



## IOTA GAMEHUB FUNDRAISING - UTILITY TOKEN - IEXP

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## Overview

At IOTA+ (a startup company) we plan to build on top of IOTA, a well established and fast growing technically innovative cryptocurrency network and ecosystem. Recent developments in IOTA have opened up amazing possibilities for building new businesses. In brief, IOTA provides a worldwide network that can handle transactions of many types, quickly and securely. What is more, though it does not use blockchain, any transaction can be trusted once it is registered on the network.



The team behind IOTA+ have always been great supporters of IOTA. They saw that IOTA will soon launch 'colored coins', Non Fungible Tokens, and Smart Contracts, all secured by the IOTA network. That opened up a world of possibilities. As they are Gamers, they immediately imagined the opportunities presented by the technology for applications in gaming. The introduction of IOTA Colored Coins (ICC) in particular was very exciting. IOTA colored coins are tokens that can represent real-world assets in a tamper proof way, based on the IOTA Tangle. That could be tangible assets like land or shares, but also ownership in the online world.

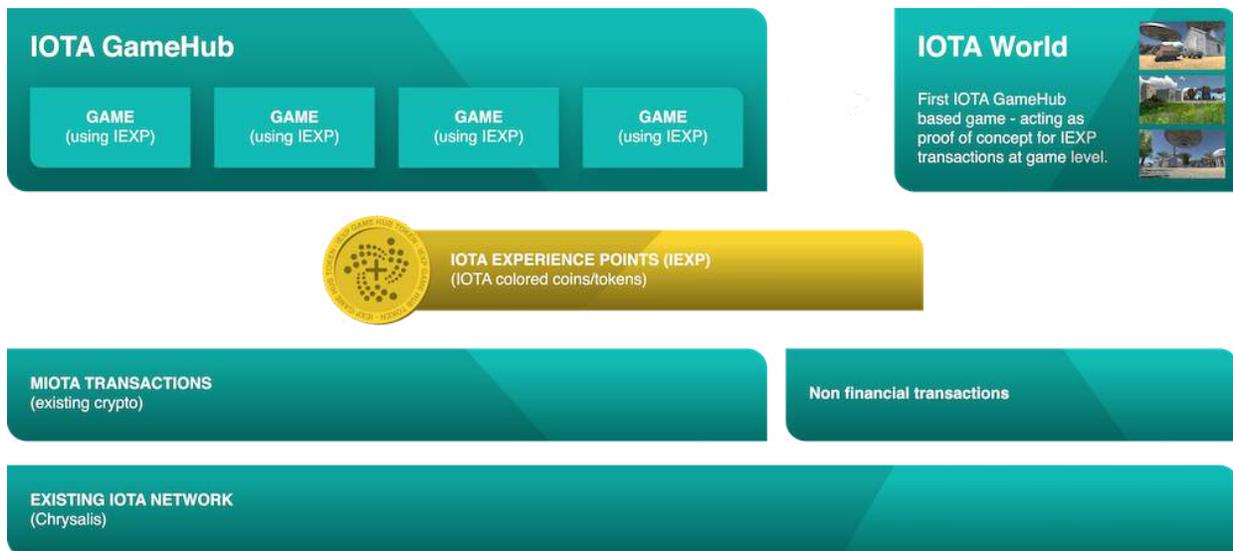
This paper describes IOTA GameHub and IOTA World, key elements in building a system to take advantage of the new possibilities. All of this also requires the creation of a new 'token', which are to be called IOTA Experience Points (IEXPs). This paper is written because IEXP can only be brought into existence with a Fundraising, and that process requires full documentation to satisfy the investors.

# IOTA World and IOTA GameHub

The innovative part of the system being developed is the interaction of the IOTA network (an established cryptocurrency) with a games platform which has two main elements, IOTA GameHub (the portal) and IOTA World (the first of many games). This will enable an utility token called IOTA Experience Points (IEXP) to be fully integrated into gameplay. This will allow individual players to both enjoy game playing and to participate safely in the growing cryptographic economy. Indeed many will be able to build their own businesses within the system, creating new unique Non Fungible Tokens that can be resold. Through the IOTA system any profits will easily be brought back to the historic financial system. The Fundraising is being made to launch the IEXP utility token.

