WHITE PAPER 01/2019

# Fieldcoin

**Buy Land, Empower People**

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**Join the next 4.0 agricultural revolution:**
Exchange land properties, crowdfund agribusinesses,
get rewarded and improve communities life

**Be part of a market of more than 10 trillion USD**
Own agricultural land while earning cryptocurrencies

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Fieldcoin Ltd's mission is to bring the blockchain technology to land property transactions and agricultural crowdfunding projects while creating a stable transaction instrument easing the process of land and agribusiness acquisition. Hereafter, Fieldcoin Ltd will create the 1st decentralized land property management global marketplace that enables the coordination of countries blockchain-based registry systems in order to facilitate transactions between individuals.

fieldcoin.io

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# INDEX

## A WORD FROM THE FOUNDER

### "Agricultural land will always be the ultimate source of value"

The current enthusiasm about cryptocurrencies, often compared to the Internet boom of the 2000's, is leading many users to allocate their money to cryptocurrency projects which are not always ready to confront the real economy, monetary and business issues. However, some emerging cryptocurrencies are not only designed to be means of speculation but also solutions to real business situations: they provide easiness to trade, strong community support, access to innovative services. They also allow voting, make an income, trace products, register properties and are used for internal settlements in the ecosystems of companies.

It all started with the Bitcoin 10 years ago. The coin that was traded few cents per coin back in 2010 is now valued over 10 000 USD. Its success is due to 5 different factors: it was the 1st cryptocurrency, there are a number of spots where Bitcoin can be used for daily routine transactions, it is easy to transfer, relatively secure nowadays, and above all, its number of coins is limited. Ethereum has recently solved the same issues with lower day-to-day practical applications, while introducing smart-contract protocols that are adopted by many projects on its blockchain. Since smart-contract protocol was launched by Ethereum, the cryptocurrency projects have flourished.

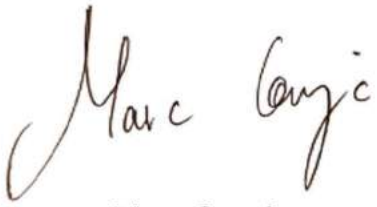
The only problem Bitcoin and Ethereum have compared to other assets such as gold, luxury cars or art objects, just to name a few, is that it has no intrinsic value. Neither do many of the coin projects found on listings such as CoinMarketCap or WorldCoinIndex. To resolve this problem, some coins promise to tokenize all assets with the intention of transforming them into "a kind of money". These are interesting ventures considering their understanding of the current issue: in no way tokenizing every category of asset can make transactions on a cryptocurrency less volatile. The reason is simple: real physical assets fluctuate nearly as much as cryptocurrencies over time. A car becomes old, a fashionable gold watch becomes outdated, master's paintings prices are volatile, even a real estate investment not built on solid foundations may become a true burden and a money sink.

One might also argue that everything with some value could be considered as money, and thus used as such. In theory, yes. Everything can be used as money. But money is only an instrument of valuation, a means for exchanging goods more easily than when merely swapping products, particularly when it is in large quantities. So, in practice, only few things can be used as money instruments. Bitcoin and Ethereum among them, because they respond to many of those problems, yet still lack intrinsic value.

All goods that are perishable or can be duplicated infinitely cannot keep the attribute of "money" over a very long period of time. Gold had it all, but it lacks many characteristics needed in the current stage of global economic development: First, it is difficult to store. Second, keeping gold at one's home is not safe, and it has been under strict regulations forbidding its trade. Third, gold has been volatile, and its long-term value is still not a certainty. Fourth, it has no other applications besides jewelry, and just a few industrial and medical uses. And above all, fifth, it is not easy to exchange.

To bridge these gaps, Fieldcoin Ltd, has developed a new crypto-currency protocol based on agricultural land property. In practice, only one asset can bear all the attributes of money: land properties. It can be widely adopted due to its amount, in constant demand, limited (arable land is losing ground to urbanization and desertification), but not easy to trade so far. Thanks to the blockchain technology, it is now possible to create a new instrument of transaction based on land property trades.

Currently Sweden, Russia, Dubai and India among others are adopting the blockchain technology for securing the ownership of land properties. With the increasing number of countries implementing land property registration systems on the blockchain, Fieldcoin Ltd Aims at creating the 1st platform of exchange for land property assets using the blockchain and cryptocurrencies.



Marc Couzic

## ABSTRACT

**"Buy Land, They're Not Making It Any More"**

*Mark Twain*

### One hectare of land will become a field of gold by 2025

Today, land ownership is the best way to preserve both your wealth and to make a sustainable profit in the near future. One hectare of agricultural land can yield on average 5 tons of rice, 6 tons of wheat, 7 tons of cereals, 8 tons of mangoes and 10 tons of grapes. On average, 200 kilos of cereals are needed to feed one person for one year.

### Food needs are expected to skyrocket

→ Over 7.7 billion people will need to be fed and accommodated by 2020. The number will reach 10 billion by 2050 and most of them are young people.

→ There are 1.4 hectares of arable land per person in the world. Thus basically, more than enough to feed the entire world population. However, large areas are not cultivated yet and other areas lack the necessary investments to modernize the means of production that would allow to increase the yields.

### The huge market potential of agricultural land

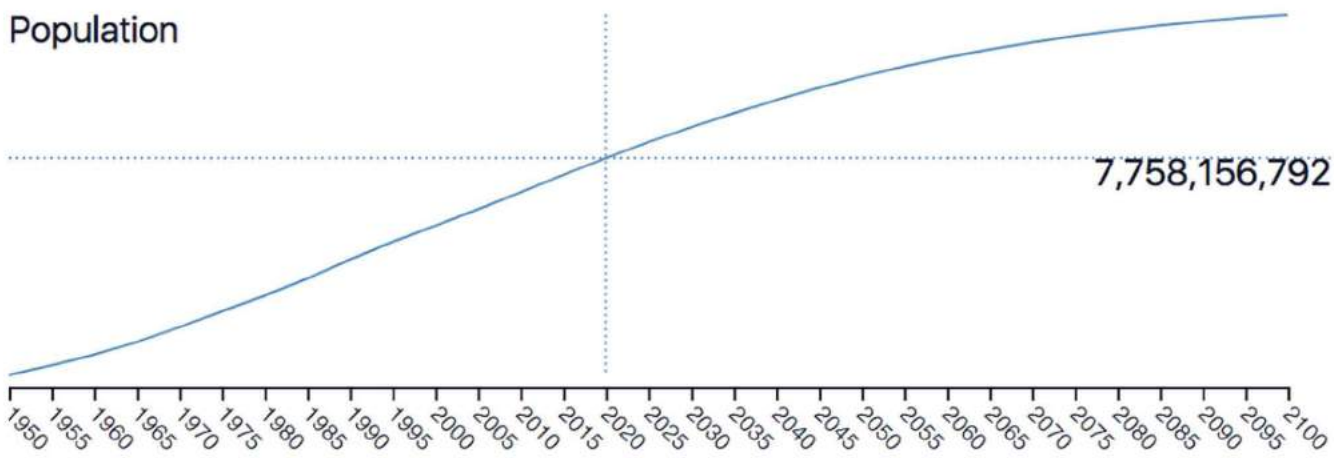
As we write these lines, the agricultural land market weight is tremendous and its potential growth even greater:

→ The amount of agricultural land around the globe is estimated to be at 5 billion hectares.

→ The price of one hectare of land ranges from 100 USD in underdeveloped countries to more than 1 000 000 USD for French vineyards.

→ Most agricultural lands, nonetheless, are worth between 1000 USD and 10 000 USD.

→ The average price of agricultural land on the globe is close to 2500 USD. And global market capitalization of farmland in the world is around 10 Trillion USD.




### The increase of meat consumption

Fast-growing consumption trends are accelerating the need for improved exploitation of agricultural land. If everybody was to follow the average consumption habits of an average American, at least 5 times more arable land would be needed, and even more if people of emerging countries were to eat increased amount of beef, as 10 kg of grain are needed to make 1 kg of beef meat. This trend is not sustainable, even in the short term.

## 1. PROBLEM STATEMENT

The current state of resources does not meet the needs of the world's growing population, and as a result, we are now living on stocks every year. At this rate, we might not have enough food to feed the world population by 2030.

### 1.1 Farmland lightly impacted by speculation

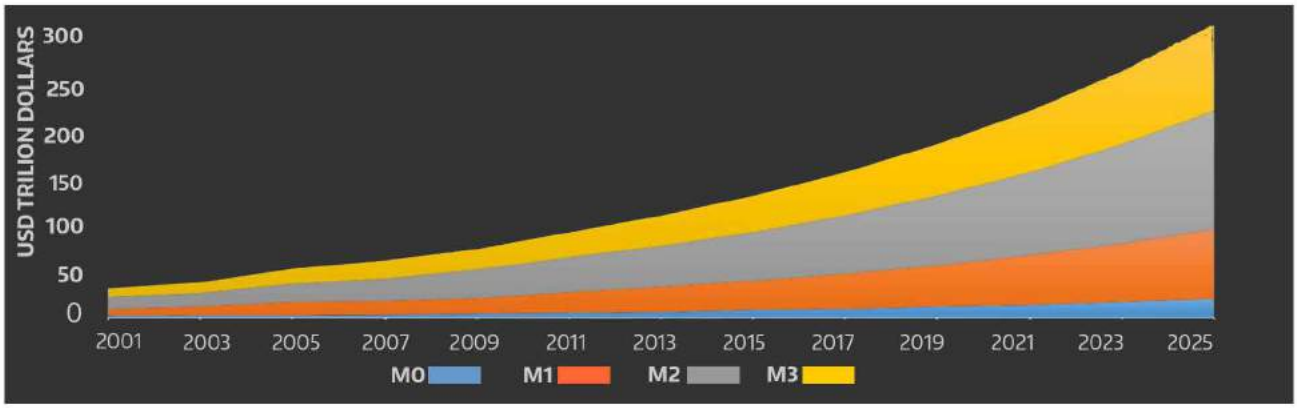
So far, farmland has not been greatly impacted by speculation, for instance compared to housing and real estate properties which have been financialized for a few decades already and cover a much larger segment of customers.

But, speculation on farmlands is growing at an unprecedented pace, and it is not rare to see farmland sold 50% above market prices in some specific agricultural sectors.

Those costs are largely due to transaction difficulties, especially from overseas. This new trend, called "land grabbing", is just beginning and will grow for the 20 years to come, also with individuals willing to secure a piece of land of their own.

### 1.2 Monetary Inflation

Central banks around the globe have not facilitated the task of valuing the price of farmland. Inflating financial monetary policies combined with local price policies and international trade barriers have complicated the task of determining the value of farmland and discouraged people from investing in farmland so far.




*Money Supply Forecast M1, M2, M3 graph Exponential Growth Forecast 2025 in Trillions of USD*

Money printing QE has led to the increase of the monetary base of currencies and price inflation of financial assets. Since the Great Recession of 2008, about 85% of the quantitative easing has been drained to financial assets and not to the real economy. This monetary printing coupled with low interest rates was used by investors to speculate on the bonds and the stock markets, but very few positive effects were felt in the real economy of the OECD countries which already suffer from structural problems such as demographics, high public deficits and low purchasing power.

### 1.3 The safe haven status of agricultural land

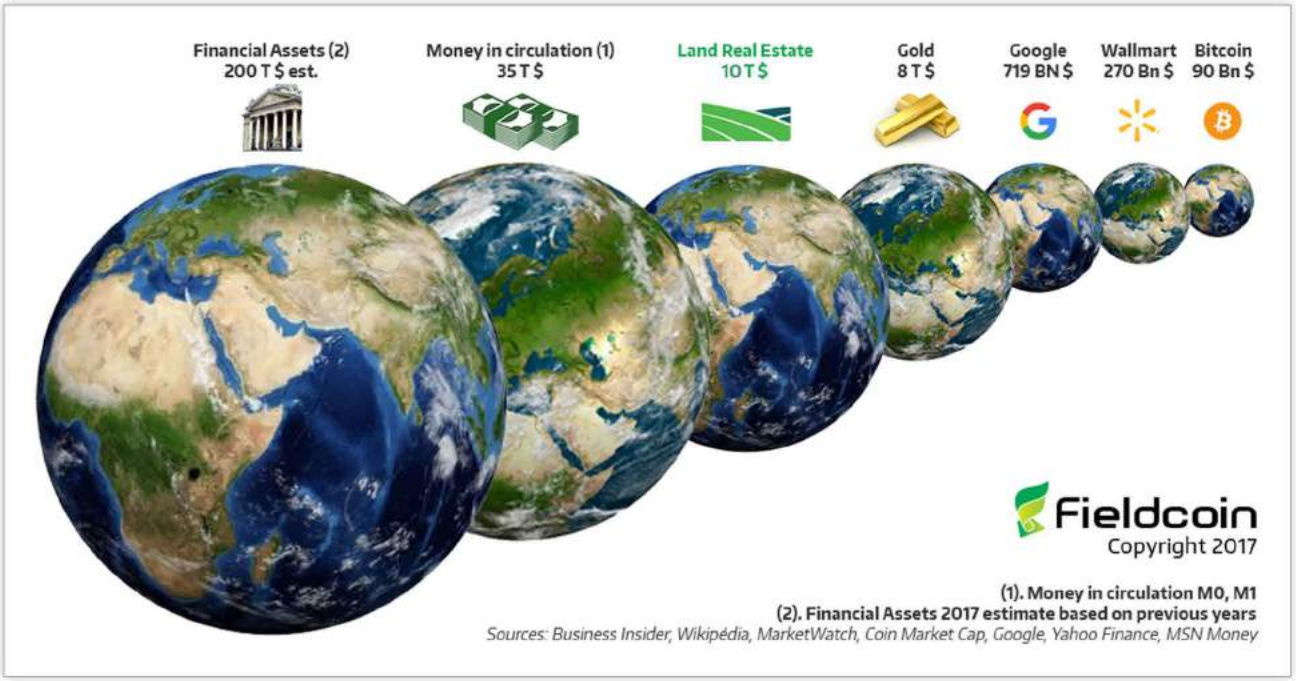
When this stocks and derivatives bull rally which began in 2009 will eventually stop, we shall witness a massive flow of cash pouring into the real economy, resulting in a tremendous rise in the price of land properties:

