

Investors Presentation



Crypto Blockchain Industries

<https://cbicorp.io/>

Sept. 2022

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The background is a dark blue gradient with a grid pattern. It features several overlapping financial charts: a bar chart in the top left, a line chart with circular markers in the center, and a candlestick chart in the bottom right. Various numerical values are scattered across the image, including 44.291, 26.417, 31.012, 48.991, 12.002, 20.556, and 44.870. The text 'Company Statement & Strategy' is written in a large, bold, white sans-serif font in the lower-left quadrant.

Company Statement & Strategy

01

Unlocking value by investing in blockchain-based applications across multiple industries

CBI invests and develops applications in the blockchain space.

As an investment company, CBI's interest extend across multiple industries, either as sole operator, in partnership with co-founders or as a financial investors. Investments have already been made, ranging from interactive entertainment to industrial services. Investments can range from modest commitments to multimillion dollar single transaction.

As a developer, CBI conceives blockchain related applications and solutions. CBI is currently developing AlphaVerse, an online persistent world operating on the blockchain, featuring various themed or branded environments. Users can interact freely within them, sharing in virtual experiences that combine social interaction with the best of online gaming.

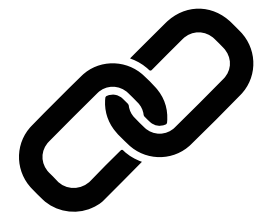
CBI is NOT an exchange platform and its main business is NOT to trade crypto-currencies.



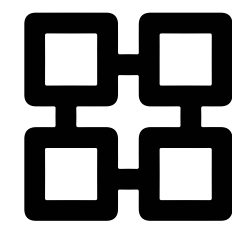
The Blockchain Industry & Opportunities

02

The Blockchain Industry: Definition



Blockchain technology is a ledger that stores transactional records, also known as blocks, of the public in several databases, known as the “chain,” in a network connected through peer-to-peer nodes.



The blockchain relies on cryptographic mechanisms that guarantee the authenticity of transactions.

The transactions become inseparable from their history, by grouping together in "blocks" and are therefore unforgeable.



Every transaction in this ledger is authorized by the digital signature of the owner, which authenticates the transaction and safeguards it from tampering.

Hence, the information the digital ledger contains is highly secure.

The Blockchain Industry: **Specificities**

Distributed ledger technology

All networks participants have access to the distributed ledger and its immutable record of transactions. With this shared ledger, transactions are recorded only once, eliminating the duplication of effort that is typical of traditional business networks.

Records are immutable

No participant can change or tamper with a transaction after it has been recorded to the shared ledger. If a transaction record includes an error, a new transaction must be added to reverse the error, and both transactions are then visible.

