

White Paper

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Blockchain-powered investment marketplace

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1. Summary

The platform is designed to scale and empower the effective existing business model of the private investment Club «EmpirePuzzle» in order **to offer perspective solution to the most prominent issues of International medium-term real estate investment:**

1. Accessibility of complex expertise and general analysis method, as well as the difficulty of strategic real estate valuation and legal issues.

SOLUTION:

The effective running business model with its unique methodology of market study and choice of property, developed by the company, provides a safe and simple investment instrument, which allows to operate on various markets and to scale the business model, while maintaining a high level of risk assessment and insurance.

2. Lack of organization and regulation of collective investment (crowdfunding), long lock-up periods, high minimum investments and other issues of classic real estate crowd-financing industry, as well as Inflated commissions of middleman financial processes.

SOLUTION:

Multilayer tokenomics with custom monetary policy design allows to implement cost-effective management of assets and financial operations. It consists of the following layers:

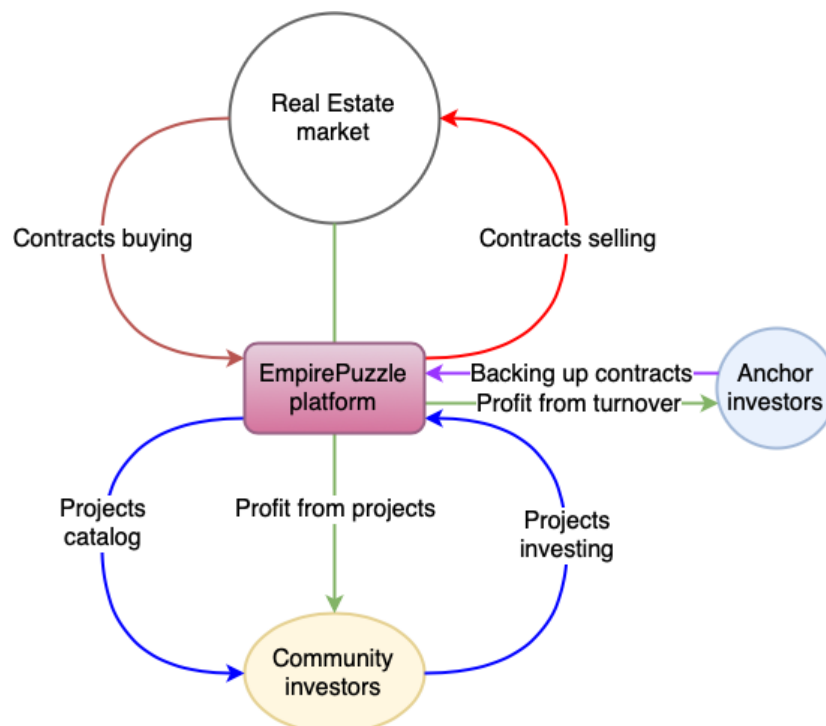
- 2.1. Security layer provides solution to organizational issues of the current business model, as well as individually regulated lock-up periods and customized investment limits;
 - 2.2. Utility layer provides transparency and confidence to business activity by public blockchain technology and replaces middleman with secured algorithms of consensus, cutting costs;
 - 2.3. Stable layer allows to replace traditional financial operations with technological escrow, decreasing commissions due to facilitation of international transaction processes provided by blockchain technology.
3. Lack of effective solutions, which would include well-structured international data base of real estate investment opportunities with flexible portfolio diversification and efficient secondary markets.

SOLUTION:

Digital platform as cloud architecture employs AI for Big Data analysis and DLT for private data and assets management. It includes all necessary functional accessible online, allows to unite large quantities of participants and to scale the business model to the international level.

2. Business model economy

How it works: The company selects perspective property in the real estate market and, with assistance of the Curator Committee, approves it for profitable medium-term ownership with buyback rights. Through anchor investors the company buys this contract at a favorable price, and puts it on the platform as an investment project for Club members. Members select suitable options from the list of investment projects and, by subscribing, make investments into the selected contract. Further, they make an interest profit according to the terms of the contract, and upon its completion they return their investments.



Anchor investors make an interest profit from the total turnover of the company.

The company is formed of narrow specialists of the field, and is regulated by decentralized and independent Curator Committee, which is responsible for analytics, decision-making, and market intelligence on the best investment opportunities. The company takes on automation of workflow and all issues related to contracts execution.

Investment risk for Club members in this business model means only an increase in time of return on investment, which, in the end, brings increase of the profit.

Innovative digital technologies, applied to this business model, will automate the process, making it transparent, safe and scalable, both for investors and for companies wishing to become Export License holders of the business model.

2.1. Curator Committee

Empire Puzzle Club Curator Committee is responsible for analytics, decision-making and presenting to the Board the verified and approved information on investment opportunities, values and risk. The platform will empower this process of decision-making with BigData Analysis.