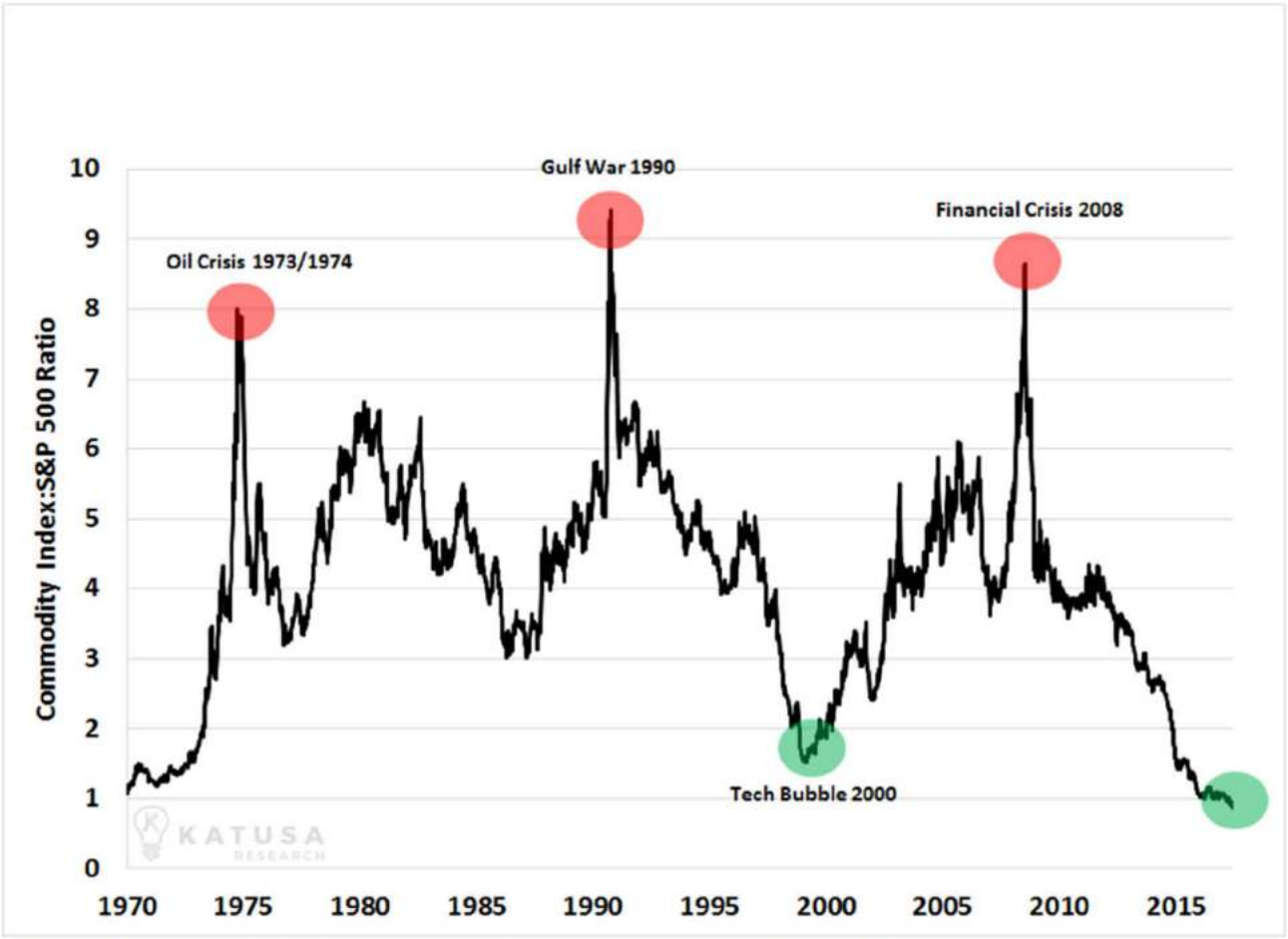
→ Although the price of commodities and cash rents somehow used to correlate with farmland prices, it is no longer the case.

→ On the other hand, land prices are driven by the opportunity costs and its refuge value.

→ Agricultural land is therefore likely to be the next bubble after currently experiencing all-time highs of financial assets in an unstable economy.

→ Commodities prices are at their lowest price ratio to financial assets for the last 40 years. The next commodity market bull will trigger a huge attraction towards agricultural lands.






Source: KATUSA Research. https://katusaresearch.com/chart-45-years-making-commodities-vs-sp500/

### 1.4 Blockchain technology in agriculture

The application of blockchain technologies to the agro-business sector is likely to solve most of the problems faced by the agricultural sector, while creating an effective transaction instrument.
Today, it is already possible to apply the blockchain technology in many ways onto the field of agriculture. In the domain of food traceability, a customer can check all the intermediary processes from farm to fork. This will ultimately reduce the amount of waste during storage and transportation.

Another application of blockchain technology to agriculture is the public registry of the land in many countries where this cadastral information does not exist yet. Once this is the case, the process of land property exchanges, costs and uses will become much faster.

Fieldcoin Ent. pulls the string for all those technologies, enabling them to work together in the near future in such a way as to revolutionize the agro-business industry as it is known today.

## 2. EXECUTIVE SUMMARY

### 2.1 Creating a cryptocurrency for exchanging land real estate properties

The current stage of the technological development of blockchain enables the creation and use of a currency for trading agricultural land property assets, making it possible to limit the losses in case of a long period of bearish volatility on crypto-markets. Fieldcoin innovative Trade Back Token combined with Proof-of-Asset protocol is planned is such ways as to render trading in land property assets easier while limiting the effects of market pull-backs.

Furthermore, the growth of digital assets adoption, combined with fast technological advancements on the blockchain as well as the agriculture sector, together with the international willingness to communicate across nations through social medias, has made it possible as we write, for land property assets to be easily and quickly exchangeable while reducing transaction costs and increasing transactions security.

Using the blockchain, Fieldcoin's Ecosystem will transform land property and agriculture sectors to tackle the issues of liquidity, transaction speed, accessibility, ownership security and visibility. Already Sweden, Russia, India and Dubai are developing blockchain-based land registry system that will soon enable direct transactions on the blockchain and release Fieldcoin's Ecosystem full potential.

### 2.2 Solving global monetary issues

Fieldcoin is the first token bound to the most stable and steadily growing asset: land. Indeed, most of the existing projects that aim to tokenize assets lack vision and method concerning the assets they are tokenizing. For there is no point to simply tokenize all assets. Thanks to our protocol, things are pushed further than ever before in the process of liquifying land property and real estate assets.

Besides the opportunity of seeing the token price grow at a fast pace, Fieldcoin token holders will have the possibility to considerably limit their token value losses in case of swings in the cryptocurrency market.

In practice, token holders will be able to acquire land property with their tokens on Fieldcoin platform. The day of the transaction exchange rate of Fieldcoin tokens will apply. In the case of a market downtrend, a threshold amount will be determined by a fixed ratio applied to Fieldcoin's Ecosystem assets and recalculated every semester by an external audit agency to reflect the value of assets in Fieldcoin's Ecosystem to the amount of Fieldcoin tokens in circulation.

### 2.3 Fieldcoin Ltd e-commerce applications

Fieldcoin is composed of 3 poles of activity. First, land acquisition operated through our Ecosystem that are valorized and exchanged on our platform. Second, peer-to-peer exchanges between users of our platform. And third, a crowdfunding e-market place for users to get crowdfunded and to crowdfund agricultural projects. As a result, Fieldcoin will be used on a daily basis on our platform.

This is how we aim at empowering and encouraging people to use and hold cryptocurrencies, own land, increase the value of their assets, develop infrastructures and crowdfunding of agri-businesses in a way that will benefit producers, users, agricultural communities, as well as the future of our societies.

### 2.4 Fieldcoin Enterprise assets value will increase in time

After 2 years of development, we will implement an 80% minimum trade back ratio of physical asset in our organization, in both land property and agribusiness infrastructure, to tokens in circulation.

Minimizing costs and Ecosystem value growth while developing agricultural regions is our leit-motiv. During the first years of development, we will target European countries and our method of implementation will then enable us to work with land real estate companies all over the globe without having to build permanent structures in many countries.

All revenues from our exchanges will be reallocated to Fieldcoin's Ecosystem in order to make new land acquisitions and increase its trade-back threshold. However, Fieldcoin users who crowdfunded particular projects of their choice will be rewarded individually.

## 3. FIELDCOIN TOKEN PROTOCOL

### 3.1 Two tokens: ERC20 and ERC721

One token is a fungible token commonly known as ERC20. The other token is a non fungible asset designated as an ERC721 token. During the FCO, token holders are enabled to purchase land asset backed ERC721 tokens on the Fieldcoin platform entitling the token holder with sole ownership rights. In practice, the 2 tokens have very different functions.

The ERC20 utility token is used to raise funds during the FCO to finance the company, IT solutions, business operations, purchase the first land properties into the Eco-system crowdfund agrobusinesses but also for token holders to acquire ERC721 land backed tokens. The ERC20 is used to buy ERC721 land backed tokens. One ERC721 token representsone land property and guarantees full property rights to the holder.

### 3.2 Fieldcoin Token vs Fieldcoin Ltd

Fieldcoin Token is an Ethereum ERC20 Smart Contract token aiming at facilitating transactions of agricultural land and agro-business projects. It is not the property of a particular person or a company. It is a public coin that can be traded on exchanges and used by anyone. It is set up to enable token holders to trade land property assets and prevent high bearish volatility.

A company will be created to apply Fieldcoin's ecosystem and to use Fieldcoin tokens. The company will build an internet platform, market Fieldcoin services, tie partnerships with local land management and real estate agencies, buy, valorize land and agribusiness projects with the assets obtained during the FCO.

### 3.3 What is the main benefit of the Trade Back Token (TBT)?

If the price of the Fieldcoin token market cap falls, everyday during a 2 months period, under the threshold ratio of 80% to the Ecosystem's assets total value, you will get credited for future purchases. This credit amounts to the difference between the set threshold and the market value of the token. To ensure accuracy of the process, every semester, we will have an external company audit our assets and the results will be released to the Fieldcoin community, through social medias.

### 3.4 How does it work in practice?

Token holders will buy land on Fieldcoin's platform and pay the full market price displayed on the website with their Fieldcoin Tokens. They will be credited with a coupon to buy land for later purchases. The value of the voucher corresponds to the difference between the price drop of the token under the 80% threshold and the actual value of assets in Fieldcoin's Ecosystem. The coupon can be used on available properties sold by Fieldcoin Ltd on the platform. This will be credited in Fieldcoin tokens that can be used for future uses in Fieldcoin's platform or sold on exchanges.

### 3.5 How is this ratio calculated?

Let's take the following example for a land worth 100 000 USD in times of downward trend:

*The Total Fieldcoin Ecosystem property assets equals 30 000 0000 USD*
*Current Fieldcoin Token market price equals 0.023 USD*
*Number of Fieldcoin Tokens equals 750 000 000 Tokens*
*Total Fieldcoin Token market cap equals 17 250 000 USD*

*We calculate the Token worth ratio to Fieldcoin Assets*
*which equals to 17 250 000 / 30 000 000 = 57.5%*

*Therefore the Coupon price value equals to the difference between the 80% threshold and this 57.5% Ratio. In this case the Coupon value equals to 22.5% of price of the land bought.*

The land price is 100 000 USD. As a consequence, a land bought with tokens at current rate will provide the buyer a 22.5% coupon discount that is worth 22 500 USD.

This Trade Back Token system applies only to lands and real estate that are the property of Fieldcoin's Ecosystem. It is not applicable to peer-to-peer traded land on our platform between other entities.

### 3.6 Fieldcoin Ltd's land exchange and crowd-funding platform.

The company, Fieldcoin Ltd, is building a platform to trade Fieldcoin Token against physical land and to crowdfund agribusiness projects. This platform will bridge real estate land, agribusiness owners or farmers looking to be crowdfunded by an purchaser looking for a land or agribusiness to buy, or a crowdfunded project to bid on. All projects will be reviewed with high scrutiny by our experts.

Our crowdfunding department differs from some other crowdfunding projects found on the blockchain as our organization will guarantee initial assets + interest back to the lender.
Our legal team will work on all securities related and take the necessary sureties to ensure full repayment and interests. Fieldcoin Ltd will in this case act like a third party to guarantee that the contract between both parties has been respected. Those will often be taken on agribusinesses owners physical land or machinery, as they constitute the safest assets to mortgage. The particularity of our protocol is that we fix a trade back threshold of 80% ratio of Fieldcoin tokens to tangible assets.

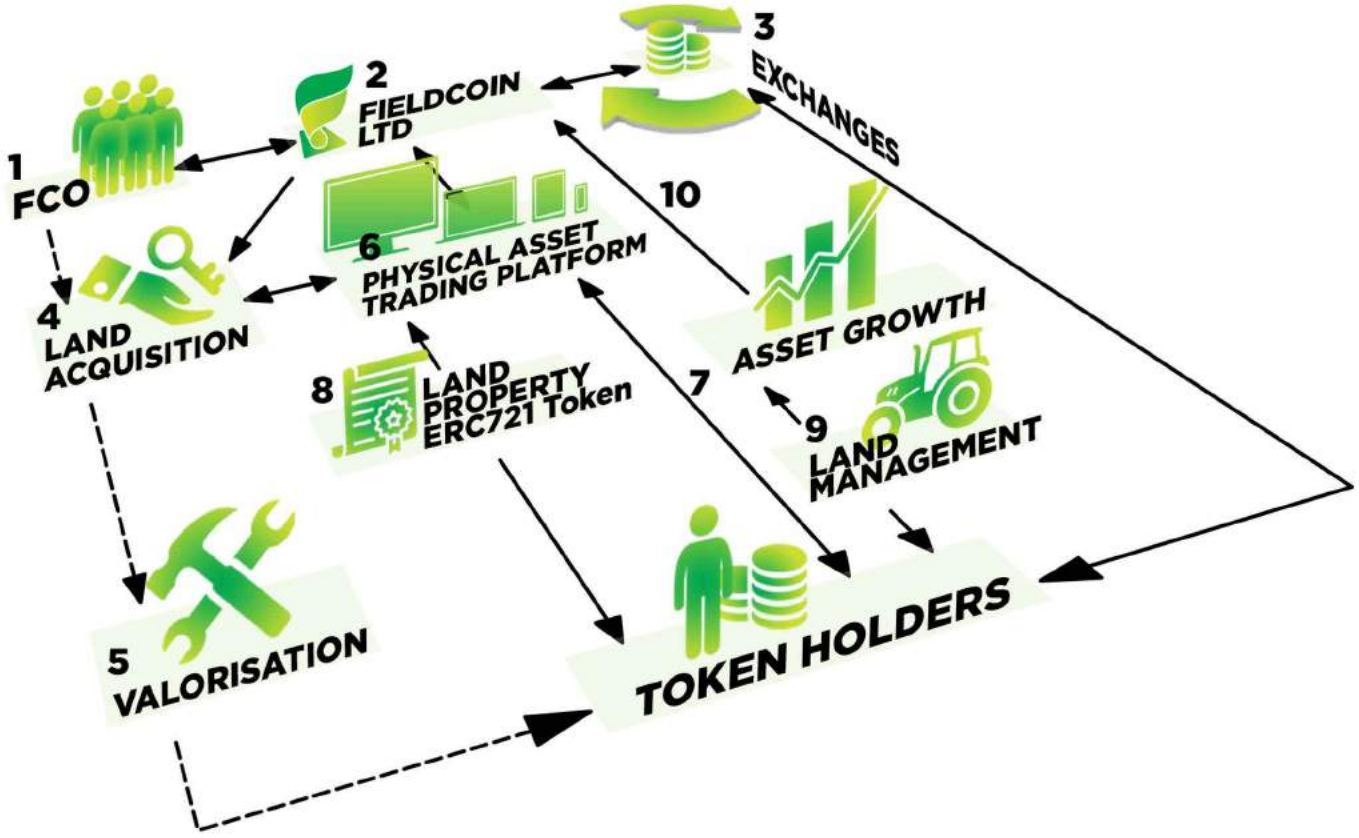
Consequently, Fieldcoin token holders are sure to get a fixed amount of physical assets against their Fieldcoin Tokens if the price of the tokens to tangible assets goes under this ratio. The Fieldcoin ERC721 land backed tokens sold on the platform represent a corresponding value portion of a company equity. This enables a faster transfer of property. The model is issuing current legal frameworks and can be applied over 70% of the countries of the planet.