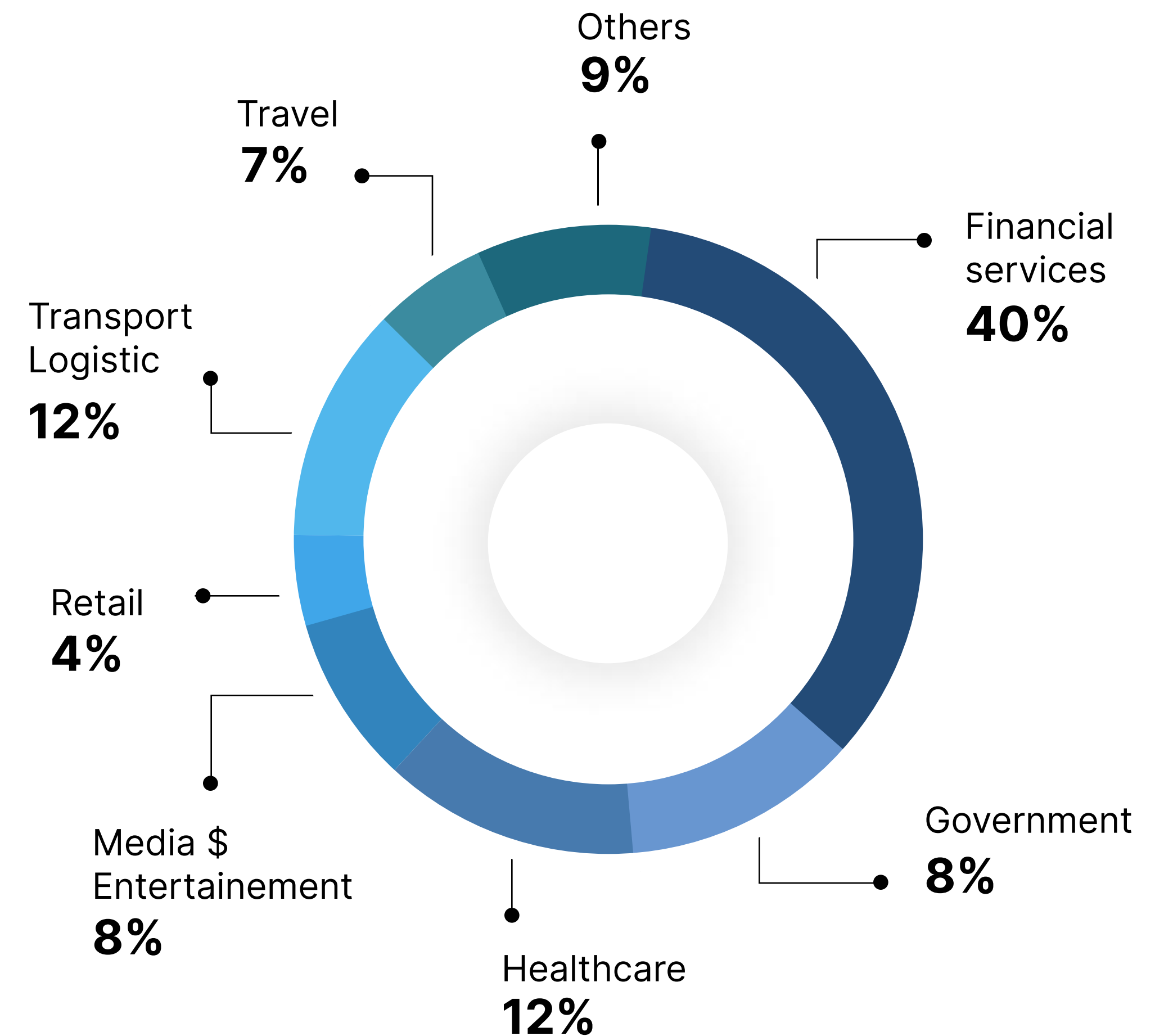
Smart contracts

To speed transactions, a set of rules – called a smart contract – is stored on the blockchain and executed automatically. A smart contract can define conditions for corporate bond transfers, include terms for travel insurance to be paid and much more.

The Blockchain Industry: Opportunities

In the gaming industry, cards are being reshuffled thanks to Blockchain.

Blockchain technology is here to stay, and more and more industries are or will need to make the switch



Source: Deloitte 2019

CBI's Investment Policy

CBI's Investment Policy is to invest in all domains of the crypto-blockchain industries and token as well as ongoing businesses and start-up companies, selecting the segment of the value chain which offers the best opportunities

Operating Businesses: CBI controls, alone or with partners, the business

Investments: CBI invests in start-up companies; CBI also invests and assists existing companies in a digital transition to the blockchain space

Intellectual Properties: CBI can invest into property rights (IPs)

Portfolio Management: CBI holds and manages a portfolio of crypto-currencies and tokens, and also owns highly liquid assets such as cash and listed shares

The complementary nature of these business lines enables the optimization of synergies.

CBI's permanent focus is to build the portfolio, maximize ROI and operate on very low overhead.