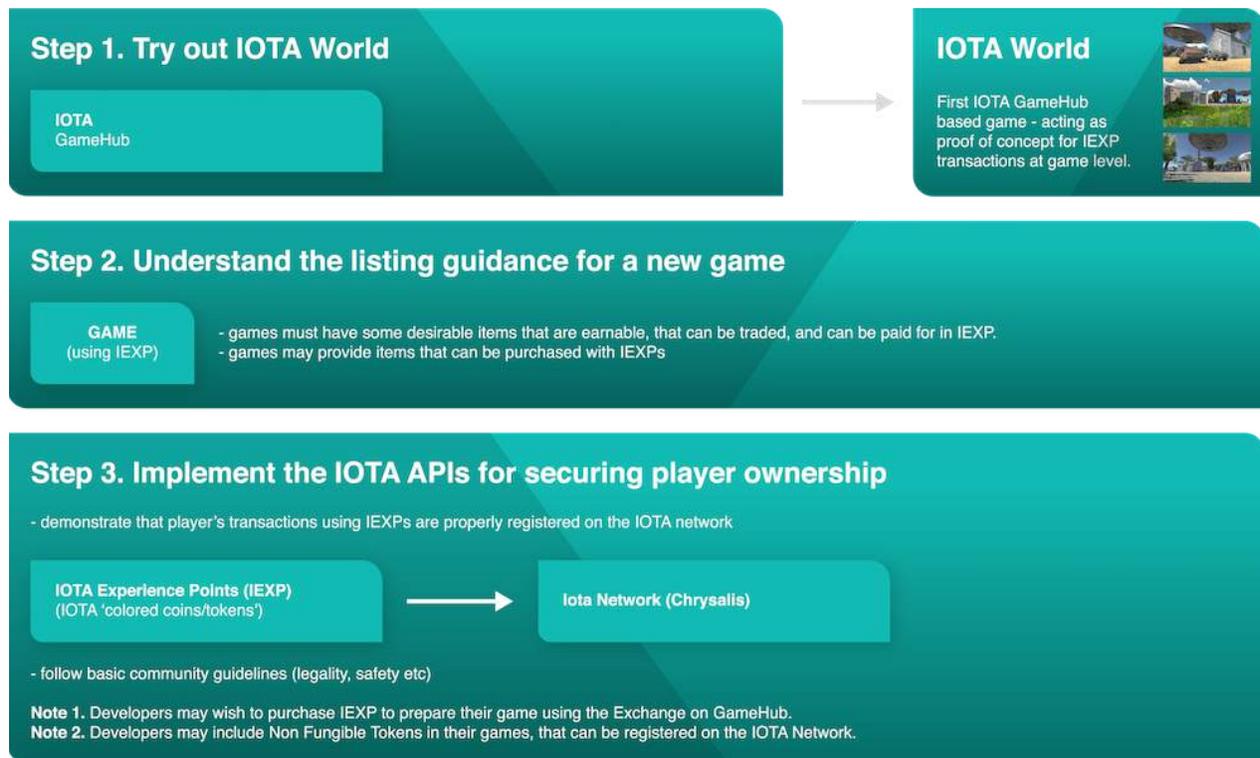
## IOTA EXPERIENCE POINTS CONCEPT

What have cryptographic tokens got to do with games? Well most interesting games already have some form of internal currency. Players can use it to gain advantage, and they can add to their account by being successful. Usually the creators of the game have control of that ingame currency. When a player wants to move to a different game, they usually have to start again. The IOTA+ system allows a radically new approach. IOTA GameHub will host a wide range of games and apps that support use of the IEXP utility token. Players will be able to buy IEXP utility tokens, earn them, or spend them for items. Any time they want, they can then move to a different game, keeping their utility tokens. The IEXP will be tradeable with a smart contract against IOTA. IOTA itself is a widely traded cryptocurrency so they can convert IEXP to old money – dollars, euros etc when they wish. The players will be in control.



## Game Developer Interest

Games Developers are always looking for a new way to differentiate themselves from the crowd. Players can be fickle, moving around as soon as they lose interest. IOTA GameHub, and its ecosystem using IOTA Experience Points (IEXP), will prove very tempting. In particular, it is believed that Developers will be attracted by a growing number of players who like the idea of using IEXPs to trade within and between games. There are also associated opportunities to grow income substantially with Non Fungible Tokens, paid for with IEXPs and registered on the IOTA network. The diagram below should help to explain this further.



Two simple examples of application.

