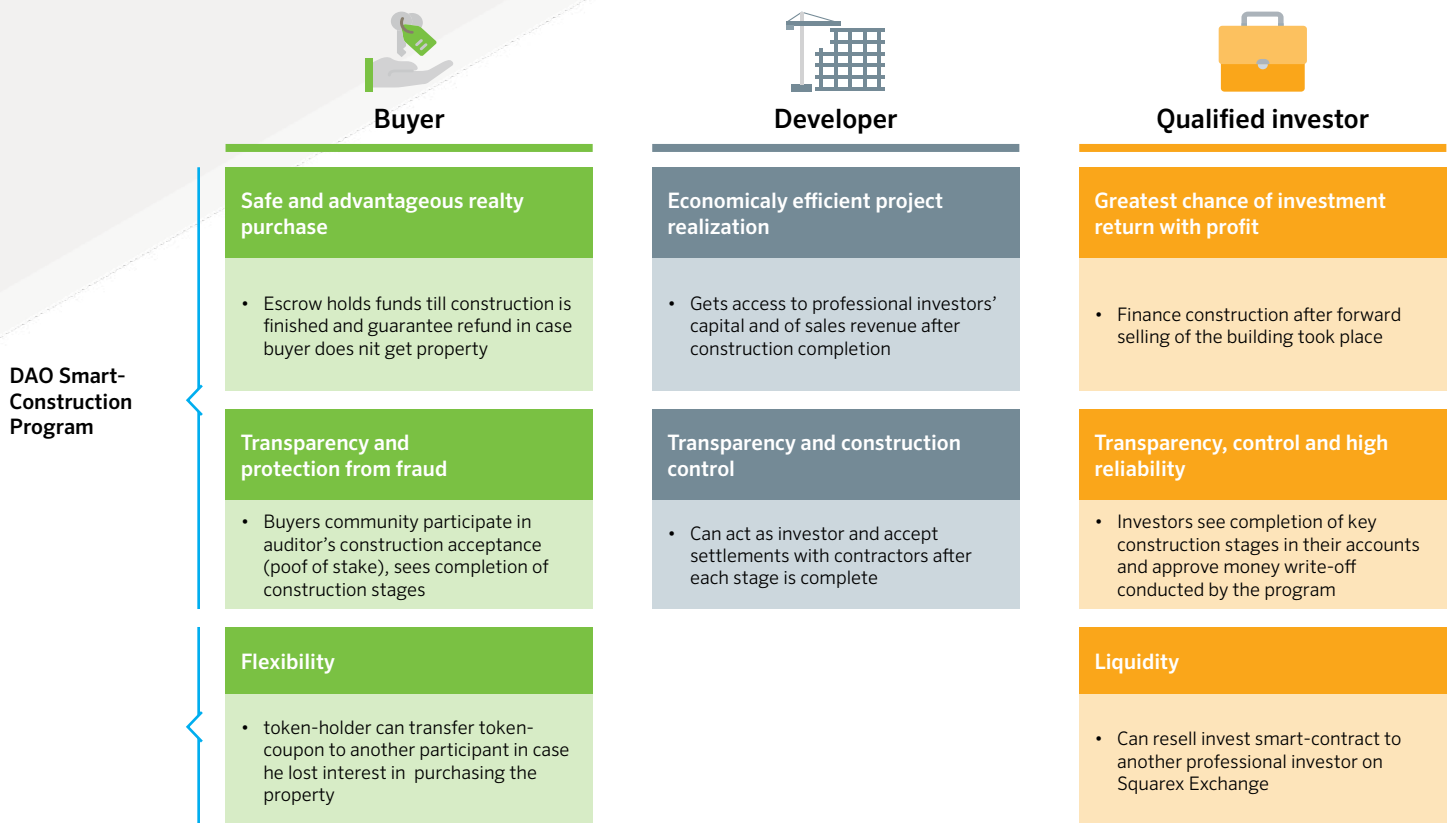
1. Here and after in all sections of intermediary vision by project token we mean token-coupons, that allow realty buyer get a discount when purchasing square meters of property when construction is finished

from the contract account – on the basis of the work schedule ②. Completion of each stage of work is accompanied by an audit.

Holders of project tokens have the right to block the auditor to avoid collusion between investors and general contractors.