AlphaVerse, a metaverse

03



AlphaVerse Overview

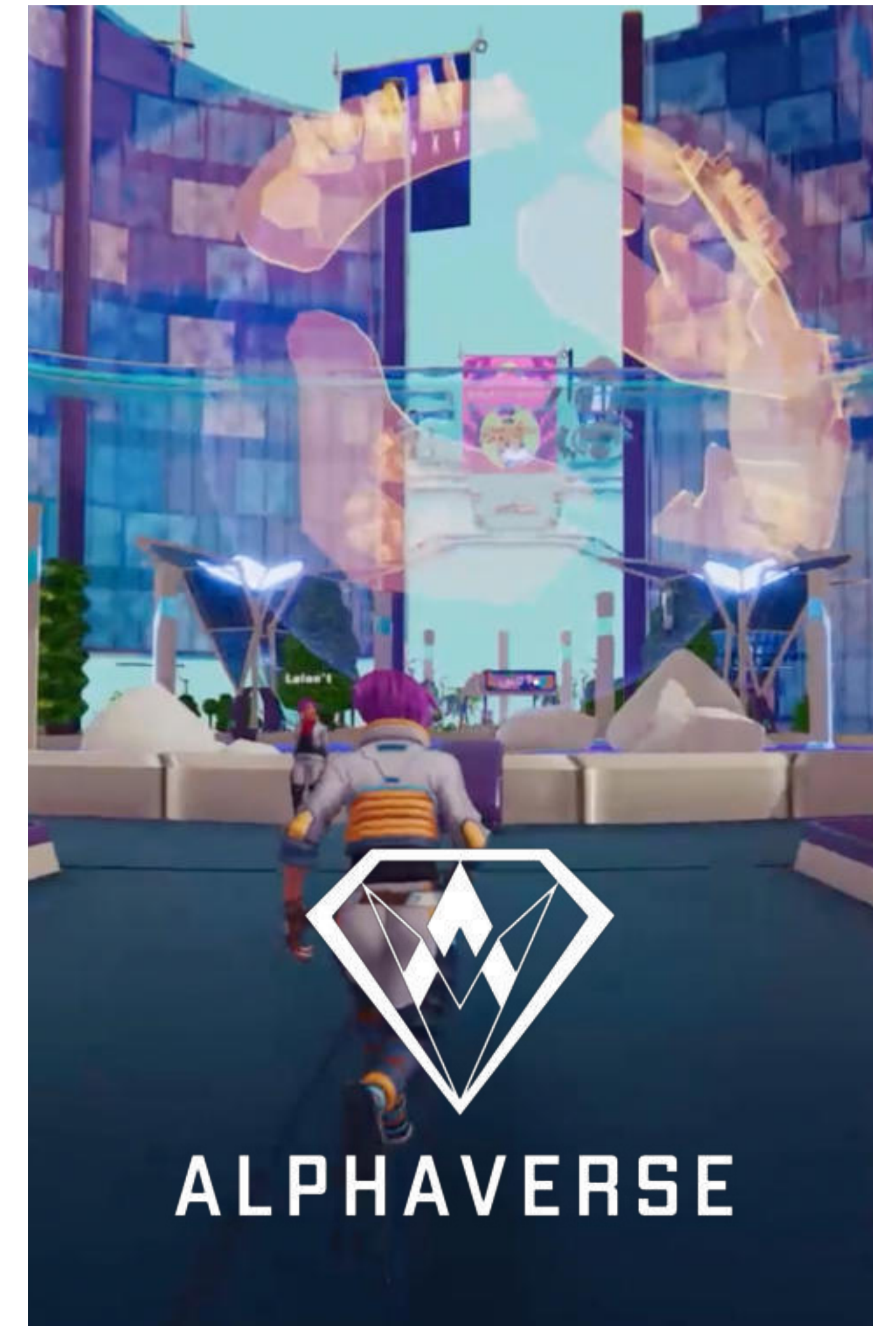
A metaverse offering social & entertainment experiences by connecting different worlds together, allowing for infinite tailored expansions

One HUB fits all!