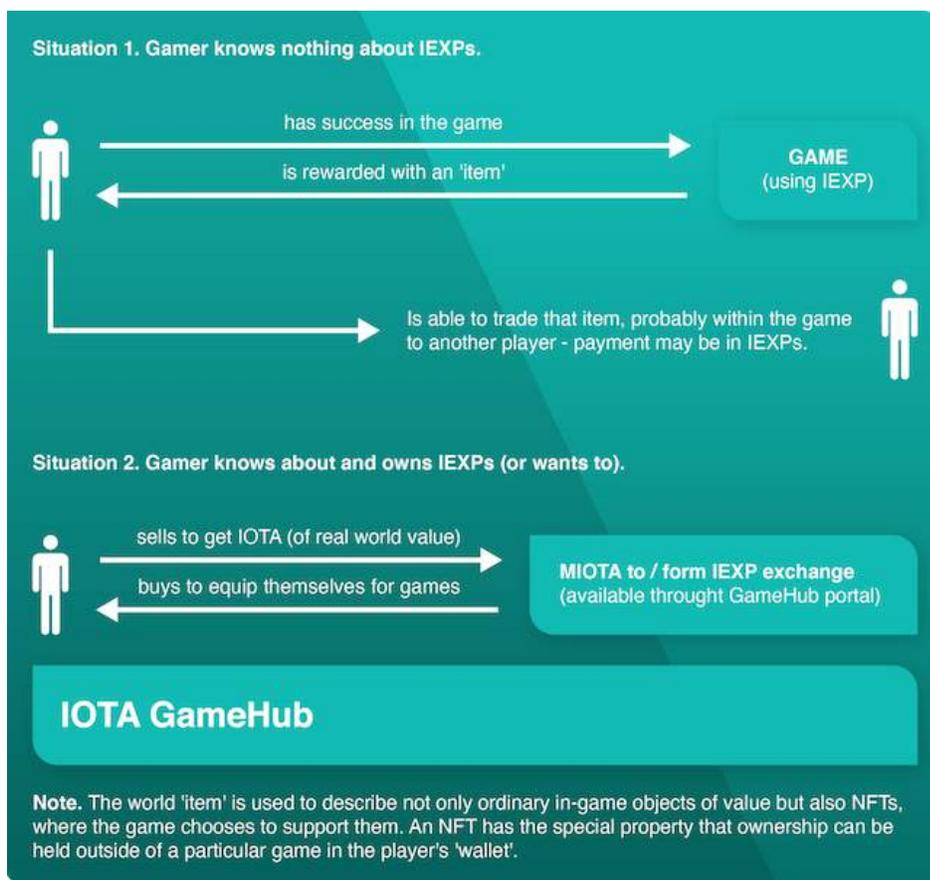
- A new player enters the game. They do not have any IEXPs, and have probably never heard of them. They achieve success in some element of the game (e.g. a high score) and they are rewarded with an item – a trumpet, for example (in game). Later they discover that trumpets are in demand by other players and that they can trade them in the game. Somebody offers to buy their trumpet for a number of IEXPs. They trade, and they are now an IEXP holder. Indeed, over time, they build up quite a lot of IEXPs and they learn how to trade them, take them to another game, and even cash them out.
- A rich but lazier player enters the game, having purchased some IEXPs beforehand. They decide that they want a drum, so they buy with these utility tokens one from the game itself, none being available for trade from another player. The Game Developer is now better off and can always trade IEXPs for IOTA (an established cryptocurrency) and then into old style money, should they so wish.

In the second example, the drum might actually be something of wider interest, for example an online artwork. That can be registered with the IOTA network as a Non Fungible Token and proof of ownership can

be stored in the player's own wallet. The possibilities are endless, and Games Developers are the right people to make amazing things happen. Nobody really knows where this leads. For example, if a game decides that it will only accept IEXP rather than credit card payments then it allows a parent to limit unexpected costs by pre-stocking a child's wallet with IEXP – which may make the game popular with parents. Elsewhere, talented players may decide to focus on creating sellable items and build a business that way, supporting themselves and others wherever they live in the World.

## Gamer View and Interoperability

At the moment, most gamers have little idea about cryptocurrencies, at least in the context of game playing. Gamers are, however, a very intelligent and quick learning group. They already spend a great deal of time thinking about how to maximise their returns, in the form of high scores or accumulation of in-game goods and services. Gamers will be very quick to see the advantages of IOTA GameHub and the games on it. The diagram that follows explains how Gamers are expected to experience IEXPs.



The existing point systems in today's games are antiquated.

Many gamers find the existing system frustrating. In many games they can collect things, level up and their account gains some kind of personal value but it is not a real value.

Gamers find it very difficult to cash out all their points, levels and achievements earned in-game.



When they stop playing a game and start another game, all of their work, points etc. are lost. They have to start over, they can't bring the wealth with them to the new game.

## Conditions for new GameHub Games

To become listed on IOTA GameHub, games will be required to use IEXP. The games must use the utility token IEXP and NFTs in a consistent, safe way and must meet community standards, for the good of the developers and user community of GameHub.

Each game developer will be free to choose how their game is developed, provided that all in-game items are bought and sold with IEXP. This is not the place for a full description of how new games become eligible for listing, but the above provides an outline at least.