## 4. PROOF-OF-CONCEPT

We shall prove the viability of our project during the 1st year in Western European Farmlands. Fieldcoin Ltd will also start acquiring small parcels of land in other stable regions like Eastern European, South Asia and India where we will establish permanent offices on mid-term. Starting 2nd year after FCO, we are expected to grow at faster pace in those regions and start implementing our protocol on the American markets.

### 4.1. 10 steps Protocol

**1.** Fieldcoin Ltd launches Pre-sale and FCO (Field Coin Offering).
**2.** Fieldcoin Ltd exchanges ETH collected against FIAT currencies.
**3.** Fieldcoin Tokens Holders may trade their Tokens on exchanges.
**4.** With proceeds collected, Fieldcoin Ltd acquires land properties.
**5.** Fieldcoin Ltd valorises its land acquisitions.
**6.** Fieldcoin Ltd land properties are traded on the platform.
**7.** Users send Fieldcoin Tokens to trade physical land and crowdfund agribusinesses.
**8.** Token Holders send tokens to Fieldcoin Ltd against land property ERC721 Token.
**9.** New lands owners may decide to let Fieldcoin Ltd manage their lands.
**10.** Received tokens are traded into Ethereum and FIAT on exchanges.



The primary objective in this proof of concept is to build the Fieldcoin Trade Back Token Ecosystem and to implement our project in real market conditions. While rents, costs and management costs differ from one region of Europe to another, our market target is 15% (9% Property and 6% Rents) yearly returns after land valorisation for a balanced portfolio of farmland located in both Western and Eastern European regions.

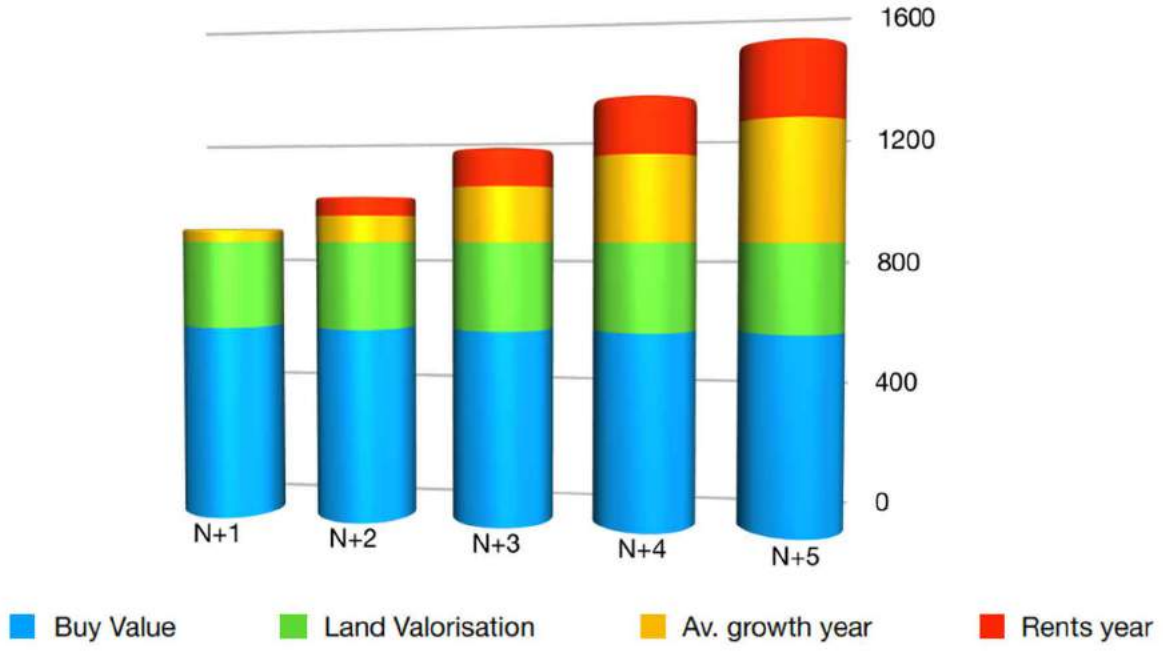
Value growth for land valorized at 20% of its total acquisition cost, on Eastern European regions are around 16-20% (Property and Rents) while value growth of Western European regions range from 8-12%. The range of land holding before transfer is between 2 to 5 years. This is considered the most optimal period to achieve land valorisation projects but also cope with price volatility due to market speculation and exogenous factors such as poor harvests.

Once our value growth target has been attained, the land will be sold. At the end of this 5 years period, Fieldcoin Ecosystem will be grow at fast pace. It will start operating completely after a period of 2 years after the FCO and will increase its assets significantly during this period of testing some groundbreaking features of our business model.

Once our Ecosystem has been implemented and is showing the 1st signs of success, we will expand to regions with higher growth such as South-East Asia, Africa, Latin-America and Russia.

### 4.2 Eco-system growth valuation for European farmland physical assets est.

*Value growth low-risk farmland: 5 years land valorization project based on a 1000 USD FCO investment.*




Buy Price Invested / Present Value: **Bp**
Selling Price / Future Value : **Sp**
Land valorization 45% : **Lv%**
Land Value after Valorization : **Lvav**
Acquisition & Valorization Costs 20% : **Avc%**
Development Costs 20% : **Dvc%**
Av. Growth 9% year : **Ag%**
Rents 6% year : **Rg%**
Number of year : **y**

*Lvav = [Bp - Bp(Avc%) - Bp(Dvc%)](1+Lv%)*
*1st year Ag% = Lvav (Ag%)/2*
*Sp=[Lvav(Ag%/2)]+Lvav(1+Ag%)^y+Lvav(y.Rg%)*
*Lvav = 600 (1.45) = 870*
*Sp=[870 (0.09/2)]+870(1+0.09/⁴)+870(0.24)*
*Sp= 39.15 + 1220 + 2088*
*Sp = 1468*

***Land percentage value growth 5 years = +59.26%***
***Ratio to ICO fundraising = +46.8%***

### 4.3 Land valorization asset growth study case est.

**91 070 000 USD Commission Collected**
**14 040 000 USD Land Valorization Growth**
**= 105 110 000 USD**

**105 110 000 USD - Costs 20%**
**= 84 088 000 USD**

**84 088 000 growth + 30 000 000 Initial Value**

**Fieldcoin Eco-system will be worth 114 088 000 USD after 5 years est.**

**380%growth over the period**

**This figure is an estimate considering an average rate adoption and current land value growth on the European markets.**

#### → Platform exchange commissions 0-5 years est. :

1% of transactions amount is kept to buy new land into the ecosystem and to finance agribusinesses.

Commission on exchange platform 1%:

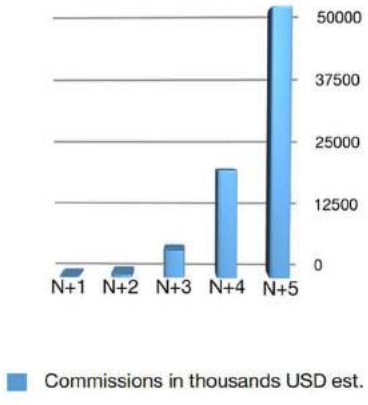
**N+1 :** 1 million USD turnover = 10 000 USD

**N+2 :** 50 million USD turnover = 500 000 USD

**N+3 :** 500 million USD turnover = 5 Million USD

**N+4 :** 2 Billion USD turnover = 20 Million USD

**N+5 :** 5 Billion USD turnover = 50 Million USD




#### → Crowdfunding exchange commissions 0-5 years est. :

A 10% commission is applied on crowdfunding transactions (operational costs) and 1/10 of this amount is kept to buy new land into the ecosystem and finance agribusinesses.

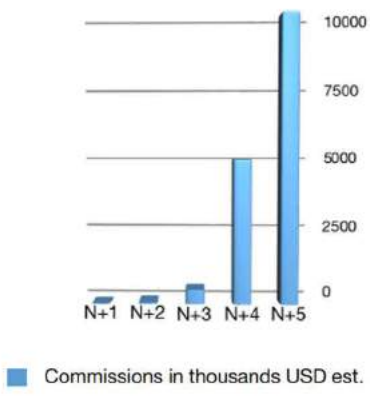
**N+1 :** 1 million USD Turnover = 10 000 USD

**N+2 :** 5 million USD Turnover = 50 000 USD

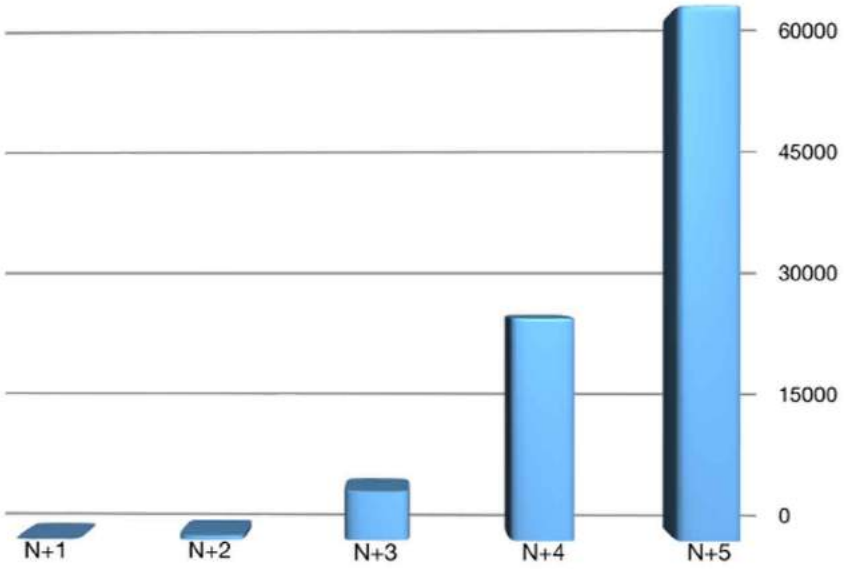
**N+3 :** 50 million USD Turnover = 500 000 USD

**N+4 :** 500 Million USD Turnover = 5 Million USD

**N+5 :** 1 Billion USD Turnover = 10 Million USD



→ **Total Commission est.**




## 4.4 Projections

→ We expect a 15 to 20% growth during the 1st year.

→ IT and Business operational costs will be largely compensated by FCO bonuses and land valorisation added value.

→ After 2 years, the reallocation of assets to the ecosystem is expected to double with fewer fixed costs, more adoption on the platform, commissions and lower acquisition fees due to larger project investments.

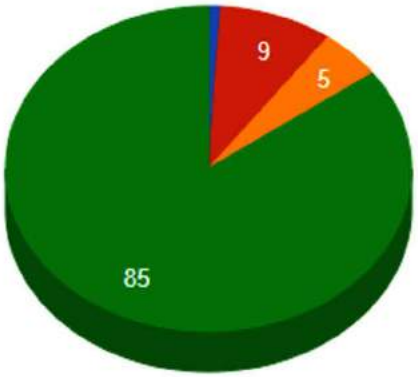
→ The token is expected to grow fast with adoption as increasing number of people will start trading assets and crowdfunding projects on our platform.

→ A growing amount of Fieldcoin Ltd's physical land assets will represent a bigger ratio to the tokens in circulation.

→ After 5 years, the expected value of Fieldcoin's Ecosystem physical assets valuation is estimated to be 380% from the amount collected during the FCO.

## 4.5 Eco-system Asset Reallocation

- Business Operations **9%**
- Land recapitalization **85%**
- IT Development **5%**
- Participation in Communities **1%**



## 5. LAND VALORISATION

### 5.1 Technical land valorisation:

Land valorisation is the process of adding value to a land property by modifying the soil or adding infrastructures on the land in order to enable the development of agribusinesses. For exemple, preparing the land to organic food production or transforming desert into arable land, are technical land valorisations.

### 5.2 Marketing land valorisation:

The process of upgrading property value by communication and image building. Bringing global visibility and spreading information concerning the potential value growth of land is another example.

### 5.3 Natural land valorisation:

Land is one of the only assets that may increase in value without exploitation. Agricultural land left in fallow for a few years, produce high valued organic food products. Similarly, when climate changes makes it possible to diversify crop production, as it is the case in some wine-growing regions of France where entrepreneurs are moving their production North to maintain the quality of their wines, it is called a natural land valorisation.

### 5.4 Market valorisation:

Depending on the offer and demand of particular food segments, urban development or scarcity, the human acts on the value of land.

### 5.5 Land Valorisation Project Examples

**Organic food**
**Farm development**
**Permaculture**
**Warehouse building**
**Aquaculture**
**Facilities : Electricity, water, road**
**Urban agriculture**
**Soil modification and Stabilization**
**Animal farming**
**Reforestation**
**Insect farming**
**Crop diversification**
**Natural park development**
**Water purification**
**Ecotourism**
**Tiny Houses**

We are also committed to boost 3.0 innovative and sustainable agricultural development projects.

**Robotisation**
**Climate relocalisation**
**Hydroponics**
**Local Crop Diversification**
**Aquaponics**
**Rural Land Development**
**Vertical Farming**
**Desert Greening**
**Drone use**
**Agriculture Technical Education**
**IT monitoring**
**Organic Food 3.0**

## 6. TRACEABILITY FROM LAND TO FORK

Our current food production systems often leaves a lot to be desired. In order to increase access to information, a project called "Farm to Fork" supported by the EU commission, became very popular and applied to many AgriBusiness supply-chains. With the Blockchain technology, we can go one step ahead by starting traceability at the roots of the plantation, directly from the land.

Gathering information about the land quality is often critical for production such as organic food. The quality of soil directly impacts the food nutrients and it often takes many years in order for the land to regain its vitality. Fieldcoin uses innovative blockchain technology to facilitate a deeper level of food traceability from land to fork, providing a new level of transparency in the processes of farming, and forming part of a road map to a more sustainable future for the agricultural industry.

Often, when food traceability is discussed, the systems or guidelines are set up as to allow for transparency in the origins and distribution chains of food items. For example, food traceability laws in certain jurisdictions are enforced to make sure that consumers know that the food they are buying comes from certain locations, or meets certain welfare, health or environmental credentials in its growth or manufacture.

Blockchain technologies allow food traceability to go much further. Fieldcoin's system allows landowners and farmers to register many more details. These details will be of use to consumers in making decisions about the food they eat by providing the history of a piece of land where the food originate or that they are considering purchasing.

### 6.1 Empowering land-owners and farmers

The blockchain technology employed by Fieldcoin allows farmers and landowners to record the inputs and outputs of the land they manage. By examining these, consumers and potential land purchasers can make informed decisions. In order to analyse the well-being and function of any system, it is important to understand its inputs, outputs and characteristics.

### 6.2 Monitoring Farm Inputs

All farms will require basic, fundamental, natural inputs in order to produce a yield. How a farm manages these natural, renewable inputs will be a measure of that farm's sustainability and how eco-friendly, productive and profitable it will be able to remain over time.