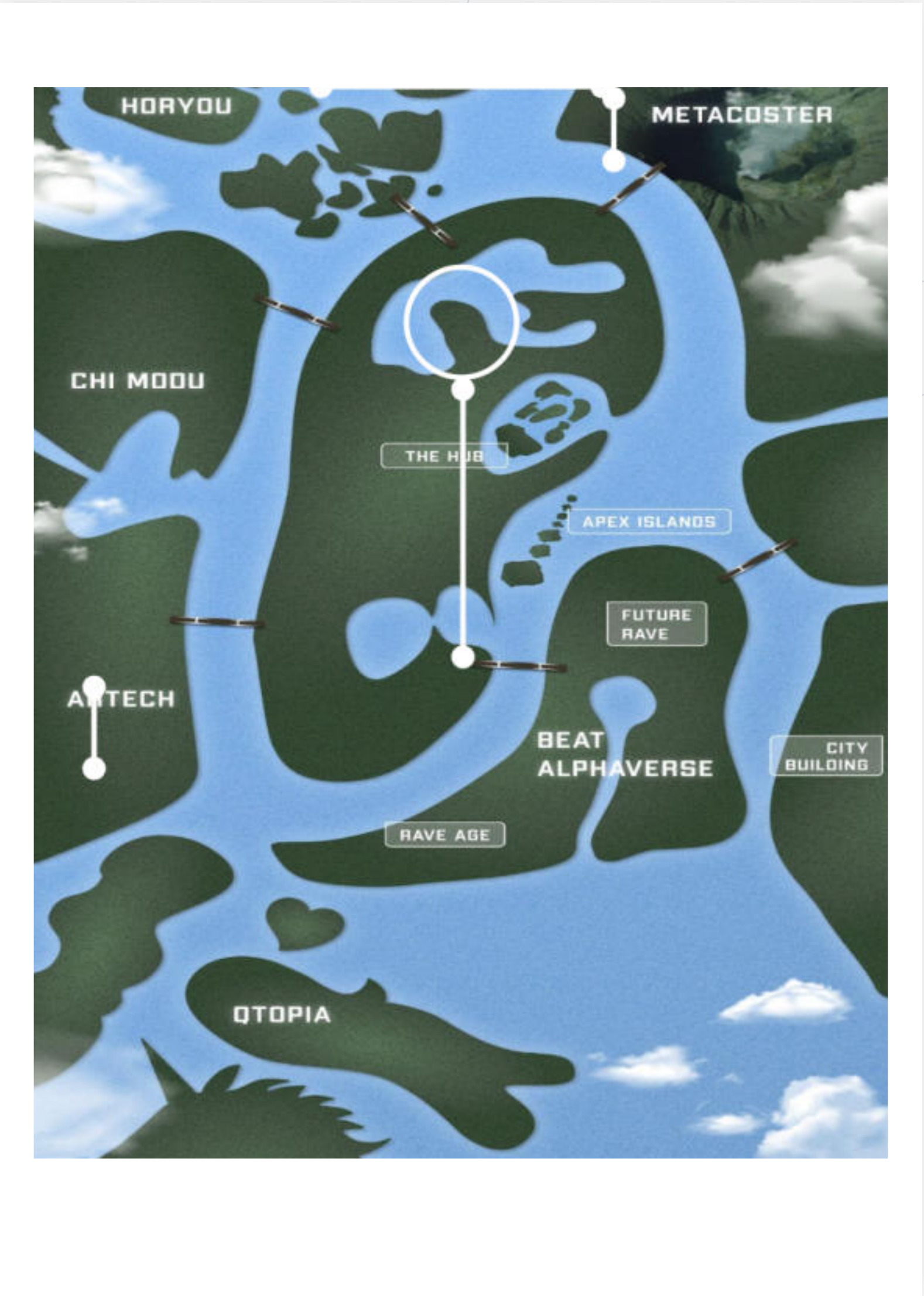
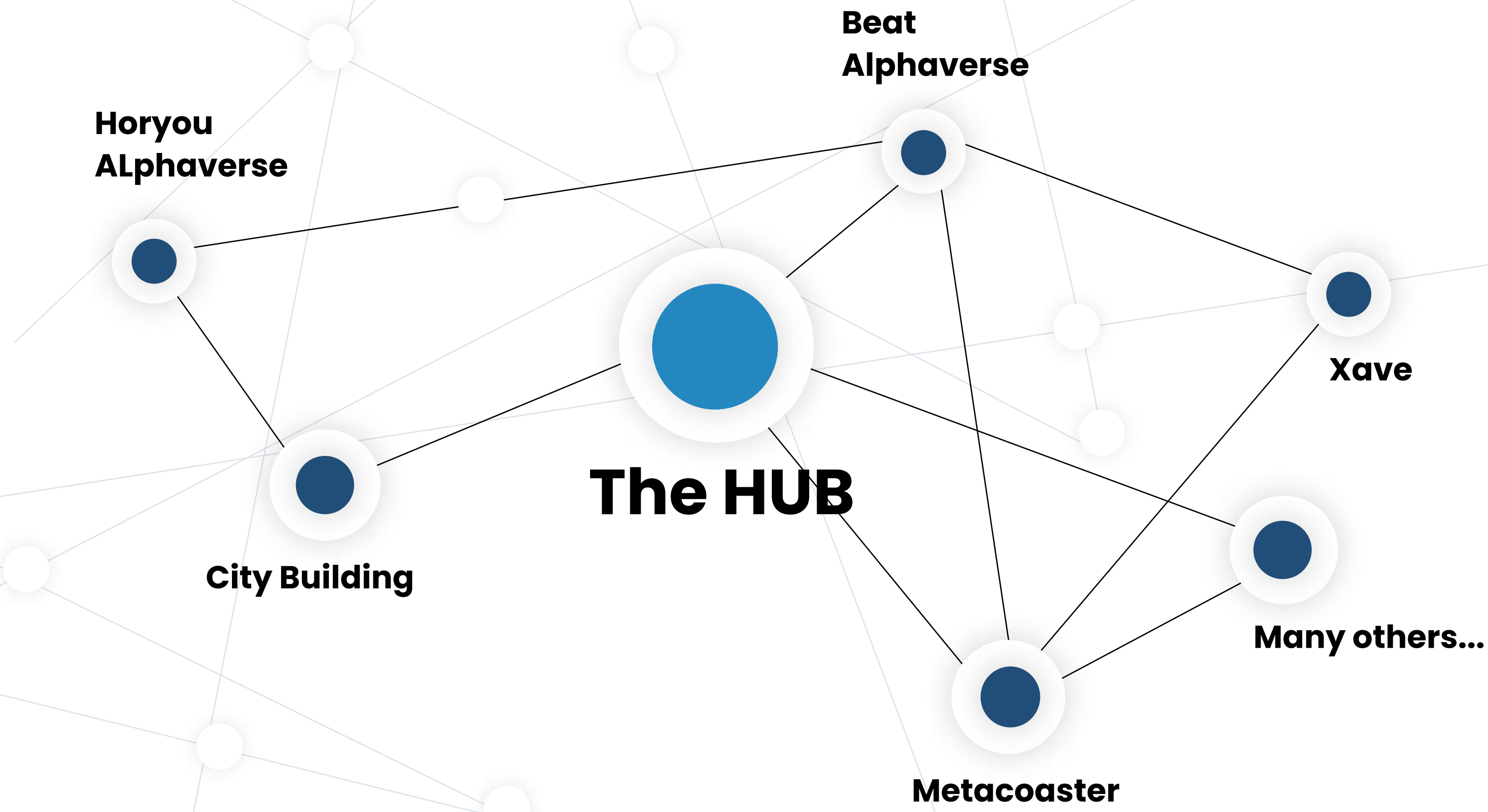
The AlphaVerse revolves around a central Hub with an access to different metaverses in the blockchain gaming and NFT space, each of them offering a specific gameplay:

- The number and types of experiences is infinite, contrary to one digital world;
- Transition to/from each universe is seamless, with the same avatar and the same account;
- Development of the universes can be made in parallel;
- Games made by 3rd-party developers can be connected to the Hub against a revenue share;
- Unity engine and multi-chain approach.

AlphaVerse is opening in September 2022



A Universe of Universes



AlphaVerse Vision / The creation of communities

The main objective is to offer tools to the players to create their own communities, through the creation of community houses.

The owner selects the theme of the house and is incentivized to recruit members through a Reward Program, as he/she receives a % of the spend of the members in the AlphaVerse.

Each house has a billboard at its entrance to advertise:

- Community houses have an open area.
- The upper floors contain flats to be sold by the owner to community members.
- There is also a “Members Only” section.
- The owner can upload and stream video content throughout the community house to entertain the community and share content.
- Range of community houses is broad: gaming, sports, football, dating, etc..



AlphaVerse Use Case #1:

Music Artist

An artist in AlphaVerse World can access the following features:

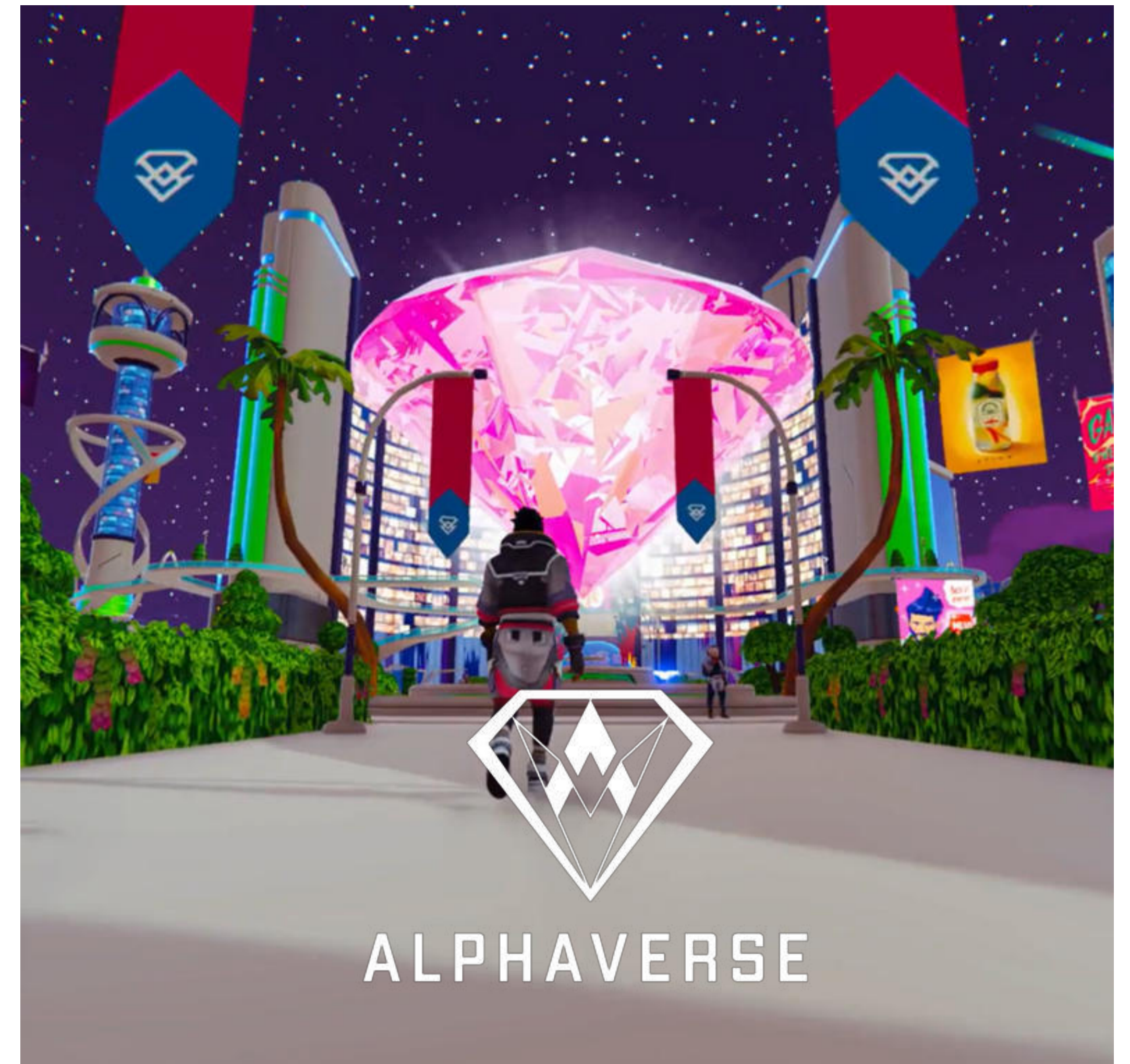
- Create an avatar
- Access Billboards Content or create his own content
- Adding users to their Friend List, Chat (Private and Public Chat, one-on-one, Voice Chat)
- Buy Lands and Flats
- Create a community house around his work
- Manage his community
- Create NFTs, sell his content directly in the metaverse
- Create their own events for free or by selling tickets.
- Raise funds for future projects
- Become a member of a Fan Club – Community Houses.
- Buy and Sell NFTs