After the building is completed, buyers have the right to present project tokens to the developer ③, use coupons and carry out a transaction for the acquisition of real estate at the discount indicated in the coupons. After the property is acquired and the system registers the transaction, SQEX tokens from the escrow account are sent to the developer ④, and the developer settles with the investor ⑤. In case of the building not being completed, the SQEX tokens from the escrow account is returned to the buyers.

During the construction of the building, buyers have the opportunity to assign the right to their project token-coupons through the Square Exchange platform to other persons. When assigning project token-coupons to other persons, all the rights of original buyers automatically pass on to them, including the right to return SQEX tokens in case of unsuccessful completion of construction.



**Figure 9.** Intermediate Vision: benefits of participants in the SquarEx ecosystem.

Intermediate vision includes an operational IT-solution that real estate buyers, professional investors, developers, escrow agents and other participants in the construction process can use when the SquarEx ICO is completed. This IT solution is the way to decentralize the platform and the first step towards implementing the Final Vision of SquarEx. Such vision is chosen by the SquarEx project team not by chance: it shares the roles of investors and buyers, introduces escrow mechanisms to exclude crowdfunding by unprofessional investors. In our opinion it will help us avoid recognition of ISO tokens as securities in certain jurisdictions. Such vision also does not guarantee the receipt of square meters with a significant discount when buyers present to the developer ISO tokens.

In this case, the developer and professional investors, through the marketing campaign implemented in the sale of token-coupons, can find out about the interest of buyers in construction at the earliest stage and determine what will be the demand for the project.

## SQEX token economic model

**Disclaimer.** The information set forth in the economic model below is based on authors' subjective opinion and prognosis and may not reflect events that will happen in the future.

We ask you to apply your own analysis based on recommendations from experts you trust in the field of economy, finance and jurisprudence when assessing risks related to token purchase. This model is not a guarantee or an offer and implies probability of significant deviation from scenarios described here depending on actual circumstances.

### Main assumptions and prerequisites of the model:

#### Motivation of SQEX token-holders:

Price of SQEX token is determined by demand and supply equilibrium. SQEX tokens are released only during the SquarEx ICO stage. SQEX tokens cannot be additionally emitted or minted after the ICO completion.

#### The demand for SQEX token is determined by:

1. The use of token as the sole means of payment for deals between SquarEx ecosystem participants.
2. The use of the token to form the provision of the participants in the construction process when taking part in construction and related works. Blocking the bundle of tokens for participation in the works removes them from circulation for the duration of the construction works.

#### In the Final Vision, SQEX token is used for following operations within the ecosystem:

- › Payment of the cost of placing an application for Initial Square Offering (ISO), including the cost of due diligence of the application, the cost of digitizing a construction project (creation of a smart construction contract);
- › Acquisition of square meters of projects in the course of ISO on the DEX SquarEx exchange;
- › Mortgage and leasing payments;
- › Participation in the auction for builders and auditors;
- › Settlement of penalty payments for poor quality audit and poor performance of construction.



**In the Intermediate Vision, SQEX token is used for following operations within the ecosystem:**

- › Proposal audit fee when listing project on the platform
- › Purchase and sale of project token-coupons by final buyers in order to use them to purchase property from developer at a discount later on;
- › Financing of construction process by professional investors.

**Other Assumptions:**

- › The Annual world digitized real estate construction market share will reach 1% of total real estate construction market by 2021.
- › It is important to note that technological superiority of SquarEx over existing competitor solutions and over modern ways of real estate and construction management is likely to increase these figures even more.

Growing demand for SQEX tokens, determined by the growth of services provided in SquarEx Ecosystem by participants, alongside fixed total number of tokens (500 000 000 SQEX tokens, without additional emission and minting) enables stable long-term growth of SQEX token value.

## Pessimistic scenario

Pessimistic scenario assumes that 2018-2019 participants of the ecosystem would use just the Intermediate Vision of IT-solution. During this period SquarEx ecosystem will prevent token from being recognised as security by eliminating all prerequisites for doing so:

- › All participants would have to go through KYC procedure that identifies professional investors and buyers willing to purchase property in order to get access to the ecosystem.
- › Project tokens would serve as coupons. End buyers would be able to purchase only those and solely to actively use them in order to buy real estate at a discount from developer in the future. Meanwhile, money raised from the sale of project tokens will NOT be directed to fund construction. These money will be frozen on special escrow account and returned to buyers in case the construction is not finished.
- › Only professional investors will finance construction.

Pessimistic scenario also includes the risk of SQUAREX GLOBAL exchange not acquiring in 2018-2019 the license for stock activity for SquarEx Exchange platform.