By recording its use of renewable resources such as sunlight, rainwater, wind, and biomass, a farm can prove its provenance as a sustainable food production business to consumers. For example, a landowner may record, using blockchain technology, the amount of energy created on the land through renewable power generation, such as with solar panels or a wind turbine. A landowner may also be able to prove a drop in energy use over time, as they take measures to improve the efficiency of all their systems and move to more sustainable methods of production.

By recording the water use over time, a landowner may show that they have effectively conserved water through good water management—by harvesting rainwater, installing greywater systems, or by the creation of earthworks to improve water retention or water flow on the site.

On an organic site, the use of herbicides, pesticides and other such substances will be avoided. However, certain organic soil amendments or fertilizers may still be used. An organic farmer may also use nematodes, or other organic pest control methods. By recording these on the blockchain, a farmer can keep a record that will be valuable to them in future, but which will also reassure consumers that they are not imbibing anything harmful or contributing to a system which damages the environment.

### 6.3 Monitoring Farm Outputs

Another way to monitor sustainable progress on a given piece of land is to measure and record various outputs of the system. The output, or yield, is usually largely in the form of food. However, there are other yields that can be measured in sustainable agriculture—biodiversity on site, for example, which can be enhanced through good practice.

By recording the weight of an arable yield, a farmer may be able to show how they have successfully embodied solar energy in food crops. They can show how yields were increased over time due to, for example, the use of biochar or other biomass in organic production, or to the effective care of the soil through 'no till' farming, companion planting or other permculture methods.

A livestock farmer may be able to show that they are rearing healthy, happy animals by recording the details of each, how each one lived and the ultimate yields that they provide. By recording rotational grazing practice, or other measures, they may additionally be able to demonstrate how they are looking after the land that they manage and caring for the soil and other natural systems.

Increased biodiversity is another potential output for sustainable farms. In addition to providing food, a landowner or farmer may be able to show that they are adding value to the site by enhancing the natural system and increasing the number of plants and/or wildlife on the land. Diversity is an important factor in true land value and helps to ensure that a system remains resilient over time.

### 6.4 Monitoring Land Value For Land Owners and Land Buyers

If someone is considering purchasing a piece of land, it is of course essential for them to know how much it is worth. The value of a piece of land can be considered in financial terms, but can also involve the intrinsic value of the land. The records of the blockchain technology regarding the inputs and outputs of the site can help to determine the true intrinsic value of the land as well as its literal financial value.

A piece of land's value should not merely be considered in the present, but should also be considered with regard to the future. While the financial value in a capitalist system can vary depending on market fluctuations and external events, the value in Fieldcoin takes into account the real-world value of the site, based in the potential yield that can be derived from the site but also its richness in plant and animal life and its natural resources—soil, water etc... This is a model of value that can be employed over the years to come.

Through its blockchain technology, Fieldcoin can build up a picture of true value that is directly linked to the land and its resources. Not only does this add to the transparency of food production, it can also help landowners and land buyers to establish what a piece of land is really worth.

### 6.5 A Record For Future Improvement

The new enhanced food traceability and transparency in sustainable farming is not only of benefit to those external to the land management systems. Farmers and landowners, as well as those who eat their food, can benefit from the enhanced record keeping enabled through blockchain technologies.

By recording the inputs they consume, and the yields they deliver, and keeping track of the intrinsic value of their land, owners and farmers can build up a clearer picture of what has worked and what has not worked as they have strived for better, greener and more sustainable systems. This record can help them to work out where they still need to improve, and how they can best move forward towards continued improvement.

### 6.6 A Democratization of Sustainable Food Production

One final thing to note with regard to Fieldcoin's blockchain technology is that it allows for a more fair and ethical food production system. The increased transparency allows consumers, land owners and others to come together. Everyone has access to the information, so everyone can benefit from it and feel some sense of ownership and control over the food that ends up on our plates.

## 7. ISSUES IDENTIFICATION

Here are stated all the main barriers that prevent people from accessing land and making benefits offered by landownership for which we provide a solution.

### 7.1 Diversification

Putting all your assets into one field could be dangerous, as it could be expropriated or classified under the register of a natural disaster.

→ That case, your land would be worth only a small fraction of your initial investment. Diversifying your assets is the key for land investors as there are some uncertainties beyond your control.

→ A pool of different types of land minimize the risk of losses when a land property has lost some of its value and mutualize benefits of highly profitable land parcels.

→ One of the problems with physical assets is that in some cases they can get old and perishable such as food.

→ Some never age such as gold and silver.

→ In the case of land, some changes do occur due to the climate, weather changes, natural disasters or political instability.

→ Investing in only one piece of land within the same area is not necessarily the best option as it is subject to changes.

→ The risk can also come from countries that suddenly decide to confiscate land in order to build an infrastructure project such as roads or plants.

→ Land is also difficult to exchange fast. In case of such sudden changes it is impossible to sell in due time.

So as to cope with these type of issues, Fieldcoin Ltd mutualizes the risks and opportunities within a portfolio of land integrated into its Ecosystem.

### 7.2 Cryptocurrencies volatility

The main issue with cryptocurrency is its volatile price.

→ FIAT currencies' only advantage over cryptocurrency is interest rates.

→ They enable central banks to adjust the price in case of inflation or deflation.

→ Such system balancing the value of cryptocurrency has yet to be implemented.

→ Currently, the price fluctuates according to supply and demand. And in some cases, one crypto currency can fluctuate as much as 100, 200, even 1000% over a period of 24 hours.

→ This is a problem debated over in crypto communities, although, the fact that the token value increases should not be an issue.

→ However, when the price drops below certain levels of preliminary investment, it is not admissible.

This is why with Fieldcoin we have implemented a system which guarantees that your token acquisition runs the lowest percentage chances to go under a certain threshold. Simply because your token represents a real value.

### 7.3 Real value

In times of excessive money printing of FIAT currencies and unprecedented growth of crypto-currencies ecosystems, Fieldcoin is the guarantee that your token will deliver the promised value. Here are the common mistakes in valuation of cryptocurrencies:

→ Assessing their price on emotional and psychological value they generate through social media communities.

→ The coin or token does not represent any tangible asset.

→ The project has not planned to deliver benefits to the token holders. In other words, there is no guarantee that they will get any benefits once the project has been completed.

→ Some teams hold more coins than they should, which ends up reducing the value of your current holdings. Also, excessive reserve funds can be found within some projects. This will impact the value of tokens negatively, especially once these tokens are unlocked.

→ Some projects are not innovative, simply very difficult to achieve and will not be successful.

As an example, we have today about over 20 projects competing with Ethereum to become the largest decentralized smart contract platform, ...eventually there won't be more than 5 at the end, or maybe even fewer.

### 7.4 Liquidity

Cryptocurrencies need daily volumes to prosper and be efficient, and so does real estate property. The current undervaluation of land properties is closely related to the lack of liquidity assets in the sector.

### 7.5 Global Presence

This will be enhanced through partnerships with established real estate firms specialized in land acquisition and through our own implementation in the region depending on the economic and judicial context.

### 7.6 Bureaucracy and Paperwork

It is often too difficult to buy land because of these problems.
The number of required documents the legal procedure, the gathering of information, legal advice... make it too complicated and time-consuming for potential purchasers.

### 7.7 Confidence

Buying a real estate property overseas for an individual is also often risky business as frauds are frequent. The need of experts and local representation is necessary.

## 8. Token holders send tokens to Fieldcoin Ltd against ERC721 land backed tokens

Fieldcoin Ltd addresses all these issues within one project. It proposes a solution to all issues encountered by land purchasers as it reduces the risks of land acquisition. Buyers can allocate 1 US dollar in Fieldcoin Token and receive in exchange 20 tokens they can use to buy land on our platform.

Fieldcoin platform will handle different product categories where users can buy physical properties with 100% ownership.

### 8.1. Land valorized

Once the FCO is over, the tokens will serve primarily to acquire agricultural land in regions and countries where our agribusiness analysts believe the opportunity cost is the best. At this stage, the fields will be valorized and rented in priority for companies or individuals who wish to develop agricultural projects in adequacy with our chart of ethics, in respect of the environment.

### 8.2. 1% of the tokens to support local communities

1% of the tokens will be allocated to our humanitarian development projects in the regions where we have bought land in order to participate in the communities' development and increase indirectly the acquired lands value.

### 8.3. Buy physical land from the Eco-system

Once the first projects have been completed, platform users will have the opportunity to buy a specific type of land from the Ecosystem with an agribusiness renter or not.

Here's a few examples: wineries, wheat, rice plantations, forest replantation or fallow land, ready to grow organic crops. An assessment of the revenues for each sector will be made every 3 months and the revenues will be reallocated to the most promising agricultural lands.

At this stage, token holders will become the sole owners of the chosen properties. The fields will be taken out or bought separately from the pool of land and sold through our internet platform. Everyone will also have the opportunity to buy and sell those properties located on the platforms.

A detailed data sheet with all the necessary informations will be added with the descriptions concerning the fields. In cases where the land is not virgin, that is to say there are some infrastructures on it with monthly rents and a lease, the buyer will have to respect the agreements made.

The token holder who buys the land will be the owner of the land and will receive a real estate property ownership certificate.

### 8.4. Individuals and companies will be able to sell their properties on the platform.

They will fill in a form and send documents to us and we will review all the information. Once validated, the property can be added to the platform and consequently be sold using Fieldcoin Token. The property being sold, the seller will be paid in Fieldcoin Token that can be freely kept or traded on exchanges against any cryptocurrency or FIAT currency.

A 1% commission of the real estate transaction will be allocated once the property has been sold to the Ecosystem. Other operational fees have already been deducted in our Ecosystem. The buyer will only bear the cost of obtaining ownership documents which amount to an average of 4% and range from 1 to 10% depending on regulations applied in different countries.

The buyer will first have to subscribe to the platform and once this is done, he will gain access to all the properties available. The buying process will happen through a dedicated smart contract corresponding to the specified property. The buyer will have a certain timeline to provide all the necessary funds.

Meanwhile, in order to reserve the property, the buyer will have to exchange 10% of the amount to validate the transaction. This funding will be kept until the whole amount has been paid, and the transaction will occur at that precise moment.

### 8.5. Land Management

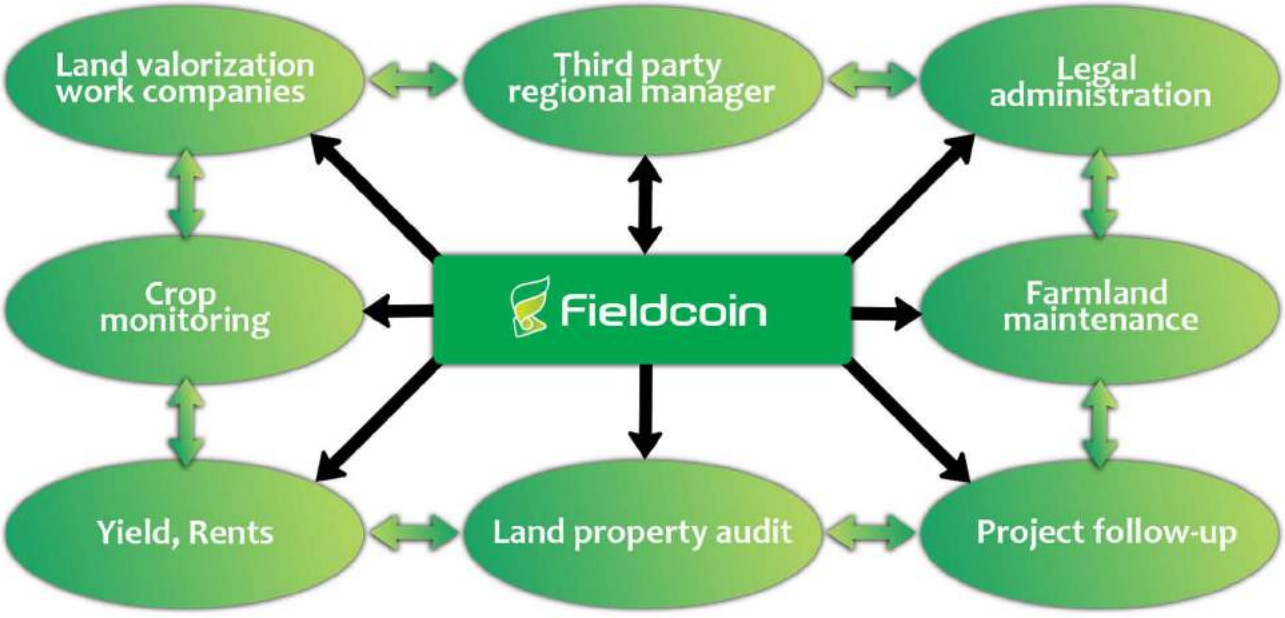
The users will have the possibility to let us manage their land for them while remaining full owners of their land and/or agribusiness.

Another service provided by Fieldcoin's Ecosystem is the management of the land. Too frequently, landowners are left with no other option than to leave the land in fallow. Indeed, the geographical distance, lack of expertise and other related issues are barriers that are not always easy to overcome for landowners.

Fieldcoin Ltd propose the owners to handle all the issues related to the management of their land. We can not only optimize the output, take care of rents, administer documents and apply local legislation and improve land quality.

The land owner will receive 60% of the benefits while Fieldcoin Ltd will get 40%. This will cover the management costs of the land, pay the 3rd party logistics and business operations while retaining a percentage share allocated to the Ecosystem.

### 8.6 Standard Land Management Scheme



Fieldcoin Ltd determine the optimal rotation of the farm and watch the preservation of the agronomic value of your lands.

Technical monitoring of crops in the field: On each farm, a manager is responsible for field monitoring. Its role is to manage, make his work profitable while respecting the current and future legislation requirements.

The manager ensures the timing of interventions in the plots: cultivation, sowing of crops, plowing, spreading of fertilizers and phytosanitary products, harvest. Each intervention is checked and recorded in our plot tracking software.

The users do not need to be involved directly in any kind of management. They will receive semesterly detailed data sheets on their property management and rents. Only a management fee of 40% will be deducted from those rents. This is a true revolution in the agribusiness sector as people will become the main supervisors of their arable land, gaining access to full information on the agribusinesses they manage.

There will be a spreadsheet for all the projects in progress, but also videos on the project in order to ensure transparency, and to allow the token holders to get a real insight view of Fieldcoin's Ecosystem off chain assets.

### 8.7. An Instrument for Transaction Efficiency

Also, trading land in FIAT currencies is a very costly operation. It involves one or two intermediaries, long and expensive travels, information gathering, legal advice, and important transaction fees.

Fieldcoin allows to simplify the entire process. You can exchange your tokens in an instant, even across borders, with low fees and no intermediaries' costs. Fieldcoin also alleviates tax inefficiencies and provides more transparency during the acquisition process.

### 8.8. Selling back land properties (see Crowdfunding 11.)

Once your land property has been exchanged on Fieldcoin platform, there is no need to go through selection process again. Your land will be automatically selected on the platform if you wish to sell back your land against tokens.