## GameHub Game Examples

There are limitless possibilities to use the idea of the IEXP utility token in games. There are easier solutions which include pay to win and some more complex solutions to avoid that. Different game developers will have radically different concepts.

### Simple Advertisement and Levels example - Jump and Run

A simple jump and run game could show advertisements before a level starts and let the user earn IEXP directly if the gamer successfully ends the level. The developer then earns a small amount by having the gamer watch a particular advertisement, and may reward the gamer with IEXP. The users would be able to progress in the game by finishing levels while collecting IEXP by the way. Later on the user can level the account down by exchanging IEXP for IOTA in the IOTA GameHub exchange, or just by moving the IEXP to another IOTA GameHub game.

### Jump and Run with additional items example

A lucrative option for the developer would be to offer some sort of chargeable items which are collectable, winnable or buyable..

Imagine a 4 player online jump and run game. In one existing and very successful game, 4 players compete with each other and the first finishing the level wins. On the way there are many obstacles and items to collect to speed up the player or to slow down the other 3 players for a few seconds. The winner and the second place get some in-game coins. There is an in-game shop to buy other avatars or clothes to customize your character with these coins. In the existing game, you also can buy these goods by credit card.

A game within IOTA GameHub could be very similar. For example, to get limited NFT customizations you can buy them in the shop with IEXP.

The collectable items, for example 'to speed up', could be used directly or later to interchange this normal non NFT item with an NFT item like an avatar directly with IEXP. The player could change them with another player peer to peer or in the ingame marketplace. To make it even more interesting for the gamers, a games developer could let the gamers win a specially rare NFT customization like a nice hat or a skateboard or just a non NFT like a 'super speed up'. There are limitless possibilities.

If the user wants to start playing another game or to make gains they can exchange all their items peer to peer with another player or in the in-game marketplace for IEXP.

## IEXP - Colored Tokens

The IOTA Experience Points (IEXP) are the colored tokens from the IOTA network as described earlier. They will act as the main utility token for all IOTA GameHub games. They will be created in the near future, as soon as IOTA releases 'color coin' functionality. They will then be offered for sale in the fundraising called initial Colored Coin Offering. The precise finance figures are seen in a later section.



Note that the technical way that IEXP are generated and secured on the IOTA network means that there can never be more 'made' once the initial number is created - there can be no inflation or erosion of value.

We will use IOTA smart contracts to construct a decentralized exchange to trade IOTA versus IEXP in the GameHub.

## IOTA World Explained

IOTA World (now under development) will be a fully working proof of concept of how a game will work on IOTA GameHub. It will demonstrate exactly how new Players will first encounter the IEXP utility token system, as well as how a typical Game Developer will integrate IEXP into their game. As shown below, a typical game will have its own internal trading system. In the case of IOTA World, players will be able to purchase, combine, or create things like chairs, cars, or even complete houses. They will be able to own land (as Non Fungible Tokens NFT) and mine valuable sources like metals or wood. In short, there will be things to buy and sell. The following diagram outlines how it works.

## IOTA World

First IOTA GameHub based game with IEXP transactions in game



- Player gets unique ID to use in game.
- Unique ID will allow any IEXP or NFT assets player obtains to be held securely for them.

### SITUATION 1. Player has IEXP tokens and chooses to buy land.

- Player buys land (ILAND tokens - each plot is a Non Fungible Token that can be stored in a cryptographic wallet).
- Player builds on land, catches animals, mines and otherwise builds up game points and quality of life (within the game).

### SITUATION 2. Player has no tokens so cannot buy land.

- Player is allowed to mine on common land, and even on owned land, if the owner is neglecting it.
- Player now owns items like gold, silver, produce from animals.

#### ILAND

Each parcel is a Non Fungible Token (NFT)

- tradeable  
(as an NFT)

#### OTHER WEALTH

Gold, crops, produce etc.

- tradeable  
(in game  
using IEXP)

**Note.** Any player can create their own NFT if they have materials and IEXP. If they don't have any IEXP, they can sell materials (gold, crops etc) for IEXP. Once they have created an interesting NFT, then a player can sell it.

IOTA World development uses the game engine Unity to create a browser game. It uses several tools including Voxels (3D cubes) to mine materials and create new NFT objects. The landscape of rivers, trees, mountains and plains will have buildings and be populated by animals. Players will be able to build and furnish houses and create rich elements of their own choice.