Due to such risk, offering of properties to buyers by professional market participants (brokers and dealers) in order to crowdfund construction will not be possible.

Pessimistic scenario implies low growth rate in number of projects and participants in SquarEx ecosystem. This might occur due to difficult legalisation of SQEX tokens in various jurisdictions.

Pessimistic scenario assumes that IT solution from the Final Vision would be realized in 2020. At the same time SquarEx Exchange would obtain licence for stock exchange activity only by 2020.

Thus, Pessimistic scenario implies that specialized market participants, holding brokers', dealers' or other special licenses would be able to allocate properties for purchase only from the year 2020. In such scenario opportunities for buyers to crowdfund construction and mortgage and leasing mechanisms would only be available from 2020 also.

**PESSIMISTIC SCENARIO: SCOPE OF SERVICES AT SQUAREX ECOSYSTEM,  
PROVIDED BY ECOSYSTEM PARTICIPANTS, \$M**

	2018	2019	2020	2021	2022
Initial Square Offering (Purchasing of Project Tokens)	150	314	1 046	5 450	21 008
Financing of construction	74	201	613	3 014	12 052
Exchanging of Project tokens	167	355	1 174	6 087	23 535
Loans of Project tokens	-	-	680	3 157	12 627
Expected total annual trade volume	390	870	3 512	17 707	69 221

**PESSIMISTIC SCENARIO: SQEX TOKEN PRICE FORECAST**

	2017	2018	2019	2020	2021	2022
Turnover on Squarex platform, m\$.		390	870	3 512	17 707	69 221
Turnover coefficient		5,00	5,00	5,00	5,00	5,00
Free-float volume at the start of the year, in token thousands		200 000	250 000	300 000	350 000	400 000
Free-float money supply cost, m\$.		78	174	702	3 541	13 844
Estimated price for SQEX token, \$	0,300	0,390	0,696	2,341	10,118	34,610
Cost of all SQEX tokens, m\$.	150	195	348	1 171	5 059	17 305

## Optimistic scenario

Optimistic scenario implies that in 2018 already SQUAREX would attract additional funds through equity sale of SQUAREX GLOBAL on private equity market. With that money it would offer IT-functionality of the Final Vision in the market.

This scenario implies that in 2018 Squarex Exchange would obtain license necessary for stock market activity which will allow professional market participants, who hold special licenses, such as brokers and dealers to issue and realize tokenized square meters to non-professional investors.

Moreover it would allow financial institutions holding special permissions in certain jurisdictions to lend such square meters to buyers via Squarex Exchange.

This would allow opportunities for crowdfunding, in turn significantly improving accessibility of capital and accelerating the influx of projects into SquarEx ecosystem.

**OPTIMISTIC SCENARIO: SCOPE OF SERVICES AT SQUAREX ECOSYSTEM,  
PROVIDED BY ECOSYSTEM PARTICIPANTS, M\$**

	2018	2019	2020	2021	2022
Initial Square Offering (Purchasing of Project Tokens)	750	1 569	5 229	27 248	105 040
Financing of construction	371	1 005	3 065	15 069	60 259
Exchanging of Project tokens	166	355	1 174	6 087	23 535
Loans of Project tokens	72	207	680	3 157	12 627
Expected total annual trade volume	1 359	3 136	10 147	51 561	201 460

## OPTIMISTIC SCENARIO: SQEX TOKEN PRICE FORECAST

	2017	2018	2019	2020	2021	2022
Turnover on SquarEx platform, m\$		1 359	3 136	10 147	51 561	201 460
Turnover coefficient		5,00	5,00	5,00	5,00	5,00
Free-float <sup>1</sup> volume at the start of the year, in token thousands		200 000	250 000	300 000	350 000	400 000
Free-float money supply cost, m\$		272	627	2 029	10 312	40 292
Estimated price for SQEX token, \$	0,300	1,36	2,51	6,76	29,46	100,73
Cost of all SQEX tokens, m\$	150	679	1 254	3 382	14 732	50 365

## SquarEx SQEX token distribution

		ETH
Maximum number of SQEX tokens	500 000 000 (100%)	493 250
Total SQEX supply in all rounds	195 000 000 (39%)	188 250
Bounty, marketing, advisers	5 000 000 (1%)	5 000
SQUAREX Team tokens number	100 000 000 (20%), ½ of them is blocked for 1 year	100 000
SQUAREX GLOBAL FUND <sup>2</sup> tokens number	200 000 000 (40%), all tokens are blocked and get unblocked 10% a year commencing with 2019	200 000