## 9. FIELDCOIN'S TRADE BACK TOKEN (TBT)

### 9.1 Fieldcoin Token Asset Protection

**Fieldcoin enables to trade back an 80% ratio on the value of your token to the assets in the Ecosystem, but also:**

- To claim your assets in physical property at a certain rate
- To use the token on exchanges to speculate with lower risks
- An Ecosystem growing in value
- A good mid- and long-term opportunity
- A good diversification investment
- An excellent solution to pivot your cryptocurrency in times of economic crisis

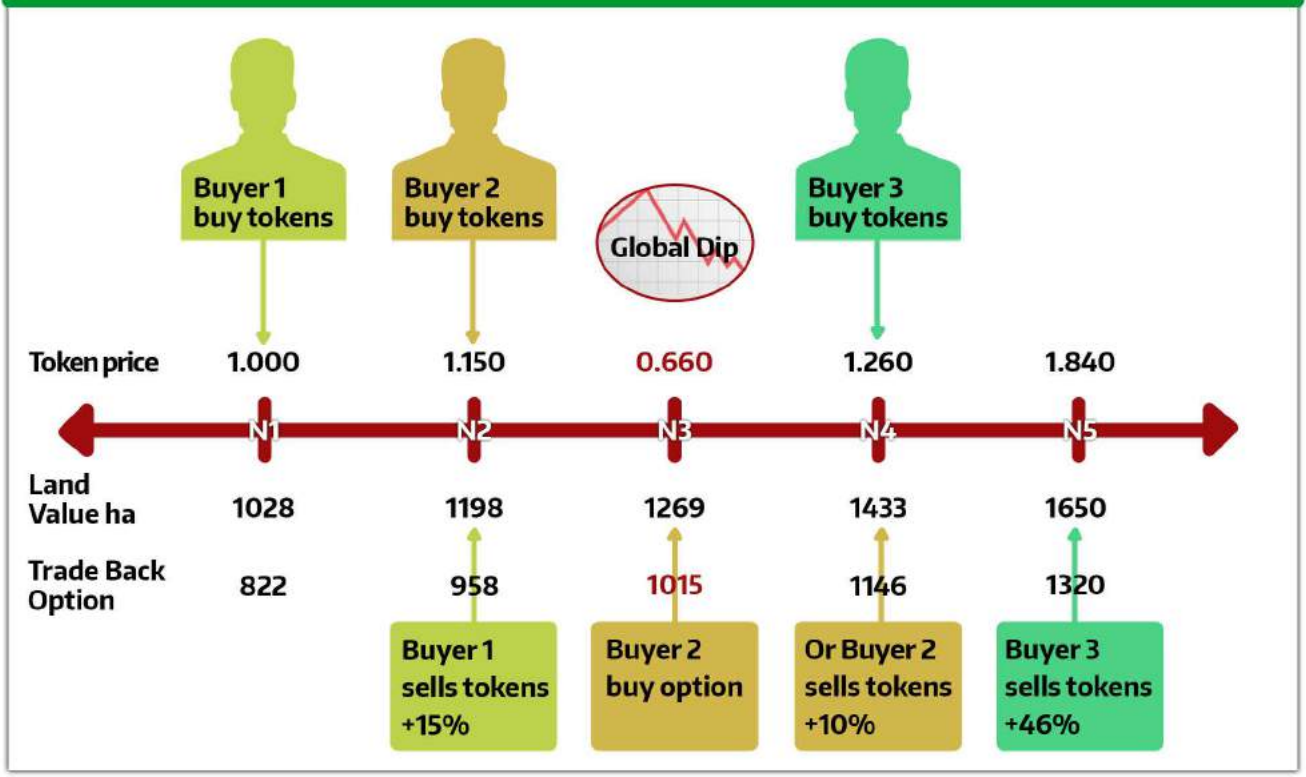
### 9.2 Buyer case study

**Buyer 1:**
Buys at 1.00 USD during the ICO + 20% bonus. B1 gets the equivalent of 1200 USD. After 2 years, the initial value of the coin increases to 1150 USD up 15% he gets 1.200 x 115% = 1380. B1 sells and gets a 38% benefit.

**Buyer 2:**
Buys token at 1.150. The following year cryptocurrency markets experience a global dip. The coin price drops to 660. Buyer 2 has the choice to minimize the drop and buy at trade back limit of 80% of the land value to token ratio. In this case, the buyer could buy land on our platform value for 1015 USD. B2 would save 335 USD which is 54% more value than if he had to sell its token at 660 USD. B2 can always wait for bull market to come back and sell his tokens at 1260USD the following year and gets 9.5% growth from original token value bought at 1150USD.

**Buyer 3:**
Buys tokens at 1260 USD and sells it back at 1840USD or buys land for 1650 USD valuation as B3 will get more land for its tokens than the previous year.

**1260 / 1433 = 87.9 % of a ha**
**1840 / 1650 = 111.5 % of a ha**



### 9.3 The threshold ratio

This threshold ratio of 80% token value for the market price will seldom be attained. Because once the token price drops under this threshold, anyone wishing to buy land through tokens on our platform will buy tokens on exchanges and will get physical assets 20% or more under the market price. This will eventually boost token market exchanges and restabilize the price of tokens at market levels.

Many cryptocurrency traders in a bear market will be attracted by the Fieldcoin safety net. In practice, token holders will hold Fieldcoin Tokens at this point as the gains are much bigger when the token price is above the physical asset price, and as there could still be a small loss compared to the tangible assets price at the time of the purchase. The safety net will attract many traders to buy tokens, but also physical land buyers who are looking for a bargain. Consequently, the token would not stay long under 80% of its physical valuation.

### 9.4 Semi-annual Audit

→ Every semester, we will have an external company auditing our assets and the results will be released to the Fieldcoin community.

→ The external auditor will guarantee each token holder that we are not involved in any insight trading, but also that our figures are accurate and respectful of our mission in full transparency.

→ The audit will also provide all the necessary information for the token holders regarding the ins and outs of land properties from our ecosystem. This information will be highly expected every semester, as it will influence the token holders' decisions concerning the use of their tokens.

→ Also, Fieldcoin Ltd will communicate on rents every semester. Depending on the management structure (tenant farming, pure rent or land management with 3P contractors), and unpredictable factors such as climate, farmlands will provide different value growth.

→ Each semester, a table of the inputs and output will be made. This way, token holders will be informed twice a year on the different costs and returns of Fieldcoin's ecosystem properties.

→ The aim of the semesterly audit is also to ensure a maximum serenity for the token holders concerning the value of their tokens, especially when cryptocurrencies are in volatile times.

→ The global market capitalization of cryptocurrencies generally impacts all crypto-currencies, whatever the fundamentals beneath the coins.

→ This audit is the information needed to check the Fieldcoin's ecosystem's solid foundation on a regularly basis.

## 10. LAND ACQUISITION

The acquisition process, legal barriers and financing also frequently constitute tremendous barriers to overcome for individuals or SME companies. Fieldcoin team members are there to help you out. They have a proven track of professional experiences and academic records in their sector of expertise.

The core team is composed of agribusiness developers, legal advisors, blockchain experts, agricultural engineers, traders, real estate partners, web and IT developers to cover all the various aspects of the project.

Although the potential of growth for agricultural land and agribusinesses is huge, the sector still suffers from the lack of liquidities due to high barrier entries. The main obstacle preventing people from owning land has been questions of size and nature. Fieldcoin Ltd makes this type of acquisition sound and easier for all.

### 10.1 Fieldcoin Ltd acquisition strategy

Too frequently owners tend to lack the necessary skills, as well as the time and liquidities to make the necessary changes needed to grow highly demanded agricultural products on their fields. On the other hand, agribusinesses are looking for ready-to-use land properties in view of their development plans. Consequently, in most cases arable land is left in fallow.

Fieldcoin Ltd bridges this gap providing the solutions needed to valorize the fields for the use of agribusinesses. By acquiring land into our ecosystem, our agribusiness strategists target those high potential growth fields which are currently undervalued considering the lack of global visibility and liquidities. Our main goal is to bring those land properties to sufficient exploitable maturity, increasing value on the growth of the regions that are attracting new types of agricultural applications and crops that will be highly demanded in the near future.

Liquidities will enable us to acquire land under the market price, and the global visibility of our ecosystem will allow the valorization of land properties. On the other hand, we plan to turn those acquisitions into real agribusiness industries with renters and customers. We plan to target low-risk and average potential market first, such as the countries within the European Union, and we will move slowly to more venture capital countries with much higher expected returns for Fieldcoin's ecosystem.

### 10.2 Property transactions

Our land valorization projects generally take between 2 to 5 years to reach its optimum potential. We tend to choose mid-term projects and try not to get involved in projects that are longer than 5 years.

The transaction is validated after a buyer has been found, a KYC has been accomplished, a contract has been edited, signed and all the tokens associated with the smart contract address sent to Fieldcoin Ltd.

Once this is done, the corresponding amount of tokens to the property value + a 10% reserve fund for acquisition taxes, transaction costs and price volatility during the transfer will have to be sent by the token holder who can then request the physical land property from Fieldcoin's Ecosystem. The token holder will receive a confirmation and be refunded its reserve fund adjusted to the costs of the transaction. The title deed will then be sent to the redeemer making the token holder the sole owner of the property.

The same process will be applied to transaction between individuals. Fieldcoin Ltd will serve as an intermediary. Depending on future blockchain based registry system advancement and adoption, the process may change to enhance transactions speed and easiness without intermediary.

### 10.3 Future perspective

Many countries, like Sweden, Russia, India or Dubai are implementing land registry systems on the blockchains. This will tremendously ease the land acquisition procedures and lower transaction fees on Fieldcoin platform. Once this whole transition has become effective, online land property transactions should not take more than 24 hours.

## 11. CROWDFUNDING

### 11.1 The need for a new funding model for agriculture

More than ever the need to restructure the agriculture sector has become essential. The need to feed the global population, the growing number of farmers retiring and the aging of our agricultural economic model with the current lack of liquidities in the sector makes it necessary to drastically change our funding models. Thanks to the Blockchain and 4.0 Agriculture Technologies, we have solutions to move forward and give humanity the chance to prosper through this century.


### 11.2 A disruptive economic innovation model

Our project associates three of the most recent disruptive economic innovation with the greatest potential in the global economy since the Internet revolution: Blockchain technology, 3.0 Agribusiness Technologies and Crowdfunding. Fieldcoin Ltd makes a strong contribution to the way people land properties are exchanged and participates in the implementation of innovative agriculture technologies.

This is an entirely new model of crowdfunding that we see as an Ecosystem where token holders are fully involved in the development of the most promising industries of our century: the blockchain, land management, agriculture technology and food industry.

As a result, we are creating a more efficient way to deal and valorize your cryptocurrencies by supporting agricultural development projects. The value generated by land valorization and exchanges on our platform will be reallocated to the Ecosystem where it will increase its assets leveling up the token trade back threshold.

### 11.3 Fractional or full ownership:

**-Smart Contract Crowdfunding (Fractional ownership)**
Initiating ICO's for specific project is the ultimate solution for land owners to both develop their farming industries, increase their revenues and keep ownership of a high portion of their land. The token holders will only acquire a percentage of land ownership.

Fieldcoin Ltd will propose Initial Coin Offerings on its platform, for token holders to invest in specific projects. They will receive a share of the property. As an example below, token holders will acquire 50% of the land will still be owned by the farmer or land owner. He will be able to regain access to his land by buying back the tokens from the token holders with the profits made with his exploitation or just keep his profits for other personal expenditures. Those ratios are just taken as an example. Depending on the cost of the Agribusiness development project, they will differ form one project to another.


Those tokens and ICO's will be considered as securities and approved by the local financial authorities in the country where it is implemented.

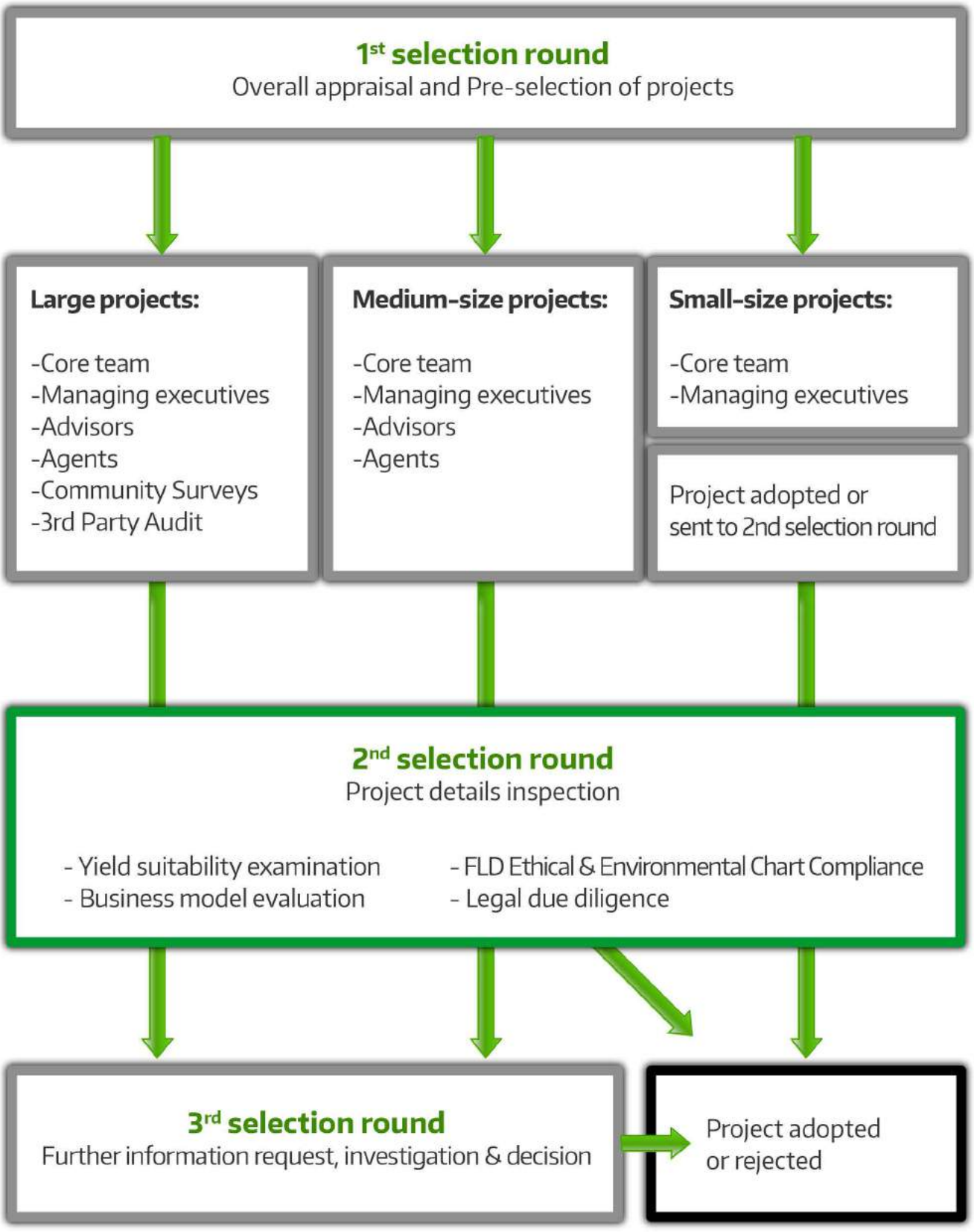
Token holders will receive benefits every quarter from rents. A token for each project will be created. Fieldcoin utility token will be used as a smart contract generator for those projects to be crowdfunded.