The Curators' Committee is composed of senior professionals in the areas of real estate appraisal and real estate investment analysis. Its members do not participate in the negotiation of investment projects in order to maintain their exemption from the projects they analyze.

Its conclusions are integrated into the process of analyzing new projects, as well as in the reassessment of alternatives for ongoing projects.

The work of the Committee on property valuation follows the rules of **RICS «Royal Institution of Chartered Surveyors»¹** and **TEGoVA «The European Group of Valuers' Associations»²**. The investment risk analysis is carried out following their models. Business export model will force adoption of local standards (ex. US based **ASA «American Society of Appraisers»³**).

The value obtained in the valuation is considered the upper limit for trading. In the case of a favorable investment decision, the Committee presents to the members initial risk classification, financial terms and final conditions of the business realization.

The unique methodology of market study and choice of property, developed by the Curator Committee, allows to work in various markets by scaling the business model, while maintaining a high level of risk assessment and insurance.

¹ <https://www.rics.org/uk/>

² <https://www.tegova.org>

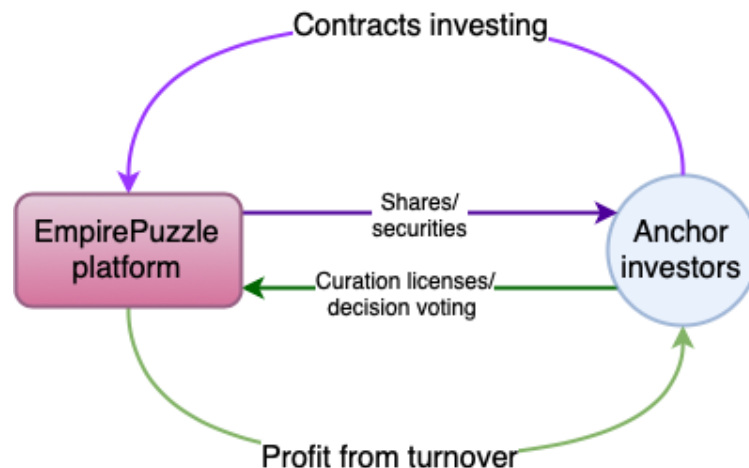
³ <http://www.appraisers.org>
Lisbon, 2018

2.2. Base market (Anchor investors ecosystem)

The base market is formed by anchor investors with a high degree of influence, who make large investments in projects selected by the Curator Committee, and receive an interest profit on turnover, stimulating both the business model and the community.

They are the first to make a timely deposit, in order to reserve chosen property, and, thereby, form a profitable investment offer for the other participants of the Club. Anchor investors are carefully selected in compliance with the Club criteria (due diligence procedure) and, upon approval, receive exclusive privileges, such as:

- *Voting right in strategic decision making;*
- *Participation in closed strategic workshops and conferences;*
- *Invitation to sponsored events conducted by the curated company;*
- *Invitation to membership in the Curator Committee.*



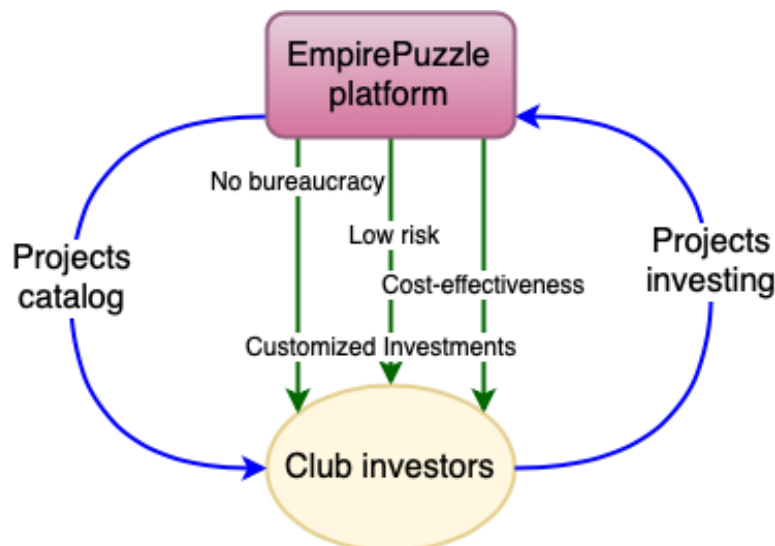
This uniqueness of this market is that it represents securities - an internal organization of the business model: anchor investors quickly respond to emerging lucrative offers on the real estate market, forming competitive prices for the property and making deposit within the next 48 hours. Further, investors provide access to the reserved project to other Club participants on favorable terms, obtaining a percentage of turnover during the subscription period. Depending on the share of the community in the investment project, anchor investors take on the remaining share and participate in the project on general terms. Participation in this market creates a basic financial engine that supports the turnover of funds and provides a perspective line of short-term profit, which depends on the activity of the community.