### ICO Round

ICO Exchange rate	1 ETH = 1000 SQEX
SQEX tokens issued at PRE-ICO	175 750 000 (35,15%)
Eth raised	175 750 ETH
Approximate date of ICO start	15.04. 2018
Approximate date of ICO end	30.04.2018

### Pre-ICO Round

Pre-ICO Exchange Rate	1 ETH = 1500 SQEX
SQEX tokens issued at PRE-ICO	15 000 000 (3%)
Eth raised	10 000 ETH
Approximate date of Pre- ICO start	1.03.2018
Approximate date of Pre- ICO end	15.03.2018

35.15% of all SQEX tokens would be sold to investors during the ICO. 20% will be allocated amongst SquarEx team members, where a half would be locked-blocked through smart-contracts for the duration of one year from the start of SquarEx ICO.

40% of all SQEX tokens (200 000 000) would be transferred to SQUAREX GLOBAL FUND (further SQUAREX GLOBAL) and would be lockedblocked (which would exclude the possibility to sell them). These tokens would be used by SquarEx team only, for the purpose of controlling the development of the SQUAREX platform and code.

These tokens would become automatically unlocked/unblocked in the amount of 50 000 000 (10%) each year during the process of SquarEx platform

1. Free-float - tokens that do not belong to SQUAREX. Upon completion of SQUAREX ICO, 200 million of tokens will be frozen via the function of smart-contracts. Every year 50 million will be brought back into circulation.

2. SQUAREX GLOBAL FUND - is a SQUAREX development fund. On the date of the ICO completion, the Fund will own 40% of SQUAREX tokens.

development and would be sold on DEX SquarEx in order to decentralize SquarEx. Initial number of platform curators for the start of ICO would consist of 6 founders and 4 large investors.

With each release of 50 000 000 (10%) of SQEX tokens in the market starting from 2019, there would be one seat on the Board of curators would also be released. This gradual release and sale of tokens alongside their price growth would allow to avoid risks associated with the consolidation of a large token portfolio in single hands. Implementation of this risk would stop the decentralization of the platform. Thus, by 2022 the Board of supercuratorsSuper-Curators would comprise of 2 founders and 8 large investors.

The SQEX token is positioned as an accounting unit, used by all participants of the ecosystem of SquarEx, who actively taking part within the ecosystem would be able to use this token to satisfy their material interests by applying ecosystem mechanisms. The SQEX token is not an equity or other type of security, the SQEX token does not imply receipt of passive income and does not confer any corporate rights.

### **How can I get SQEX tokens?**

SQEX tokens will be available for purchase only during the ICO. One will be able to buy / sell SQEX tokens on the exchanges that support ERC20 tokens (e.g., Poloniex).

SQEX tokens cannot be emitted or mined after the completion of ICO. SquarEx will never mint or mine tokens after the ICO is complete.

### **What is the token lockblock?**

Tokens (SQEX and project tokens) can be lockedblocked in many cases, for example when SQEX token-holder would like to become an auditor. The lockblock will effectively protect SquarEx from manipulations and fraud.

# Team



## Kirill Kotilevskiy

**Founder, CEO, Developer of business logic**

Expert in the field of securization of real estate.

Founded the "National Real Estate Broker" company, acted as a stock consultant for major Russian construction companies : LSR Group, GK-MIC



## Michael Gnezdilov

**Founder, President**

Owner and CEO of AMJ Group Construction Company ([www.amjgroup.ru](http://www.amjgroup.ru)).

Offtakes more than 10 00 000 square feet of real estate. The overall cost of his development projects is more than \$200 000 000 Has brought to life more than 20 development projects.

AMJ Group Participated in constructing of Federation Tower ([federationtower.com](http://federationtower.com)) the biggest tower of Europe.

The biggest renovation project in Moscow ZilArt ([www.zilart.ru](http://www.zilart.ru)).

The biggest energy Power station in Moscow region ([www.zagaes2.rushydro.ru](http://www.zagaes2.rushydro.ru)).



## Igor Vasilyev

**Founder, CTO**

12+ year in It industry. Team lead in development software system in Media-Saturn Russia.

Starting from 2011 Igor successfully created and launched more than 10 it-solutions in online retail and was engaged in the creation of teams of developers for IT projects.