There are similar land based platforms, for example, Decentraland. IOTA World seeks to add more interest by requiring land to be looked after, be that by mining, construction, farming or other methods. Those who do not care for their land will find that others have come in and taken resources. It should therefore be a more dynamic and interesting environment. Also, it should be possible through effort to create a good level of in-game wealth that is transferable outside of the game when desired. Most competitor platforms are designed so that players lose their wealth when they leave for another game. The target audience is gamers who enjoy Animal Crossing, Minecraft, Harvest Moon, Anno1604. There is then a new audience of crypto enthusiasts, keen to not miss out on new developments.

Note. The game will have cheater prevention mechanisms to stop users teleporting within the game, or automatically farming the materials that they need. The number of accounts that one user can set up will also be limited.



## IOTA World Gameplay

Each player will login with their own unique IOTA address. At first login, players will be able to generate their own avatar with Voxel for free and start exploring the IOTA World right away.

The IOTA world is a non hostile environment, no natural enemies in-game, no weapons.

The game is fully focused on creating, expanding and customizing your property and items. New players will start without a piece of land, but will be able to buy ILAND, which comes in the form of a Non Fungible Token or NFT for short.

Players can buy/own multiple ILAND NFT's to be able to use for more resources, expand their property or to sell it again via the marketplace or to another player.

New players are able to collect resources or mine on property when other property owners are offline or inactive, players will be able to trade collected resources and gain enough in-game currency to buy their own ILAND, so no initial investment is needed to start playing the game.

## IOTA World Investment

A player who wants to invest can acquire property NFT called ILAND. This land is backed up as an NFT and can be held on their address.

Players can go to the marketplace and buy/sell NFT objects, resources, or even build/buy a house for their land with the utility token IEXP to customize it and to give it a special value. They can always trade their ILAND NFT peer to peer, in the inGame marketplaces or from their wallet.

## IOTA World Earning

For players who would rather not invest in property or items, or who don't have access to capital like IEXP or IOTA, there will be many in-game opportunities to turn gameplay time and effort into in-game wealth

- In the Item Editor they can design their own NFT objects to use themselves or to sell them in the marketplace or p2p
- Design their own Objects in the editor with voxels
- Mine sources like wood, gold etc. for creating objects
- Create the NFT gameobjects with the sources collected for free and put them on the world or sell them p2p or at the marketplace for IEXP

# Initial Coin Color Offering Roadmap

This section contains information about the Initial Color Coin Offering to be conducted in Switzerland. While best efforts have been made to ensure accuracy, dates or details can only be provisional until this paper is in final form.

At the time of writing this (11 June 2021) the pre-ICCO fundraising (see below) is finished. The company (IOTA+ or subsequent title) will soon be formed in Switzerland, and that is where the principals involved live. Under Swiss law it is believed that the final version of the Whitepaper is required only for the public fundraising - ICCO, though that is expected to be within the next few months. The full schedule, including the details of the offering are shown in the graphic below.



The funds of the pre-ICCO stage will not be used until the creation of the company. Note that the Initial Color Coin Offering covers only the sale of IEXP utility tokens, the coin that will act as in-game token. There will be separate creation, and sometimes sale, of in-game Non Fungible Tokens (NFTs) like ILAND. Funds raised, and additional income from subsequent NFTs, will be used to keep a rapid pace of development underway on IOTA World, as well as to provide incentives for third party games developers, for marketing, and for support services.



## Why will the price of IEXP probably rise?

The demand for IEXP should rise as each gamer entering the system and building wealth raises the demand, while the supply is absolutely limited. All the in-game items and NFTs can only be purchased with IEXP. The IOTA GameHub games will use IEXP utility tokens in many ways. That means the gamers will keep them within their games to not lose their progress of the account or in-game wealth, for example a gun.

# FINMA Form

When the Initial Color Coin Offering was conducted in Switzerland, certain information was filled out in the FINMA form. FINMA is the Swiss Financial Market Supervisory Authority. There is a useful page on their website: [Assessment of Authorisation Enquiries and ICOs](#) for those who wish to inform themselves about the Swiss system. FINMA provides a checklist, as set out below.

## **Name of the project**

IOTA GAMEHUB - IOTA Experience Points - Initial Color Coin Offering

## **Company name:**

IOTA+ (provisional, not yet formed)

## **People involved:**

Founder, issuer, seller etc

## **Secondary trading:**

Where, how, foreign approval if needed

## **Project Description:**

Issue of a 'utility token' or 'colored coin' on the IOTA Cryptocurrency system. Coin name IEXP (IOTA Experience points. Coin purpose. To act as in-game token for games operating on a new portal, to be called IOTA GameHub.

## **Project Goal:**

To bring into existence a large number of IEXP utility tokens that are secured on the IOTA cryptocurrency network and which have an intrinsic value as being useful within online games.