**Peer-to-Peer Transactions (Full Ownership)**
In addition, the crowdfunding of specific projects chosen by token holders and agri businesses will result in an interest paid back by the crowdfunders at the end of the term. On our exchange platform, users will be able to exchange their tokens for physical land, but they will also be able to trade their token freely on exchanges against any other cryptocurrency or FIAT.

With our eco-system, crow-funders are guaranteed to obtain their initial capital + the interest as borrowers will allocate a corresponding amount of physical assets in mortgage as a pay back guarantee. In most cases, this is land assets.

## 11.4 Project Selection Processes

Projects selection process will be done under high scrutiny.

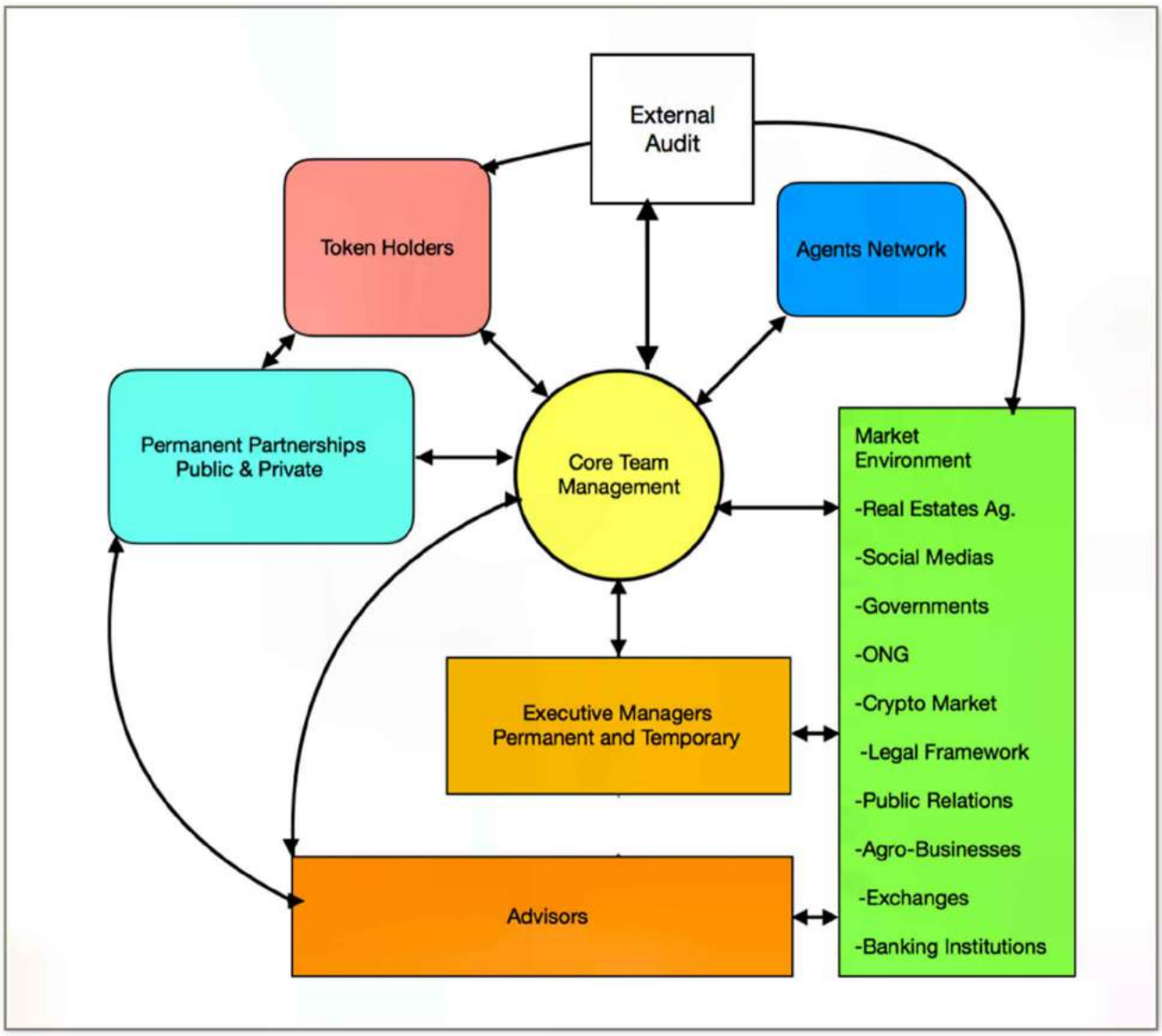


## 12. THE TOKEN AND THE COMPANY ORGANIZATIONAL STRUCTURE

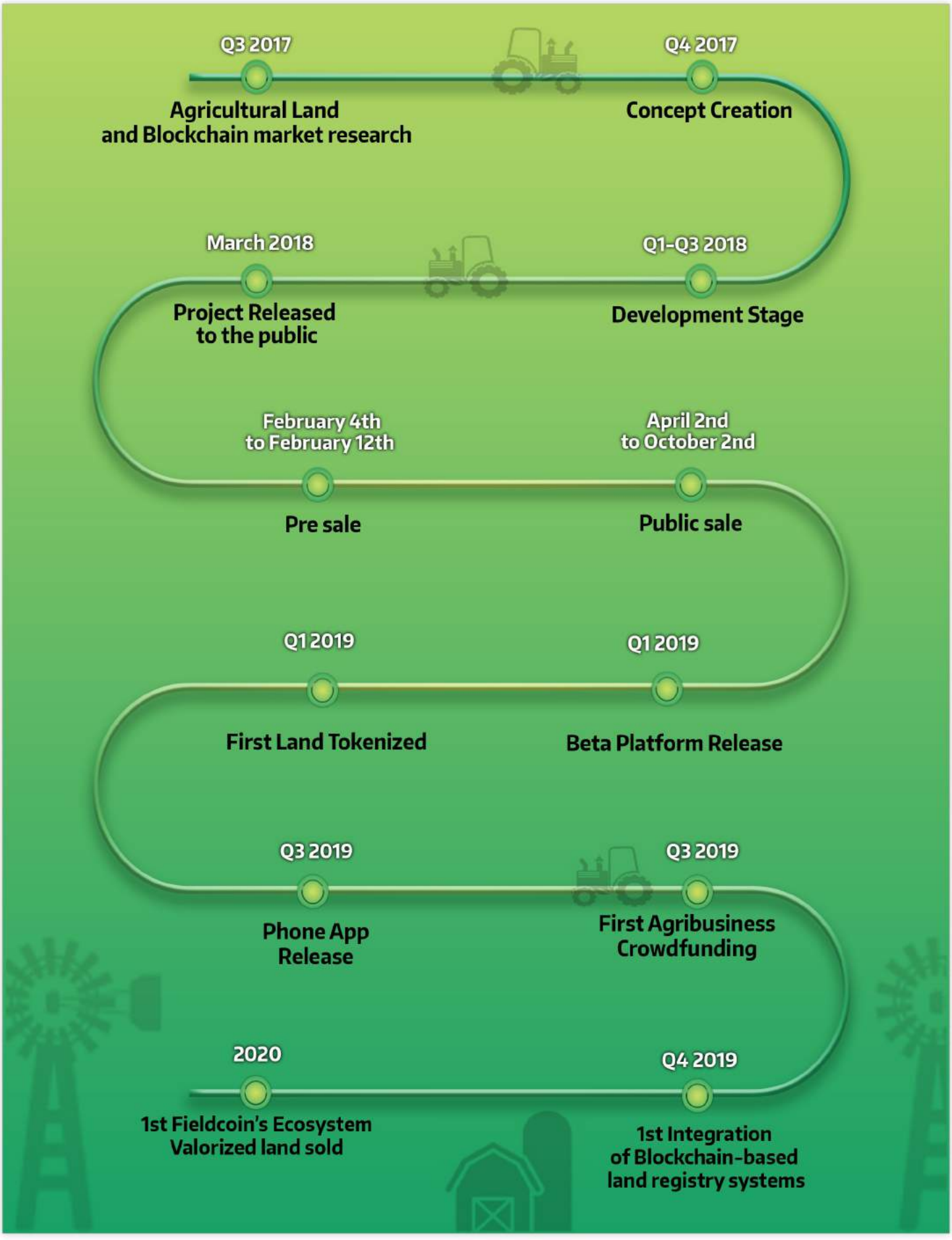
The Fieldcoin token is different from the Fieldcoin Ltd. The token is only a means of assessment to help users to calculate the cost of their land property. It is also a tool to simplify exchanges and calculate a threshold value under which the user can obtain his physical assets.

However, no contracts are made between the company and the token. The token is independent and public on the blockchain. As for the company Fieldcoin Ltd, the collected funds represent a form of pre-sale on future land acquisitions as it often is the case in home savings plans or home real estate building projects.

As for the tokens, they are freely tradable on exchanges and Fieldcoin Ltd does not interfere with the offer and the demand. Users have the possibility to use the token to buy land from the platform, but they can also hold the tokens and sell them on exchanges.



## 13. ROAD MAP


Q3 2017
Agricultural Land and Blockchain market research
Q4 2017
Concept Creation
March 2018
Project Released to the public
Q1–Q3 2018
Development Stage
February 4th to February 12th
Pre sale
April 2nd to October 2nd
Public sale
Q1 2019
First Land Tokenized
Q1 2019
Beta Platform Release
Q3 2019
Phone App Release
Q3 2019
First Agribusiness Crowdfunding
2020
1st Fieldcoin's Ecosystem Valorized land sold
Q4 2019
1st Integration of Blockchain-based land registry systems

## 14. FCO DISTRIBUTION

| | M | % |
|---|---|---|
| FCO | 600 M | 60% |
| Token bonus | 100 M | 10% |
| Token Reserve | 170 M | 17% |
| Bounty | 20 M | 2% |
| Team | 90 M | 9% |
| Pre sale | 20 M | 2% |
| Total Supply | 1000 M | 100% |

**Total circulating supply = 1 000 000 000 Tokens.**
The soft cap is 3 million USD. But the Proof of Concept and Trade Back System can be implemented only once the FCO has reached 5 millions USD. In case this cap is not reached, the Proof of Concept will postponed. In this case, once the token price increases, 170 millions Token reserves will be used to grow the assets in Fieldcoin's Eco-system, ultimately enabling the implementation of the Trade Back protocol.

### 14.1 Early Adopters' Benefits

(Does not apply to Private sells investors. Private sells investors will receive the membership card but not the physical land properties attached to the benefit).
Using our platform to exchange land properties will involve a 1% fee paid to Fieldcoin Ltd. In case of crowdfunding, Fieldcoin Ltd will get 20% of the crowdfunding revenues, as the rest will be delivered to the crowdfunder. Token holders that have contributed to the FCO will see those fees waived:

**1-** For token holders who have bought tokens for the equivalent value of more than 10 Ethereum during the FCO, crowdfunding fees on revenues will be reduced to 10%. Green membership card.

**2-** Those token holders who have bought tokens for the equivalent of 100 Ethereum, fees for land property exchanges will be 0.5% and fees on crowdfunding revenues 5%. Silver membership card.

**3-** For token holders who have bought tokens for the equivalent of more than 1000 Ethereum during the FCO, they will receive a gold membership card and all their transactions fees will be waived. There will be no fees on the land exchange platform, and no fees on crowdfundings. They will also be granted one hectare of free arable land to be chosen on our platform from all assets.

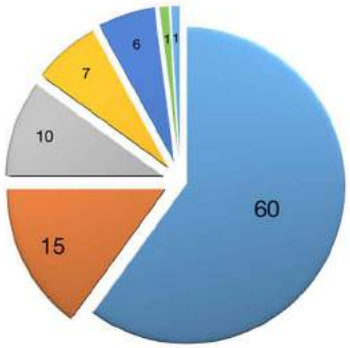
**4-** For token holders of 3 000 Ethereum equivalent or more during the FCO, all transactions fees will be waved. They will also be granted 10 hectares of free arable land to be chosen from all assets of our Ecosystem. Platinum Membership card.

In order for those advantages to be effective, token holders have to hold the tokens more than 3 consecutive months after the FCO. For token holders who acquire tokens after the FCO, the fee waiver scheme for the green membership card and the silver card will still be available for those who hold the tokens more than 6 months in a raw.

The undistributed tokens will be burned after the FCO. The more product adoptions we have, the more our fixed costs will decrease, and we will be able to buy larger amounts of physical land into the Ecosystem.

## 14.2 Fund Allocations

- Physical land 60%
- Agribusiness development 15%
- IT 10%
- Legal administration 7%
- Marketing 6%
- Reserve fund 1%
- Social and rural development 1%




After the FCO, 75% of the funds raised will be allocated to land and agribusiness development. Afterwards, the level of reallocation from the generated value is estimated to increase to 80% of the total market capitalization in order to create a threshold effect for Fieldcoin token holders.

We hope to increase the Trade Back threshold from 80% to 90% in the coming years due to innovation adoption such as Blockchain based land registry, 4.0, 3.0 Agricultural improvements and Fieldcoin asset growth economies of scale. The reallocation of resources to the system is automatic and always made in such a way as to raise the threshold, indirectly increasing Fieldcoin token price on exchanges.

## 14.3 The Reserve Fund

When the market price of Fieldcoin Token is getting high in times of high volatility, Fieldcoin Ltd will sell a small portion of its reserve funds in order to grow the assets of Fieldcoin's Eco-system, leveling up the threshold ratio of the Trade Back protocol. The amount of tokens sold during one year from the reserve fund, will however never overcome 30 Millions Tokens and be dispatched quarterly, and use ONLY in case of bull markets, in order not to intervene in the token market price evolution. The Fund allocation will be done on the Ecosystem Asset Reallocation model. The amount of token in reserve account for 170 Million Tokens.

## 14.4 The 1st FCO (Field Coin Offering)

The current crisis shows us that ICOs (Intial Coin Offerings) are outdated. They don't fit the current need of investors and lack guarantees concerning the use of assets. Worth, tokens won't reach the minimum cap of 300 million USD that would provide the token enough liquidities for users.

Fieldcoin Ltd Is introducing the 1st decentralized Eco-system backed by land properties. During the FCO (Field Coin Offering) users will be able to buy tokens and land properties. They will receive in exchange of their Ethers, Bitcoins and Fieldcoin tokens ERC721 token representing a piece of agricultural land.

During the FCO the Fieldcoin tokens will be locked and used only on the platform. The bonus will be released to the early token holders after the FCO and be tradable on exchanges or sold on the platform for ERC721 land backed tokens.

When Ethers and Bitcoins used to buy land on the platform. An equivalent amount of Fieldcoin tokens will be kept and released later during the next months after the FCO. The FCO will continue at least until the soft cap of 3 millions USD has been reached. It It will end if all the tokens are sold out or if Fieldcoin Ltd decide to terminate the token sales due to high demand in FLC tokens, giving a 30 days notice to the public. In all cases, the FCO will last a maximum of 8 months.