Winner of the European hackathon Junction 2016 in the FinTech track with the solution: "Payment channel for spending crypto coins on many classic e-commerce sites"



## Boris Sarmatov

**Founder, CVO**

CEO of "3D Capital" holding company.

Starting from 2013 Boris is heading "3D Capital", a holding company conducting activities in construction, mining and logistics in Russia.



## Vladimir Mironov

**Founder, CIO**

10+ years attracting investments and increasing sales in construction and development.

Managing partner and board member for AMJ Group Construction Development Company.

Author and developer of unique technology of realty sales through electronic tenders for a major government owned developer.

Foreign relations experience.





## Vincent Demiaux

### Real Estate Developer & Investor Relations

Co-partner of PATRIMONIO Unlimited Company in Switzerland

The overall cost of its development projects is more than 2 billions of Swiss Francs during the last 34 years.

Patrimonio Participated in constructing of many different sites, living, commercial and institutional places in Switzerland, France, Belgium, Portugal, Morocco and Monaco.



## Sergei Lebedev

### Chief Lawyer

Starting from 2016 Sergei is heading Unicraft consulting company specializing in property, commitment and corporation law.

2014-2015 heading law department in one of the Russian gold-mining holdings. 2013-2014 heading law department in "SMART Securities", took part in 2 successful IPOs, before he lead a group of bankrupts and commitment practice in one of the most effective Siberian law bureau "Lawyer LK".

Participated in various capital investment projects, including international M&As.



## Ihar Heneralau

### Head of Business Development US/EU

Ihar is an international business and investment professional with expertise in all facets of business operations and product management,

Ihar has 10+ year in international real estate brokerage and investment experience.

Through strategic partnerships and effective marketing strategies Ihar helped multiple businesses expanding to the world wide market.



## Harry Aloysius

### India Community Coordinator

Starting from 2013 Harry is heading "Tip Top Tyres" a trading company dealing with tyres accessories and performance parts.

Experienced in Leasing and subleasing of service apartments to tour operators on long term and short term basis.

Certified in basic dubai real estate laws and experienced in basic Dubai real estate sales and leasing.

# Advisory Board



## Ryan Plummer

### Adviser

Director at Ten-X Commercial

Leading innovation and technological reolution in Real Estate brokerage industry. Part of the core team at Ten-X (\$1,5B+ valuation), digital real estate platform with 21M users and over 150,000 properties listed



## Dr Vita Kadile

### International Marketing Adviser, United Kingdom

Marketing and Entrepreneurship Research Fellow at Leeds University Business School, United Kingdom, since 2013.

Specialising in foreign market entry and marketing strategy, Vita is actively involved in several research projects in relation to entrepreneurial start-ups, marketing capabilities, supply chain and export performance.

Recently completed a major consultancy project for a UK-based international multi-channel retailer resulting in a major improvement of its foreign operations.

Also serves as an Assistant Managing Editor for the Journal of International Marketing. Phd, Marketing



## Michael E. Scheinberg

### Adviser

Top Rated Real Estate Attorney in Los Angeles, CA

Michael graduated from Northwestern University School of Law and holds his licensed since 1983. He joined Pircher Nichols & Meeks LLP in 1989 and is a partner in the firm's real estate department.

Mr. Scheinberg's practice focuses on commercial real estate transactions, including private equity, restructurings, development, loan origination and workouts, joint ventures, acquisitions and dispositions as well as leasing.

State Bar of California, Real Estate and Tax section, Member since 1983

Los Angeles Bar Association, Member



## Bob Burke

### Adviser

Bob Burke & Company Ltd., Acknowledged public and government affairs specialist.

Decade-long experience in Washington, D.C. international and government leadership with service in several White

House positions. Specialties: Government contracts, land use and transportation



## Anthony Akentiev

### Blockchain Adviser

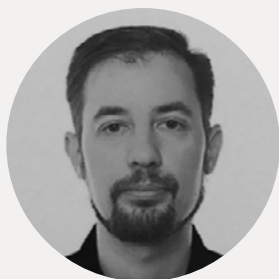
Lead developer of Squarex Platform architecture/usage scenarios of DAO Squarex.

Developer of DAO Squarex and branches smart-contracts. 10+ years of C++ experient Java, and Solidity programming expert

[github.com/AnthonyAkentiev](https://github.com/AnthonyAkentiev)

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# Testing Pool



## Pomortsev Dmitry

**SquarEx Testing Pool Representative**

Vice President, Development, Sales&Marketing,  
International Projects "AstanaTransstroy", Kazakhstan.