## **Project Process:**

To create a portal and an initial game that demonstrates how trading works in a game environment. Involve other game developers to create a large cluster of games supporting the use of the IEXP coin in a game environment.

## **Service Features:**

Game players will be able to earn IEXPs through normal gameplay, or purchase them (via the intermediate currency of MIOTA) in order to use them within games as utility tokens. They can then take any IEXPs they own with them when moving to a different game from a different supplier. This prevents players being 'locked in' by a games developer.

## **Target Investors:**

Primarily experienced investors in cryptocurrency, able to see the potential value in this new offering. There will also be some interest from experienced games developers who want to secure IEXP to use within their games at an early price.

There are no restrictions on investors providing that they are legally able to participate in Swiss based fundraisings.

## **ICCO Fundraising Timing and Milestones:**

Ideally the ICCO fundraising will take place in Q2 2021. This is an internationally competitive marketplace and delay could lead to loss of market position.

The technology to support this project has only just become viable (due to an improvement in the IOTA network infrastructure). The project is ready to execute and have a working structure (games) within the next 12 months.

## **Technology Used:**

The technology used within the games that use in-game tokens is well established and widely used on other blockchains. Many games already have internal 'wealth generation' and player 'wallets'.

The new element is the utilisation of the rapidly evolving IOTA network which is about to launch 'colored coins', Non Fungible Token (NFT) support, and Smart Contracts.

## **ICCO Currencies:**

The ICCO is priced in the cryptocurrency MIOTA. Participants are able to secure MIOTA on major cryptocurrency exchanges worldwide, and indeed many will already have them as an investment.

As the price of MIOTA itself fluctuates daily, no other pricing will be offered in parallel.

At the ICCO the transaction will take place from the Firefly Wallet or a dedicated exchange. Participants will be able to see IOTA leave their normal IOTA wallet and, a few months later after IOTA Foundation launched the color coins on the mainnet, arrive back as IEXP utility token, which is actually just an IOTA Colored Coin.

## **Funds Raised:**

The pre ICCO will sell sufficient IEXP utility tokens to raise MIOTA 100,000. If MIOTA is then trading at USD 2 it will raise the equivalent of USD 200,000.

The ICCO will sell sufficient IEXP utility tokens to raise MIOTA 375,000. If MIOTA is then trading at USD 2 it will raise the equivalent of USD 750,000.

The pre-opening sale will sell sufficient IEXP utility tokens to raise MIOTA 1,500,000. If MIOTA is then trading at USD 2 it will raise the equivalent of USD 3,000,000.

## **Funds Allocations:**

The funds will be used for a number of purposes. Firstly, to further develop the pilot game IOTA World and the portal IOTA GameHub.

Secondly, to provide incentives for third party Games Developers to make the effort to convert existing games and build new ones that can use the utility token IEXP.

Finally, to use for promotions to attract gamers to the site, and coverage in the press.

## **ICCO Surplus:**

In the event that there is excess demand, allocation will be made on a 'first come first served' basis.

## **Token Issuance:**

A utility token, IEXP (IOTA Experience Point) will be issued after the launch of colored coins from the IF. These will be created in large (but limited by technology) number after the ICCO.



### **Token Standard:**

The token will exist as a colored coin within the IOTA network. IOTA is a distributed network using DAG logic. DAG or 'directed acyclic graph' is a mathematical construction which is an effective alternative to blockchain methods. The IOTA website ([iota.org](http://iota.org)) has extensive materials explaining the method.

The IOTA system is designed to be able to track IOTA based colored coins within the standard IOTA wallet.

### **Investor Transfer:**

The ICCO will be conducted as a two stage process. First investors will express interest, giving a number of units required. Those who are accepted will then be asked to pay the specified amount in Miota to a given MIOTA address.

After the IF launches the colored coins they will receive the equivalent in IEXP utility tokens to the same wallet they had sent MIOTA from.

It is likely that in each case a small test transfer (e.g. 1 Iota) might be made to test address accuracy etc.

### **Transfer Timing:**

Times for each stage of the process described above will be published in advance of the ICCO, and progress in transfer of coins etc shown in real time.

### **Utility Token Functionality:**

Typically, a game developer will buy some IEXP to act as their game's internal currency. A player will then enter the game, probably with no idea about IEXP as being any different from normal game currency.

The player will then exert effort or skill and earn rewards in the game. Those rewards will, in some way, be convertible to IEXP. When the player moves on to another game, they can retain their IEXP.

This assumes that all games are in the GameHub environment (run by the IOTA+ company) which specifies the technical standards that allow this to work smoothly.

### **Functionality Timing:**

Once an investor has received IEXP in their wallet, there is nothing to stop them using it to transfer them to another person or trading it in some way within the IOTA ecosystem.