## 15. MARKET CAPITALIZATION

### 15.1 A word from Marc Couzic about the Trade Back Protocol and Reserve Fund Re-allocation:

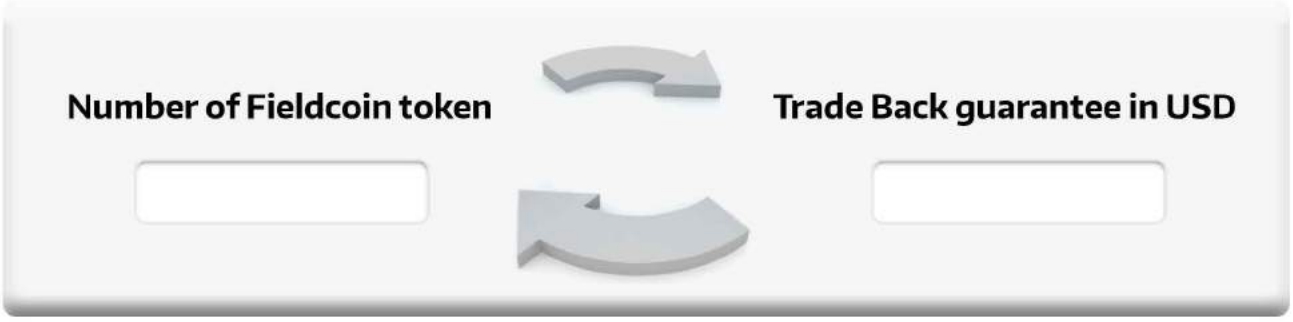
*"Here is the thing: in case the token value increases 3, 4, 10 or 20 times its FCO value, The trade-back effect will be weaken accordingly. So, we have thought of adding another mechanism in the trade-back protocol for the 1st years, before Fieldcoin's platform start to make stable and regular benefits. Fieldcoin's Ltd needs reserves in order to buy more land to draw assets into the Eco-system during bull markets in order to level up the threshold guarantee when a market dip hits back. Considering that agricultural land is the most stable asset over the last 50 years, we are creating a stable instrument for trading on our platform. There is a possibility that many traders will also seize the token during market dips to protect their crypto assets, the way they use with Tether, but this is not the original intent of Fieldcoin's Trade Back Token. Any case, it won't harm Fieldcoin token holders."*

The whole concept of the Fieldcoin Token evolves around a Trade Back guarantee and a price inflation mechanism. When the price of the Fieldcoin Token rises, a very small percentage of this increase will be minted and sold on exchanges against USD or EUR. Those FIAT currencies will be used to buy more land in the Fieldcoin Eco-system. Consequently, the threshold guarantee of the Trade Back will increase in time. In case of a bull market and a consecutive bear market, the token will not drop so badly and the market cap will remain relatively stable. We call it capitalization on the upward trend. Currently, the unresolved issue most utility token have is they cannot capitalize on a token market cap increase.

### 15.2 The concept is the following: There will be 2 rates.

The price of the Fieldcoin platform. It will be formulated in on a module. Token holders will be able to enter the amount of tokens they have acquired and get the information concerning the value off there token trade back on the platform.
The token price fluctuating freely on exchanges like any other utility token.

Consequently, once the Token capitalizes on the upward trend, the trade back threshold will get higher. If the token price drops on exchanges, it will not stay long under the trade back ratio as arbitration traders will start buying ERC20 Fieldcoin tokens to buy ERC721 asset backed tokens on the platform at cheaper price.



### 15.3 Minted token rate every 10 minutes

The minted rate has been calculated to provide the needed liquidities for the Eco-system and grow according to adoption without impairing the increase in the token price.

**Tokens in circulation / % minted of the price increase**

| | | | | | |
|---|---|---|---|---|---|
| 1000000000 | **1.50** | 2100000000 | **0.95** | 3200000000 | **0.40** |
| 1100000000 | **1.45** | 2200000000 | **0.90** | 3300000000 | **0.35** |
| 1200000000 | **1.40** | 2300000000 | **0.85** | 3400000000 | **0.30** |
| 1300000000 | **1.35** | 2400000000 | **0.80** | 3500000000 | **0.25** |
| 1400000000 | **1.30** | 2500000000 | **0.75** | 3600000000 | **0.20** |
| 1500000000 | **1.25** | 2600000000 | **0.70** | 3700000000 | **0.15** |
| 1600000000 | **1.20** | 2700000000 | **0.65** | 3800000000 | **0.10** |
| 1700000000 | **1.15** | 2800000000 | **0.60** | 3900000000 | **0.05** |
| 1800000000 | **1.10** | 2900000000 | **0.55** | 4000000000 | **0.00** |
| 1900000000 | **1.05** | 3000000000 | **0.50** | | |
| 2000000000 | **1.00** | 3100000000 | **0.45** | | |

Example: Token market price positive spread during 24 hours:
Current token price: 0.05
Total Market Cap: 1 000 000 000
Total Assets in the Eco-system: 22 Millions

Minting rate for price increase/10minutes: 0.15%
Total positive spread in one day +4.89%
Daily minting 0.07335% of the total token supply
Increase of assets in the Eco-system in one day: 36 675 USD

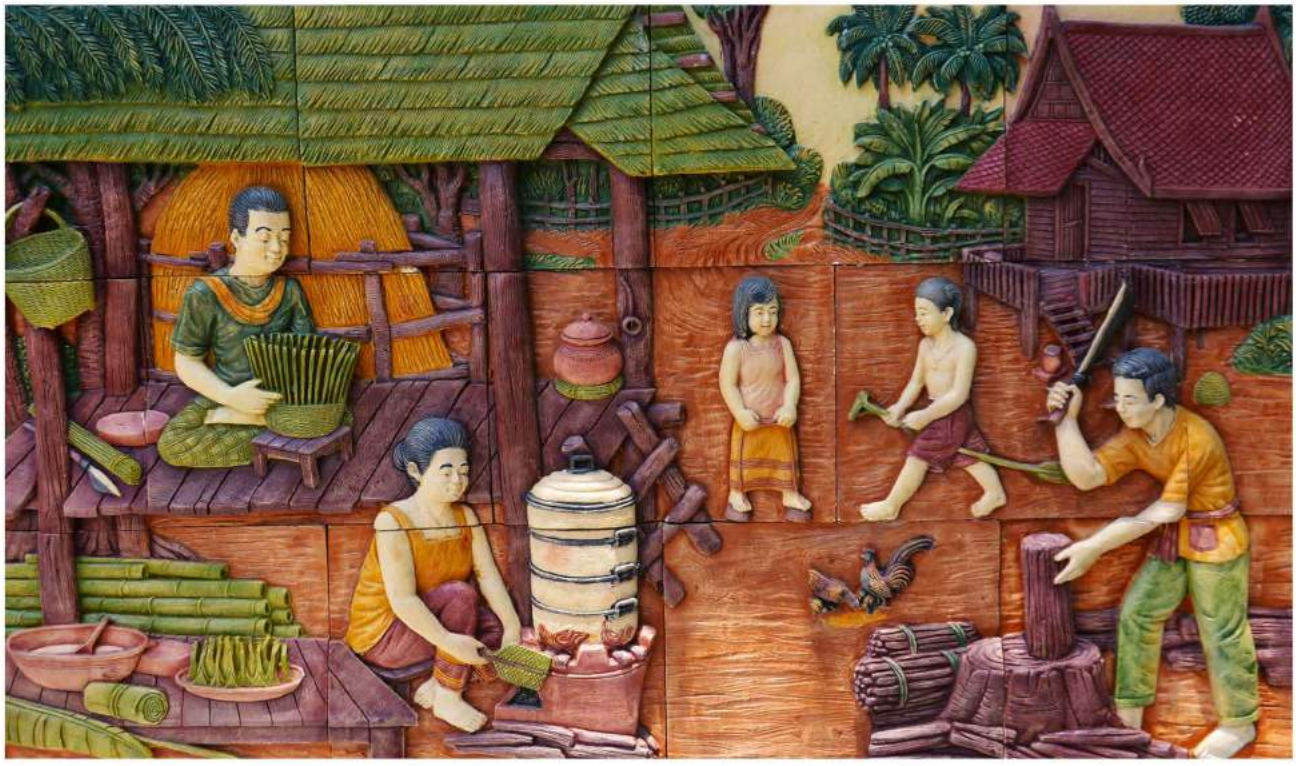
## 16. FIELDCOIN FOUNDATION

Cheap and fertile land is available in a number of areas around the world with large communities willing to work and develop their regions. Yet the market often lacks the necessary liquidities and education to develop agribusinesses.

As we know, rural exodus has led countless people to move into cities. As a consequence, many regions, suffer from the lack of logistic infrastructure and human labor which explains low price of land even if it is fertile (because yet not exploited). With the evolution of blockchain and logistics technologies these lands will become extremely valuable and sought-after.

This is why, Fieldcoin Ltd will be working on building joint ventures on its lands while participating in the development of rural communities through its donation programs within the framework of its projects. 1% of Fieldcoin tokens will be allocated to the community development through our Fieldcoin foundation. Furthermore, donations can be made through the Fieldcoin foundation, allocated to specific humanity projects listed on our crowdfunding platform. These projects include plans to build for example schools, water wells, irrigation systems and roads.

In order to make sure that the tokens allocated to communities are not used solely for philanthropist purposes, the funded project will support the development of the lands and agribusinesses of the Fieldcoin Ecosystem. Indeed, building irrigation systems, roads and schools in the proximity of Fieldcoin Ent. land will significantly increase the value of the land by providing logistic infrastructure as well as human labor to the nearby lands and agricultural industries.



# 17. THE TEAM

## Core team

**Marc Couzic**
**Founder & CEO**
UVSQ, PARIS 8, AIT, HERO, ICEX, GMA,
IT entrepreneur and Agribusiness expert

**Alexandre Paluniak**
**Web Project Manager**
12 years Webmaster
and Art Director.

**Shivam Verma**
**CTO**
Blockchain Architect, DLT Labs,
Bachelor in Computer Science, Consultant
& Developer on more than 10 projects.

**Mamadou Konaté**
**Lawyer and PHD**
Corporate,
Tax and Banking Law

**Jeremie Joncas**
**Chief Operating Officer**
SME Entrepreneur
and crypto trader

**Jani Viellard**
**Acquisition Manager**
Restaurant manager,
crypto trader and land investor

**Romain Lavernhe**
**Investor Relations Officer**
IT Commercial Engineer
Vineyard Specialist (Nicolas, MMD)

**Rayane Hocine**
**Marketing Manager**
Inseec and HEC Paris,
Magna Numeris,
SureRemit, Humaniq

## Assistance team

**Danny Montaner**
**Development Manager**
WC and E-sports Player of the Year 2005
Gaming and Software Manager
Licensed Realtor in USA Florida

**David Prinçay**
**Director of communications**
HEC, President du Club
Français des Cryptomonnaies

**Damien de Riberolles**
**Land Expert Manager**
Master of Agriculture & Environment
15 years land management experience

**William Oullette**
**Developer**
Earth Observation
Applications Engineer

**Fahran Mustafa**
**Developer**
GIS professional

**David Marandai**
**Eastern European Ambassador**
Renault

**José Miguel Núñez**
**Motion Designer**
Cannes Lions shortlist

## Contributors

**Ali Ayyash**
**Technical Expert**
Amazon, Google,
Lumeos, Beetoken.

**Dr Hayat Ullah**
**Agricultural Expert**
PHD Scholar 9 international
publication awards.

**Bruno Larvol**
**Consultant**
Advisor IXXO, IBM, Lehman,
MBA Kellogg, Master of
Biotechnology (MS) Northwestern
University, Master Sorbonne.

**David Teruzzi**
**Technical Expert**
EOS France, Carrefour,
Domraider Flashmoni,
BTU protocol ERC808.

**Joachim Lebrun**
**ICO Advisor**
Veolia, Hydrocoin,
Connecty, Tokeny

**Elizabeth Waddington**
**Environnemental Expert**
150+ Articles about
permaculture and environment.

**Ali Yazbek**
**Public Relations**
CEO Journal du Token

# ANNEX

## AGRICULTURAL LAND PRICE DRIVERS AND DETERMINANTS

### I. Bridging the gap between financial and tangible assets

The money supply has more than tripled during the past 10 years. In China twice as much as in Europe. Nevertheless, the global money supply for the entire world is now over 120 trillion USD (M0, M1, M2, M3) and expected to reach more than 250 trillion by 2025. In 2017, the price of land has still not started to rise at the same pace, but the exponential speed of its growth could rapidly exceed the speed of monetary printing. In fact, in the context of climate change, soil exhaustion and changing economic patterns for demand, investing in farmland represents, more than ever before, an opportunity especially in countries where speculation on farmland has not taken off yet compared to countries like the USA and the Netherlands which have already experienced a great market increase for over 10 years.

Besides, the price of housing real estate has increased slower than the price of farmland between 1980 and 2017. Today, the trend is being reversed. Home real estate has attained a certain threshold and farmland is clearly an undervalued asset. Some analysts predict a 30% decrease of housing real estate by 2025 due to the aging population and economic slowdown of OECD countries. According to our estimations, all factors accounted, agricultural lands are potentially worth at least 4 times more than their current value in FIAT currencies. Both blockchain technology and agricultural lands are both underestimated, yet currently receive interest from a growing number of people seeking refuge values. Fieldcoin is an answer for those looking to combine agricultural land assets and blockchain technology in only one token.

We are going to experience a paradigm shift both economically and technologically. During periods of economic crises (the etymologic meaning of "crisis" being a "turning point" in Greek), the opportunities and stakes are higher than in normal times. The factors that have to be taken into consideration slightly differ. Most of the white papers of the few real estate projects are basing their price study assessment on economic fundamentals, although the starting point should be understanding and assessing the gap between the real economy and finance. Then we have the present de-correlation of market prices with the fundamentals and the real value added of the farmland in terms of production capacity and quality. Without understanding this issue, nobody can pretend to make a good purchase for the future. Agricultural land is not yet in a bubble, but this may happen very soon and high volatility can appear quite spontaneously. This is why it is crucial to understand and assess the gap between physical assets and financial assets.

Physical or tangible assets can be felt which means that they can be seen or touched as a physical object. Other forms of assets are called Financial or Intangible assets. All FIAT papers currencies representing a certain value or physical asset is not a Tangible asset. They have no intrinsic value like many FIAT currencies. There was a time when most of those currencies where backed by gold, but this is no longer the case. Currently, the world is overwhelmed by so-called financial assets. The problem is not the financial assets but the fact that about 90% of those financial assets are currently digitalized or paper money with no real value behind. This makes some of them extremely volatile, because they are not backed by physical value or do not represent any tangible goods. Indeed, the main concern is that intangible assets can be produced infinitely.

Consequently, if emitted unlimitedly, an intangible asset representing a certain physical asset, will sooner or later lose its total value when people realize that it has completely lost its intrinsic value. There must be a consensus to limit the emission of crypto-assets ratio to tangible physical goods in order to create a threshold effect on the price.

That is why Fieldcoin Lltd introduces a token that can buy back physical land and agrobusinesses. In doing so, we develop a new kind of process called Trade-Back Token with Proofof-Asset Protocol. That being said, if not guaranteed to have the ability to buy back some sort of tangible assets, any cryptocurrency can, in market worth turmoil cases, lose all its value. That is the risk we are currently seeing with several intangible assets, such as FIAT currencies that do not determine a threshold of monetary emissions. But some crypto-currency coins are also following the same dangerous pattern of hyperinflation. The number of coins mined is limited.