Base market also provides the opportunity to purchase an Export License, which allows its holder to establish this business model on local markets.

2.3. Primary market (Community investors ecosystem)

The primary market is represented by investment projects, which have been carefully selected by the Curator Committee, backed up by anchor investors, and are open only to Club members. Investing in projects is easy and safe as shopping online; it is supported by legal documents, the subscription allows up to 25% of investment participation in each project. It is a highly profitable investment model, as it is collective investing - the most effective and popular form of financing at the moment. Club members receive the following privileges:

- *Selecting a project with the most individually convenient terms of the contract;*
- *Taking part in the voting for the formation of the Curator Committee;*
- *Selecting and inviting suitable investors to the Club.*



In order to be admitted to the Club, applicants must go through the KYC and AML procedure, confirm their investment capacity that meets the Club's criteria (min. 5000 euro), and receive a personal invitation from the current Club member.

2.4. Secondary market (Liquidity supply ecosystem)

The secondary market is a unique work-in-progress option, designed specifically for the platform. It allows to work with risks, associated with changes in market conditions or execution of contracts. The secondary market is organized as an auction-type model of interaction exclusively between Club members, providing them liquidity and facilitating them in a situation of unforeseen circumstances. The market offer is formed by Club members, who wish to sell their investment subscriptions on the value which is most convenient to them. The market demand comes from those, who wish to invest in projects with higher risk in order to receive extra-profit.

The terms of initial subscription allow members to participate in a project with up to 25% of project shares, however at the secondary market it is possible to obtain up to, or greater than, 51% of project shares. Its bidirectional capital flow will engage positive business dynamic for the Club.

2.4. Licensing model (Export License)

Business scalability for the Club is entering local markets with potential of €10 mil in assets yearly per 1 local market. To facilitate this process the company is ready to sell an Export License - a package of legal and expertise methodologies, to make the business model applicable to different markets.

According to the current strategy, the company will sell licenses on the following terms and conditions:

- *Every financial period (4 quarters) the company will auction a limited number of licenses, based on the platform capitalization;*
- *Total assets portfolio of the license buyer should be at least €10 mln in the end of financial period;*
- *50% of the license costs is reserved by the company for a financial period as proof-of-stake. In case the buyer decides to withdraw, the reserved sum returns to the buyer.*

Initial price of the license is € 278 000⁴. The license enables its holder to:

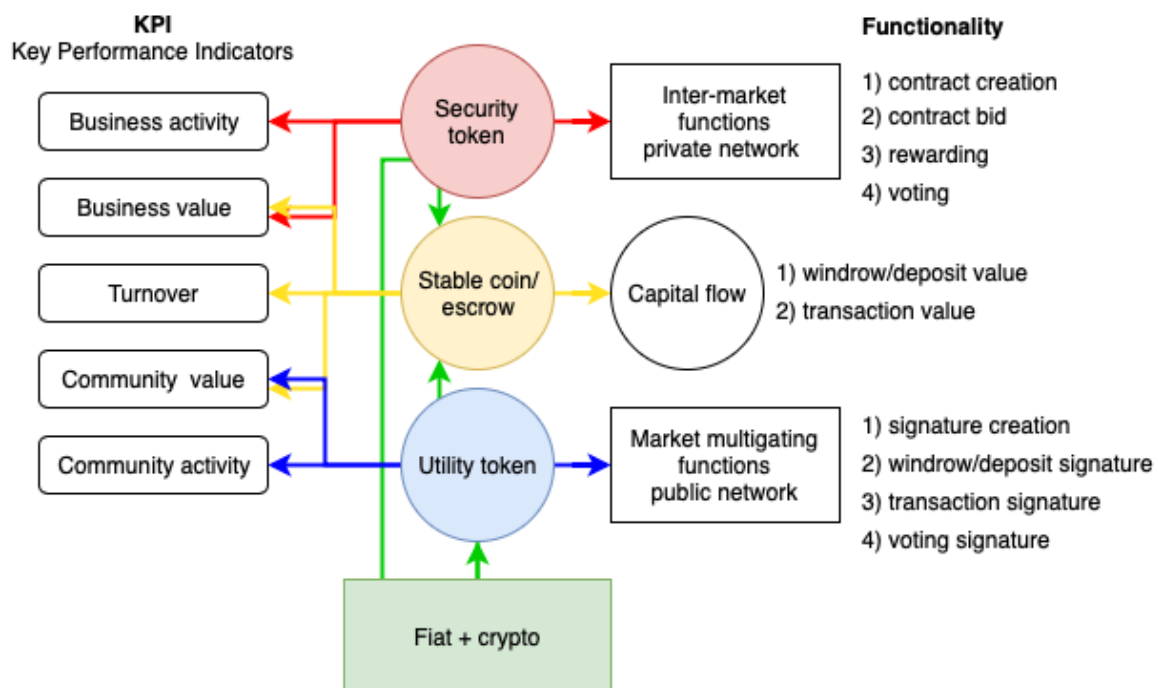
- *Perform business activity on different local markets;*
- *Update platform portfolio with local real estate property offers;*
- *Get financing from the Anchor and Community investors;*
- *Participate in strategic sessions and apply to join Curator Committee.*