They will be able to use it in a Game environment, in the pilot game IOTA World, from Q3 2021.

### **Investor Rights:**

The IOTA system and network is a decentralised cryptocurrency, and the precise technology, network and wallet design are not owned by any central authority. Therefore, once you own the utility token IEXP, which is just a special form of MIOTA, you have no recourse to anybody.

Cryptocurrency investment should only be done by experienced investors. At the same time, most investors are anonymous so it is difficult to know if they are experienced.

  
**Due Diligence:**

It is believed that the Applicability of the Money Laundering Act allows this ICCO to be free of the requirements of the Money Laundering Act.

i.e. There is NO AMLA requirement.

That is because the tokens are primarily intended to be utility tokens that use the DAG (similar to blockchain but still different) only for purposes outside of the financial sector.

**Secondary Market:**

There will be an exchange to allow conversion to MIOTA, holders will sometimes wish to convert their utility tokens to IOTA.

Transfer of IEXP wallet to wallet is trivially easy within the IOTA ecosystem, normally clearing within a few seconds at zero cost.

**Token Trading**

IEXP utility token is intended to be used in payment or reward within the context of online games. This is as simple as a player wanting an item, seeing the price, accepting the price, and transferring IEXP to get access to that item.

**Buyback:**

There is no intention to 'buyback' IEXP.

## Appendix 1. More about IOTA World

The main body of this document describes IOTA World in broad terms, and explains the context for its creation. It has many other novel features however, that a gaming enthusiast may find of interest. Please use the information in the main body of the report as the definitive information. The information below is written in a more conversational form and may be less accurate.

### The new IEXP utility token approach of IOTA GameHub

All efforts in collecting items, leveling up and so on will be monetizable.

Find, collect, trade and buy Non Fungible Token (NFT items) to make your account valuable.

Bored with a game? Simply change to another game, having first sold your items to get IEXP utility tokens which are transferable between IOTA GameHub games.

Then head over to the next game in the IOTA GameHub and utilize your IEXP utility tokens however you want, for example, to level up a gun in a shooter game.

### IOTA World Non NFT Resources and NFTs

There will be a certain amount of different objects you are able to own. We will separate them into objects which are NFTs and those which are not.

#### NFT objects

There will be 3 different Non Fungible Tokens in the IOTA World game.

- IEXP as the main utility token similar like a currency but just for utility use
- ILAND (IOTA Land) as land property
- Created objects from the Item Editor

#### Ordinary resources

All the objects you are just able to hold and trade inGame and which are not backed by coloured tokens are not NFTs. These are basically all the resources you can mine, for example:

- Gold
- Diamonds
- Wood
- Sheep Wool

### Land - Colored Coins ILAND - NFT

Landowners will be able to farm on their land, irrigate land, nourish the animals to produce resources or just mine resources to sell them or even to create new NFT objects with them in the Items Editor.

The amount of land within IOTA World is limited. There will be flat buyable land (ownable NFTs called ILAND) divided by mostly unflat and unbuyable lands like mountains, water, and other special places.

Players can buy and sell the ILAND NFTs at any time in the marketplace, peer to peer or directly from your wallet.

#### Lands:

- Let you put objects on it to customize the property. (build structures, place items)
- Produce resources like for example wood, diamonds and gold

- Landowners can mine on their land when you are online and other players can mine on your land when you are offline
- Land can be bought/sold and transferred in the form of a NFT

## Item Editor

Players will be able to design an object that they desire, and determine which non NFT resources to use and what quantity of the objects shall be created.

In the item editor Players can choose the materials they want to use to design something unique. When a design is finished you choose the amount of objects to create, the editor will show you the amount of materials you need to create your limited and copy protected tradeable NFT objects.

To realize/build your designs in the Item Editor you will need to mine or buy the required resources first.

For each NFT object created in the Item Editor it also needs an IEXP token to be initially created.

If you don't own the utility token IEXP yet, you can earn the needed IEXPs first by just mining rare resources and then selling them for IEXP utility tokens to other users who need them. For example to create an NFT object. Additionally you can sell the collected resources to someone to collect or invest and trade them later.

After you've built your object in the Item Editor, you can do with them as you wish - sell them for profit, share them with friends, or show them off as a product of your work. Place them in the ingame marketplace or just put them on your own land.

To assist with new object creation, minimum pre-build skeletons will be provided by the Item Editor. For example, when building a chair, a modular chair skeleton will be available from which you'll be able to edit/modify as you wish. You can build a simple chair, or use the basic model to develop a complex chair.