Therefore, at the end, they will not represent any more value than the psychological or emotional value people may give to the asset. Holders of such tokens will see their token value erode. Fortunately, most coins now have made progress in limiting their total number. The first one being Bitcoin which has since its beginning claimed that there will be only 21 million coins available. Not a single one more. This claim has largely contributed to its success.

Among other intangible financial assets include bonds, stocks (to a certain extent), receivable accounts, company goodwill, brands, copyright. Nevertheless, all these assets are recorded in company accounts as value comparable to physical intrinsic value. And this is mistake. Those will never be physical assets than can be touched such as land, houses, food, livestocks, machinery, equipment, cars, oil, precious metals, gems, or other. Physical assets can be used to make products we use during our everyday life, such as food, clean water, electricity, cars, and concrete. Most of these physical assets comes all from one place: the land. So, what is the best asset to secure your wealth and make great profits? The answer is obvious. It is, once again, land.

## II. The description of general macro-economic drivers

Understanding the general key drivers of farmland pricing is crucial for buyers.

To tackle this issue, we have built a method based on the understanding the real present and future value of farmland. The correct price assessment method seems to be between the price determinants and the financial monetary vs. the real economy gap. Even if the fundamentals are less involved in the formation of the price, or that investors want to hide it because it has become financially more interesting to invest in stock market bubbles, the fundamentals like population growth and related demand growth are present. If they have been blurred by the monetary easing, they are nonetheless real, and cannot disappear.

### 1. Exogenous price determinants

Interest rates, monetary inflation, commodity prices, quantitative easing programs, financial subsidy allocations, market-driven allocations and subsidies, property access restrictions, law infringement squatting of the land, illegal competition, dumping, taxes, quotas and other trade barriers, monopoly and oligopolies of farmers, market structure, political systems (collectivist, mixed economy or liberal), land policy and zoning, ownership and tenure, political security and security of land ownership.

### 2. Indigenous price determinants

Location, the basic elements of yield, population growth, climate, soil characteristics, natural water resources supplies, land availability, demand for commodities, rents from land, agricultural production incomes, land capability, possible uses, exposure to natural disasters, climate change impacts and land conversion.

### 3. The facilitators of means of production

Transportation cost, logistic facility, 3PL availability, available labor force and population in the work force, related industries, customer location and distance from a town/city, a road, electricity and water supply, irrigation facilities, unemployment.

## III. Market Environment general trends

### 1. Price heterogeneity

With the advent of the single market in 1993, many observers predicted there would be harmonization of European farmland prices. It is clear that 20 years later, property values are still very heterogeneous between countries, to say the least. Prices which thus varied in the range from 1 to 4 in 1990 between France and the Netherlands, ranged from 1 to 6.6 in 2011. Will this trend continue?
In fact, we are in the midst of a global increase in commodity prices and very heterogeneous farmland prices. A coming depression, a global slowdown, deflation and the only current solution: Larger QE could trigger the coming years an increase in commodity prices, but also farmlands increasing the heterogeneity of prices.

### 2. The phenomenon of land abandonment

Older generations are passing away and as a consequence, the land is abandoned. In some cases, there is not even information concerning the owners. They have just left and/or died and nobody knows who the actual owner is. Experts have to value the effect of land abandonment using the previously described tools and seek an investment opportunity. See up to which threshold of price increase those farmlands will become profitable, start to attract people again and boost regional dynamism. Most importantly, old people are leaving farms and about 50% farms will change hands within the coming decade.

### 3. Humans vs. Technology

Currently, the average age of a farmer is 50 in South-West Europe. There are currently more MBAs than agricultural Master's Degrees. The younger generations are showing little interest in agriculture. According to another scenario, people would continue living in growing cities, and farmlands would be taken care of by robots supervised by few humans. The new modern technology has already made it bearable for the humans to live far away from the city thanks to the internet. Already we are observing the increasing role of direct marketing: lower logistics costs, shorter supply chains, enhanced traceability, local products, better quality.

### 4. The growth of demand of beef and dairy products in emerging countries.

Food consumption habits usually take one generation to change, or two in some regions. The populations used to certain food habits will not change them easily. Most marketing studies show that consumption habits acquired at an early age cannot be altered. Physical disposition is also a factor to take into account, for instance when dealing with Westerners unaccustomed to spicy food, or with Asian consumers known for intolerance of milk products, such as cheese, due to high level of lactose present in the product.

The solution relies on adapting and proposing an offer to people who will slowly change or adapt their consumption. This also applies to the study of arable lands and future product developments. Indeed, since in Asia arable land will decrease tremendously per person, reinforced by the fact that Asians will consume more and more meat, vegetables and wheat, it is interesting to focus in Europe on crops and cattle that will be the most demanded in Asia.

## 5. The monetary policy issues

The central banks accommodating financial monetary policies combined with local price policies and international trade barriers have complicated the task of buying and owning agricultural land. In a context of climate change, soil exhaustion and changing economic demand patterns, investing in farmland represents, more than ever, an opportunity, especially in countries where speculation on farmland has not taken off yet compared to US regions such as Iowa or Illinois which have already experienced a bull market for over a decade.

### a. Credit rates

There are correlated factors with the farmland price increase, because they enable farmers to settle down more easily. It is a very good incentive, and probably the best possible incentive for farmers willing to settle.

The 3 historical bull markets in agriculture are due mostly to previous interest rate cuts, which have pushed the farmers to expand and speculators to invest. The 2 previous bear markets occurred partly because of increasing interest rates.

Currently, interest rates are very low, near 0, and it is quite surprising that more farmers are not setting up new businesses. Indeed, credit rates have been at their historical lows for years, and worldwide central banks are not showing signs of decrease. On the other hand, what has been a strong incentive for the last decade doesn't seem to prevent farm entrepreneurs or speculators from investing much greater amounts in farmland.

One may ask if this is because banks cannot lend money anymore? Or because their lending policies have become stricter? Or are there other factors influencing even more the decisions of buyers? Fieldcoin Ltd will address those issues and boost land value in some regions like France, where farmland investment is not yet very intensive. But it should be soon when analyzing the real value of the land and the growing demand for food commodities, as well as the effect of boost and bust cycle of commodities on farmland prices.

### b. The monetary base hidden value and shadow pricing

Low interest rates and the increasing monetary base have pushed speculators into putting assets on treasuries and other financial assets rather than investing in the real economy. The gap of the price of gold is already great and even greater when purchasing land is concerned.

The shadow value can also be explained by the gap between cash rents and marginal returns, due to increased policies and local barriers and higher returns than when renting. However, the most significant portion of shadow value comes from the gap between the monetary base and the real value of farmland.

### c. The price of commodities

The price of commodities could be a starting point for the analysis of farmland prices. For many years, it has been and still is considered as the number one factor by scholars and professionals. However, as we have observed, the de-correlation of price commodities and farmland started a few years ago, and has undergone an unprecedented change over the last year. Although it is not the most important factor, it is nonetheless a very important one that cannot be avoided. In fact, in case of huge price drops on some commodities for an extended period of time, young farmers can go through bankruptcies that will affect their personal lives and bring some tragedies with it. It is a known fact that the farmers in France and some other countries correspond to the segment of the working population the most likely to commit suicide. Bearing this in mind, it is important for a farmer to prepare the future and plan his budget accordingly. Indeed, farmland is considered as an asset on its own, included in the accountings of the agro-business company.

## 7. Alternative use of land.

Among the crucial factors affecting price farmland during the 1st quarter of the 21 St century is the effective use of farmland. There are many more applications to arable/farmland than farming only typical crops of the region: Bio Organic Farming, Eco villages/Eco-Tourism, recreational land, tourism, gardening farms, horseback riding, reforestation or planting trees, land in fallow, cash crops, alternative production niche markets, implementing new, highly demanded crops (Asian emerging market demand), bioethanol and biodiesel cultivation, etc. The results depend on the income and return on investment. That is done by studying the variable that aim to capture the influence of non-agricultural demand. If more important that agricultural demand, it shows us the alternative use is more suitable.

Assessing the right use of land for the future is important for returns on investments. For example, during the last decade, we saw a high increase of biodiesel in countries like Germany. This has pushed up German agricultural competitiveness and ranking.

Similarly, on the other side of the Atlantic, the influence of real interest rates is clear. Thus, the decline in real interest rates between 1997 and 2005 in the United States promoted through this period a gradual increase in land prices. Despite the decline in CAV/ ha between 2004 and 2006, and the rise in interest rates between 2005 and 2007, the increase is accelerating because of agrofuel development programs.

## 8. Policy issues.

Policies are important issues also because of its indirect or non-market effect to demand. In fact, it is a part of a huge debate currently in Europe agricultural industry is at a turning point. Among those policies we can distinguish: Land leasing, Contract farming conditions, CAP European policies concerning agricultural subsidies.

While land markets are essentially free in most EU countries, the protection of farmers is ensured by a set of indirect tax and duty regulations, instead of openly protective legal measures. The high level of these financial obligations may squeeze out some speculative buyers from the farmland market sector.

High transaction costs prevent those changes. However, an unfavorable farm structure coupled with a low transaction fee could encourage speculative buying. This is likely to happen in a near future in Europe. It seems that Europe, mixed economy (Social-Capitalistic) will not let speculators from investing in farmland in order to limit the amount of land in fallow. For example, the French government has multiplied by 3 to 5 times the unoccupied constructible property land taxes in order to boost the construction sector and cope with the lack of accommodations in the housing market. It is likely that this kind of policy could be implemented to farmland when commodity will soar, and farmlands will become scarcer.

Fortunately, a mixed-economy, also means benefits and not only high taxes. It is possible, for example, for landowners to develop an activity on the land and receive subventions nationally from France and from the EU with the CAP (Common Agricultural Policy). The investors could then receive benefits and skip some taxes.

A special attention is given to policies on three levels: France, the EU and the World (WTO). For example, property tax rate on agricultural land also varies to a considerable extent. In most member states (Finland, Greece, Ireland, the Netherlands, Sweden and the UK) there are no such taxes, or they are kept below 1% of the market value of the agricultural land. Transaction prices in France for farmlands are high, about 5%. If there was an increase, it would automatically diminish the price of the land: *«The transaction costs (costs of real estate agencies, legal fees, transfer taxes), between different countries, also influence changes in prices even if they can explain only a small percentage of land value differences. Also, for all the reasons advanced above, the price of farmland, remains very heterogeneous among European countries for some time.»* **Source: Safer France**.

They are mainly focused on price determination concerning a specific region and a specific period of time. Each region must adapt its own methods in assessing farmland prices. Only information leaflets from private investment institutions, the FAO and Ministries of Agricuture provide factual but non-scientific articles explaining the past situation and future trends.

The demand will grow in terms of quality, if not in quantity. However, the hypothesis of a financial monetary crisis and its impact on the price of land and commodities has not been seriously considered by the scholars studying farmland.

The literature is still vague about price distortion in farmland prices. They focus mainly in public interventions and subsidies like CAP (common agricultural policies). However, with increased money printing and Quantitative Easing from Central banks, price and value seem to have a negative correlation.

There are no common nor universal rules concerning farmland. There are really too many interventions on the markets that alter the prices vs. value. Moreover, demographics, public infrastructure are specific to one country. Countries have to adapt their own methodologies in assessing farmland prices. As already underlined, scientific articles can be found about the price determinants in countries like Sweden, Germany, UK, Italy, the USA, but nothing about France and too little about Spain. Global studies on farmland is also scarce, and it only deals with the same object of farmland determinants, that is to say commonly accepted factors like climate change, market rents, commodity prices and so on. But none really actually try to establish a correlation between the financial markets and farmland prices, like studies that have been done previously, to a certain extent, in metal commodities.

Indeed, most global researches have based their studies on current economic fundamentals, taking for granted the 9 billion population growth hypothesis and soil degradation, urbanization, and so on. If the global economy continues on the same path, this is a scenario which is more than likely to happen. Nonetheless, there is a strong contradiction because the economic paths are not likely to continue following the same trends until 2050. In fact, tomorrow we will be facing a huge economic crisis which is likely to shake the whole word, and consequently there will be a disruption of current trends in the coming decade or the next. A study has revealed that 80% of the major economists have predicted that the next financial crisis leading to global recession is due to happen between 2017 and 2019. This may lead to some kind of global conflict, like the one after the 1930s, or at least put a halt on population growth. However, the hypothesis of a global financial crisis and its impact on the price of land and commodities has not been seriously considered. Considering the global context, there are indeed many distortions and irregularities caused by from the law of offer and demand linked with the dematerialization of our global economy. For example, why is it that countries like France and Spain have seen their arable land prices grow at a much slower pace than their counterparts in the Netherlands, Germany or even Poland, Serbia, Romania, Slovenia and Hungary, countries with much lower GDPs? A new and adapted methodology to study price determinants must be found for all farmlands in general and particularly for French Farmlands.

**List of main policies concerning European land trade:**

Taxation policies. Ownership policies. Renting policies. International trade policies (tariff trade barriers and quotas). Legislation on product safety and harmonized safety standards (French local stronger policies than EU regulations). Subsidies for new farmers buying land. Credit rates at 0% interest rates provided by the Government. Common Agriculture Policy subsidies in the EU. Quotas and Trade Barriers.

### 1.Corrected added value

To our base price, we should apply a corrected added value that will correspond to the intrinsic value of the land regarding its yield every year such as below in the example. Same for policy impact on prices, we should apply the price % impact and add the result to our price in construction.

The value of a hectare of land between European countries varies from one to nine. And France is differs from its neighbors by a moderate increase in the price of land and cheap land. But reduced by the corrected value added per hectare, the price gap between countries in Europe is only about 1 to 3.

**Example:** The hectare of land is worth € 20 100 in Italy, three times more than in Poland, but in both countries it needs 7.5 years production revenues to amortize the cost of acquisition. The corrected value added (GVA (general value added) + operating subsidies - taxes = corrected value, or CAV) is indeed estimated at € 2,600 / ha in Italy against € 850 / ha in Poland.

### 2. The opportunity cost

The same calculations have to be made for the targeted land compared to pasture and cereal land in countries with similar level of development and for similar type of land like for instance in the USA, Ireland, the Netherlands and Germany. It will give us an opportunity cost ratio to direct competition. The opportunity cost also have to be estimated taking main investments: savings accounts, treasury bonds, Bitcoin, Ethereum and gold in order to check the indirect competition.

The opportunity cost % can be deduced or added directly to our price. In order to calculate the advantage of disadvantage ratio, NPR, EPR and CTE will have to be calculated. The NPR is the ratio of domestic prices to world market prices, EPR is an indicator that measures the extent of distortions by border protection of products and agricultural input subsidies. The CTE is calculated by comparing the price that consumers pay for their food and the international price of each food product at the border. Differences between the NRA and the CTE arise from distortions in the domestic economy that are caused by transfer policies and taxes/subsidies that cause the prices paid by consumers (adjusted to the farm gate level) to differ from those received by producers. In the absence of any other information, the CTE for each tradable farm product is assumed to be the same as the NRA from border distortions and the CTE for non-tradable farm products is assumed to be zero.