⁴ except for the crowdfunding period described in section 5. Fundraising, p.12
Lisbon, 2018 White Paper, p. 7

3. Token model economy

Tokenomics of the platform is represented by an innovative multi-layer complex design. The main advantage of such system is that each element of the business model has its own type of token with its unique structure and regulation. The advantages are:

- *A more structured KPI (Key Performance Indicator) system. As there are several markets on the platform, their structure differs into organization (security token), turnover (stable coin) and revenue streams (utility token);*
- *Live indicators correspond to different parts of the business model, therefore, at the intersection of these markets (token eco-systems) fetching of corresponding data comes more potential for business valuation. The composite system conveys the dynamics of business with highly perspective accuracy;*
- *Independence of tokens from each other allows to conduct analysis of separately taken systems and to correct errors without critical influence on the structure of the entire business model.*



Custom tokenomics allows to highlight the major rules for regulating business model dictated by monetary policy. This structure of regulation enables the business model to move from one local monetary policy to another so that global markets could become accessible with less friction, and that shows to be the most effective scalability scheme.

Combination of classic effective business model and innovative digital technologies empower local business to enter the international level of profit opportunities.

3.1. Security token model

Empire Royal Coin (ERC) is a regulator of the business framework, it represents operation within the markets - the relationship between the Curator Committee, anchor investors and other members of the Club, and permits to influence the management of the business model.

From the legal point of view, this is precisely a security token, because the token holding corresponds to the investor's share of collective ownership of the property under the terms of the contract and allows to:

- *Receive royalties from the business model's activities;*
- *Purchase the Export License;*
- *Participate in strategic voting;*
- *Perform on-market buy-and-sale operations.*

The token is activated by escrow, which is formed by stable coins. It represents financial reserve, which can be used for the business model activity and deposit-withdrawal backup. It also represents voting system - a system of activation and deactivation of all platform smart contracts. The token price is formed by stable coins turnover and its value is added by **EPC** utility tokens.

| ERC security token | Native network wallet | Client node wallet | Master node wallet |
|--------------------|-----------------------|-------------------------------|-----------------------------|
| Recieve | Buy | Project creation | ROI / escrow deposit |
| Hold | Valuation indicator | Voting / ROI indicator | Voting / turnover indicator |
| Send | Sell | Project execution | Financing / escrow withdraw |
| Use-cases: | | Auction smart-contract | Anchor vault |
| | | Curator wallet | Company vault |

The advantage of such model is that this token can be used as a store of value, it is protected legally and cryptographically and, according to the terms of the platform, requires the holder to pass the procedures for due diligence, KYC and AML. The token denotes the effective value of the business model, and is the most reliable means of storing assets.

Strategically it can be used by institutional investors.

3.2. Utility token model

Empire Puzzle Coin (EPC) is a utility token that represents an access key to the functionality of the platform and serves as means of market interaction, allowing to switch from one market to another. It is used only as a digital signature, which allows access to certain functions on the platform and corresponds to the information about users and their financial participation in the project.

From the legal point of view this is a service function of the platform, the token has no restrictions on distribution and acquisition, and is governed by the policy of the platform.

Token represents units of account and provides the following benefits:

- *A possibility to fetch information about the activity of platform participants;*
- *Protection of members of the Club from accidental third-party risks.*

The architecture of this token is composed of 4 standards: 4 types of Ethereum smart-contracts, where different standards represent different network nodes. Emission smart-contract represents ERC20-BC (bonding curve token⁵), that can issue tokens with dynamic price, stated in the contract (exchange rate). The function of buying from this contract is carried out by the second smart-contract standard ERC20, which represents community wallet. Sale and regulation is executed through the third smart-contract standard ERC827, that represents wallets of the company and anchor investors. The fourth standard ERC721 is a smart-contract that represents a unique product - an investment project, which is linked with the company, the community and investors through **ERC** security tokens. These 4 standards are interconnected by security tokens and stable coins. The **EPC** functioning is separated into the following classes:

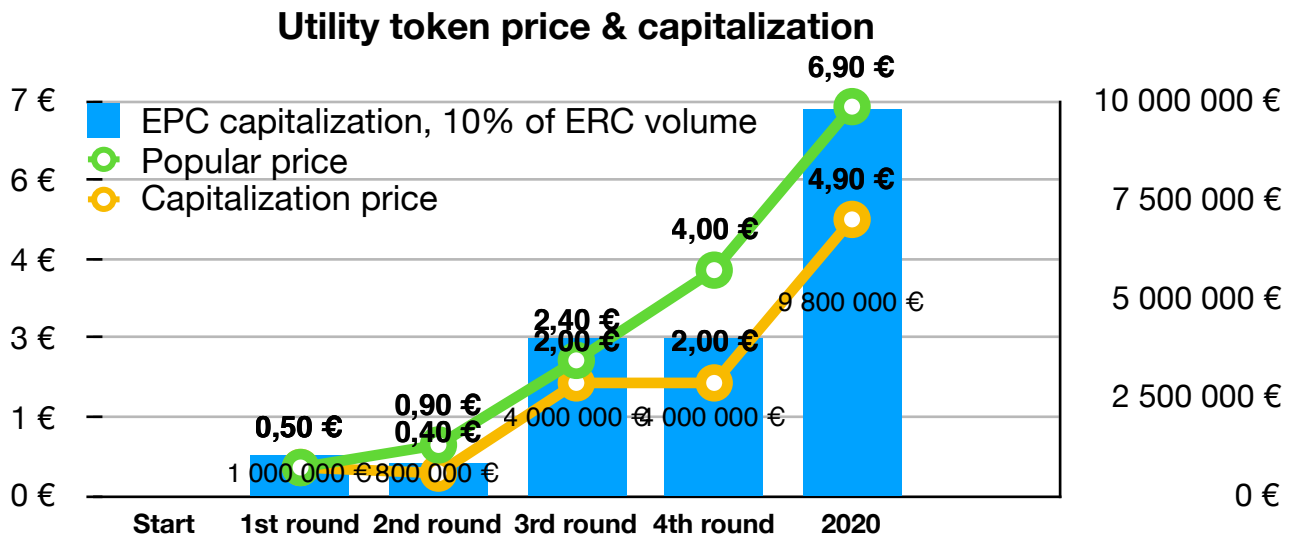
- *Financial - stabilizing and securing financial streams against token volatility;*
- *Organizational - regulating pricing policy and voting process;*
- *Utility - organizing the gateway processes of token functions.*

| EPC utility token ERC20BC | Native network wallet ERC20 | Client node wallet ERC721 | Master node wallet ERC827 |
|------------------------------|--------------------------------|------------------------------|---------------------------------------|
| Recieve | Buy | Buy / reward | Rewarding |
| Hold | Activity indicator | Active value indicator | Deflation price indicator |
| Send | Sell | Signature / fee | Royalties / Inflation price indicator |
| Use-cases: | | Community wallet | Company wallet |
| | | Project smart-contract | Anchor wallet |

⁵ <https://medium.com/coinmonks/token-bonding-curves-explained-7a9332198e0e>
Lisbon, 2018 White Paper, p. 10

The **EPC** pricing policy, based on ERC20-BC token principles, depends on the demand-offer correlation, where demand is formed by security tokens, stable coins and project smart-contracts, and offer is formed by the company through cashout.

This chart shows price correlation for **EPC** token, regarding the crowdfunding process (Capitalization price) and popularity (Popular price) among the trading community:



This token corresponds to two-factor verification of actions, and, due to self-regulation, the token is maximally scalable and can be used for marketing purposes.

3.3. Stable coin model

This token represents liquidity within the framework of the regulatory policy of the on-market interaction. It facilitates frictions related to international payments and is a carrier of capital between the markets.

From the legal point of view In this model, this is the mechanism of the fiat currency necessary for the functioning of a business, which can be connected to all other models using smart contracts.

This token is applied as:

- *Escrow in the process of fundraising;*
- *Payment instrument;*
- *Investment tool.*

Interaction with stable coin is represented by two types of smart-contract, one of which is the gateway for escrow, and the other is the escrow of the platform. The club participants regulate separate financial streams of total turnover through utility and security tokens, as well as through smart-contracts and network consensus.

| Stable coin | Client node wallet | Master node wallet |
|-------------|---------------------|--------------------|
| Recieve | Open escrow | Deposit escrow |
| Hold | Direction signature | Balance signature |
| Send | Close escrow | Withdraw escrow |
| Use-cases | Gateway | Escrow |

The advantage of this model is that being a medium of exchange, the token stabilizes the on-market transfer, reducing the risks of volatility and makes the ecosystem stable. As part of the escrow, the token guarantees the functioning of the business model, as well as the return on investment.

5. Fundraising

The period of fundraising is divided into two stages: Utility Token crowdsale and Security Token Offering (STO), and is aimed at Club marketing expansion, attracting more investors and scaling the business model.