### This prefabs have some features:

- It already contains the correct code
- The NFT object can immediately interact within the game when you hold it on your account which is basically just an IOTA address
- Your player for example will be able to sit on the created chair
- The prefab specifies where you can or can't customize the surface
- Stick any voxel/3D cube just on top of the prefab
- Able to use multiple voxels to create 3D objects

This means an endless possibility for players to create custom designed objects that can be traded in game and from your firefly wallet as limited and copyrighted NFT.

### Mining:

To build new designed NFT objects in the Item Editor, you will need to own the resources first. To own resources, you need to mine or buy them directly from other users.

### Mining on your own land:

Go to your own property and start mining like in Minecraft. You will mine and get non NFT resources by this process.

## Mining on strangers land:

Explore land from other players. If you find a property on which the owner is offline or outside you can mine in the same way as you would be a landowner.

## Mining on special land:

This land can't be owned but you can mine on it.

## What can be mined:

There will be more rare and less rare sources which can be mined.

Users can mine for example following resources from the ground:

- Gold
- Diamonds
- Silber
- Copper
- Stone
- Loam
- and so on

## Animals:

Players will be able to find and catch free walking animals in their enclosure on their properties.

- Need a safe and strong enclosure
- Will break out if not cared for
- produces resources

## Farming:

Players will be able to grow resources to feed their animals or to sell on the marketplace.

## Farming on your own land:

- Need a section of your land which is a farming land
- Needs seeds from plants or from the marketplace
- Plant seeds (seeds destroy themselves after using them)
- Wait and collect the crops after growth is complete
- Use or sell the crops

If you don't collect your crops soon after they've grown, other players will gain access to harvesting them!

They don't like to waste things.

## Farming on strangers land:

Explore land from other players and collect crops which are not collected by the land owner.

## Technical Information

### IOTA World

We use the programming language C# in the Game engine Unity to create the Browser Game IOTA+. To get the IOTA protocol working on c# and in Unity we will use the felandils c# library from github.

### Server

We will develop a simple TCP Client/Server Communication like in the IOTA World POW to make simple POST- and GET-requests.

The Game server will hold basic game info, like your collected non NFT resources, character position and position of placed NFT objects like a chair or a house on the users property.

### Smart Contracts in IOTA World

To generate NFT objects the IOTA World Game will communicate with Smart Contracts. The Gamer spends non NFT resources and IEXPs and receives NFT objects for it. The smart contract receives datas and IEXPs from the game and sends datas and the newly created NFT objects back.

### Smart Contracts in the GameHub

The GameHub will include a small decentralized exchange to let gamers and investors trade the IEXP utility tokens versus IOTA.

### Store of Value

Your IOTA address holds all your NFTs (colored tokens). Ownership of items like IEXP, ILAND and inGame created NFT objects will be stored on your IOTA address. You will be able to see and move your inGame NFTs from your favourite wallet (firefly). Non-NFT resources and other progress will be stored in your account on the server.

### Cheater Prevention

We will prevent users teleporting within the game or automatically farming the material they need from the server side.

Users will be prevented from setting up infinite accounts to harvest faster by IOTAs dust protection. That means each address needs to have 1 MIOTA on it's address to receive a transaction.

We will construct cheater detection which the server will use to determine if a real user is playing or just a bot.

### Shop

This shop is a building to enter with your character where you see the full assortment of all objects for sale.

IOTA is the currency of the realm. Buy and sell items as you wish. Use them, hold them, or give them away. Trade non NFT and NFT objects to build your own business.



## Guidance for Gamedevelopers:

Early analysis suggests the following guidance for making IEXP based games

- usable unlimited non NFT items like for example a 'speed up' should disappear from the game after using it to avoid inflation and decreasing value
- avoid selling items in the ingame shop which are important to get further in the game to avoid a pay to win game
- have buyable and unbuyable (earning for work) items
  - to let users interchange the items properly and to not compete with items you want to sell
- the amount of items received for "work" should be calculated with
  - reward something like the playing time or a kind of difficulty
  - for example
    - ~1 hour playing time to receive, find, win, collect an item
    - or the need to pass a level to receive an item and so on
- the unbuyable items have value
  - because it's difficult to get them
  - because other players don't want to spend the effort to get the item
- the buyable items have to be peer to peer (p2p) or in a ingame marketplace interchangeable with unbuyable items (which you get just for work)
- items you get just for work have to be p2p interchangeable with buyable items and IEXP

In summary, it is good for gamers to be able to collect and win helpful items while they are able to interchange them with items from other players or to buy very limited and tradeable items in the ingame shop. Also, the gamers can play and earn IEXP by selling collected items to other players and the game developer can earn IEXP by offering helpful items in the shop.