The process is divided into 4 rounds, where each offer of tokens corresponds to 2 rounds - a closed pre-sale and a public offer of tokens. The purpose of the first sale of **EPC**, pre-paid platform access utility tokens, is to get funds for the technological and crypto-economical upgrade of the EmpirePuzzle platform and to work out issues of security, workflow automation and scalability. This round shows current interest of investors in this business model. The second round is aimed at a specific target group and determines the financial forecast for two years.

If the crowdsale fundraising does not achieve 50% of the soft cap target, the crowdfunding process will be changed to the traditional mode and all funds will be returned to investors.

*10% of the funds attracted through **EPC** token sales as well as 5% of business annual turnover will be used to invest in charity projects all over the world.*

The purpose of the first sale of **ERC** security tokens, that can be used to participate investment process or to apply for a Export License, is strengthening of the business model. The second sales round provides scalability of the business model and launches the special event - «Equity Auction», when the company will offer a part of Shareholders' equity to the most loyal Club members. For each round, a target is determined that corresponds to the current required financing and is calculated based on the potential profit of the project within two years.

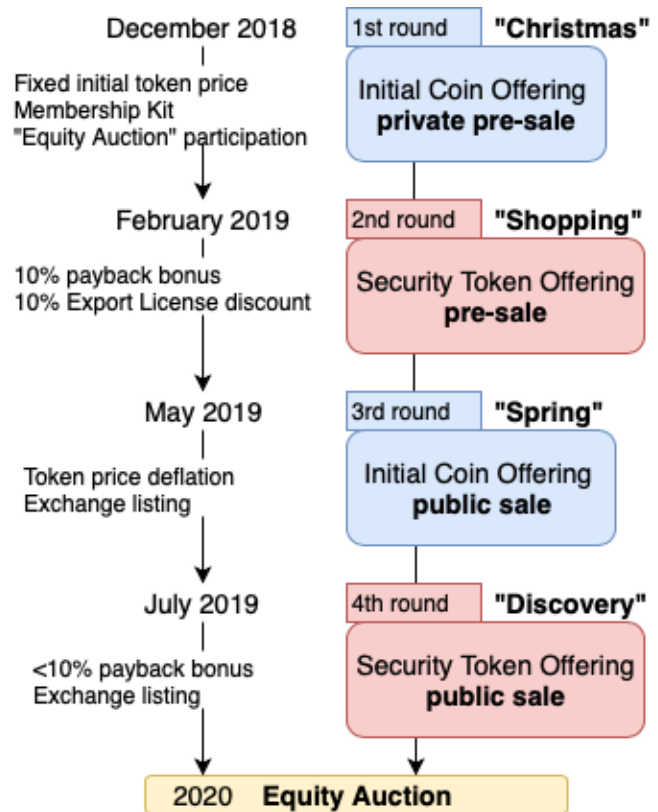
| Rounds | Soft cap | Hard cap | Minimum per participant | Maximum per participant |
|---------------------------------|--------------|---------------|-------------------------|-------------------------|
| EPC pre-sale «Christmas» | € 1 000 000 | € 2 000 000 | € 5 000 | € 250 000 |
| ERC pre-sale «Shopping» | € 8 000 000 | € 20 000 000 | € 50 000 | € 2 000 000 |
| EPC sale «Spring» | € 4 000 000 | € 10 000 000 | € 500 | € 1 000 000 |
| ERC sale «Discovery» | € 40 000 000 | € 100 000 000 | € 5 000 | € 10 000 000 |

5.1. Roadmap

Fundraising strategy is to attract accredited and private investors to the future security tokens **ERC** private sale by holding the private sale of utility tokens **EPC**, because, in our custom economic model, utility tokens are pre-paid access keys to the platform services and **ERC**, being the Business Model financial supply, are only accessible through **EPC**.

Early-stage investors receive exclusive benefit of **EPC** payback within 10% discount (depending on the round) when participating in the private **ERC** pre-sale as well as a 10% discount for Export License⁶ purchase. Public **EPC** sale will be performed through bonding curve contract, which means the more tokens are sold, the higher is their price. As all activity of the platform is performed through utility tokens, their value will increase in accordance to the platform and the community turnover.

*This fundraising model is designed specifically, so that **EPC** will gain extra growth in price, as soon as the company upgrades the platform with **EPC** and launches **ERC** royalties distribution & Export License auction sales.*



⁶ 2.5. Licensing model, p.7
Lisbon, 2018

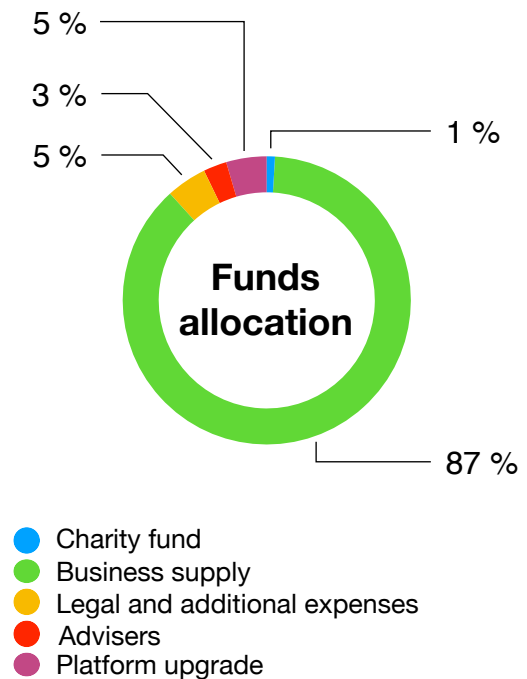
5.2. Assets allocation and distribution

The following charts show allocation of all platform assets, according to their type:

1) **Funds** allocation

All funds obtained through utility and security token sale are distributed as follows:

- 87% *business supply **escrow** - funds, represented by stable coins and fiat, are under investors management and are available for participation in the business model;*
- 4,5% - **costs**, related to the legalization of the international part of business processes (taxes, commission fees);
- 4,5% - **platform upgrade**, staff, hardware, software and marketing expenses;
- 3% remuneration to freelancers and **partners**;
- 1% deductions to non-commercial **charity organizations**.

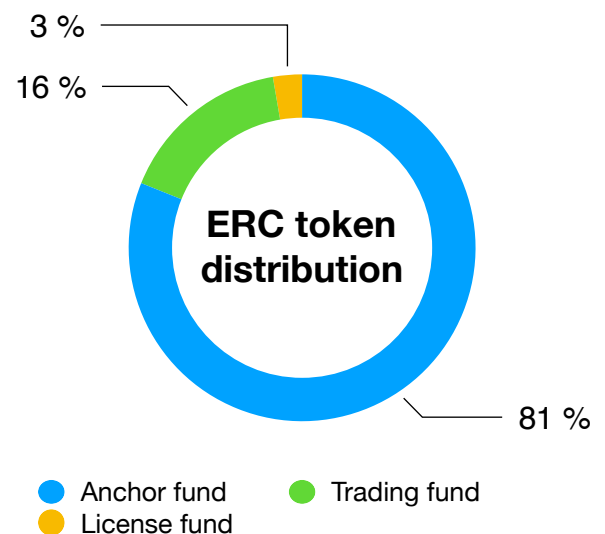


2) **Tokens** distribution

All tokens are distributed so as to satisfy the demand for all platform upgrade products without altering the pricing policy.

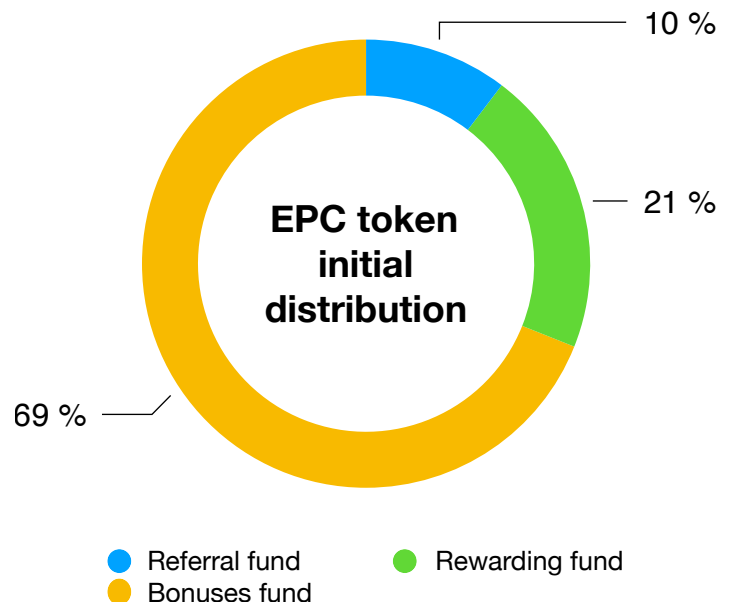
Security tokens are distributed into three main asset classes:

- 81% **anchor fund** - Tokens available to anchor investors for participation in the business model;
- 16% **trading fund** - Tokens, issued during the “Shopping” round, are used at the discretion of investors, which, by default, is trading;
- 3% **license fund** - tokens reserved by the company to meet the demand for the Export license.



Utility tokens are the ERC20-BC smart-contract standard, so they have a potentially endless supply defined by the smart-contract itself. To stabilize the price of a token during fundraising, a token pre-mining is allocated to the utility fund, which is distributed as follows:

- 69% **bonus** fund - Payment of bonuses according to the fundraising terms and conditions;
- 21% **reward** pool - Advising and the community;
- 10% **referral** fund - SMM promotion policy.



This asset allocation is customly designed in tokenomics to maintain positive token volatility during fundraising, and to stabilize the price of the token after. For early adopters of the platform upgrade it is a fine perspective to receive multiplex benefits from the crowdfunding and token sale.

6. Team

The team has proved its expertise and effectiveness in the areas of real estate business development and finance, IT business development, and crypto-economy R&D. It possesses all necessary resources, experience and competence to scale the business model and to upgrade the platform.



Ricardo Lopes

CEO/Founder @ Empirepuzzle



Filipe Caetano

CFO/Founder @ Empirepuzzle



Paulo Alves

CTO/Founder @ Empirepuzzle



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Mikhail Ananyin

Tokenomics Architect



Rui Mercadal Vieira

International Licensing Strategy / Member of
Curators committee - Germany & Spain

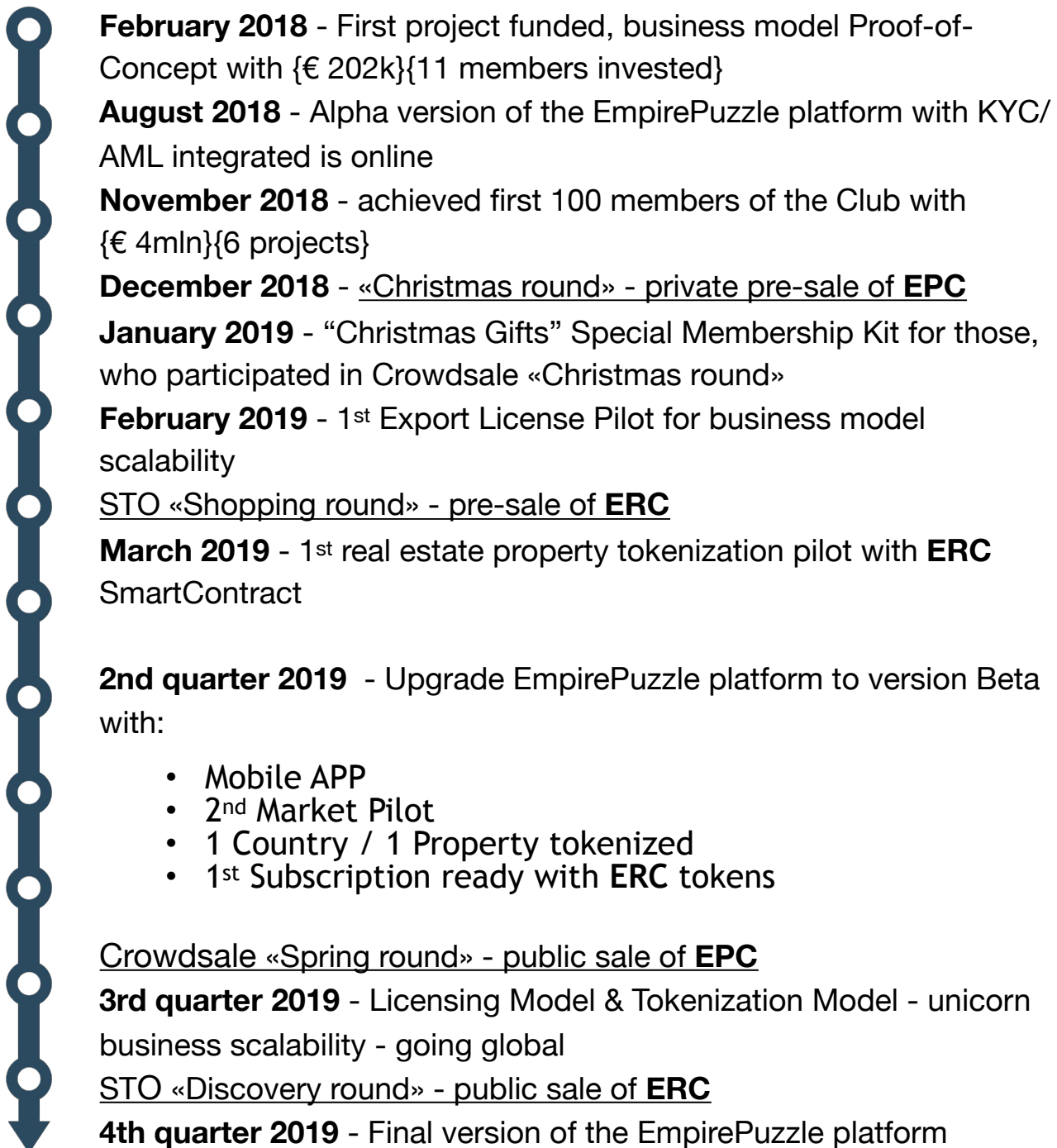


Vitor Simões

Software Development & EAI Architect.



7. Roadmap & Milestones



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