AlphaVerse Use Case #2: Owner of a Photo Gallery

This user buys a community house and dedicates it to an Art Gallery. An owner of a Photo Gallery in AlphaVerse World can access the following features:

- He has a billboard at its entrance
- He chooses its content
- User defines status the status of its street level: anyone or invite only
- User can buy a billboard to upload/advertise its content : To decorate his Community House
- He advertises the theme of the community house
- Deals with its community
- Sells flats, etc...



AlphaVerse Use Case #3:

Visitor

If a single player does not want to buy any real estate (land, flat, etc..) and does not want to spend any money, he can access the following features:

- Join an arena: free, no authorization, and watch billboards
- Visit the Expo and the Museum
- Enter an Art Gallery if such Gallery is “public”
- Ask approval to join an Art Gallery (access to street level)
- Enter a house or a flat if the owner has made this NFT “public”
- Buy a flat in an Art Gallery (no approval needed)
- Buy an Art Gallery and select a theme
- Buy a land with a regular house
- Buy a regular flat outside an Art Gallery
- Participate in chats
- Do nothing :-)



Typology of User Experiences

Player, without any purchase of land, house, flat:

- Can access public land and forums, can watch all content
- Can access houses and flats only with the approval of the owner
- Cannot enter community house except if approval of the owner

Player owner of land, house, flat outside a community house

- All of the above
- Display content on the billboards located on/in his land, house, flat outside a community house

Player owner of flat in a community house

- All of the above
- Can enter his/her community house (no approval needed)

Owner of a community house

- All of the above
- He gets 5% of the selling price of any flat (and 5% of the fee on secondary sales)
- Create community pool receiving 10% of the spending of the community members in the metaverse
- Raise cryptos / Fund projects
- Every time members of his Community House spend money in the Alphaverse, 5% is allocated to a common pool which is allocated by the DAO of the members of the community house

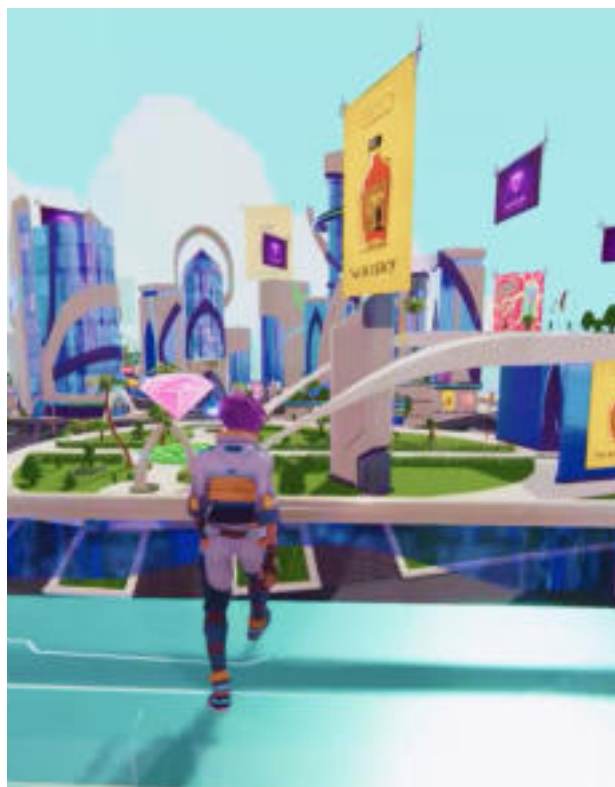
Organizer of a forum (AlphaVerse)

- Control all billboards in the forum
- Has more awareness as Forum is in a central place

Sponsor

- Does not need to own any account, wallet
- Experience defined on a case-by-case basis

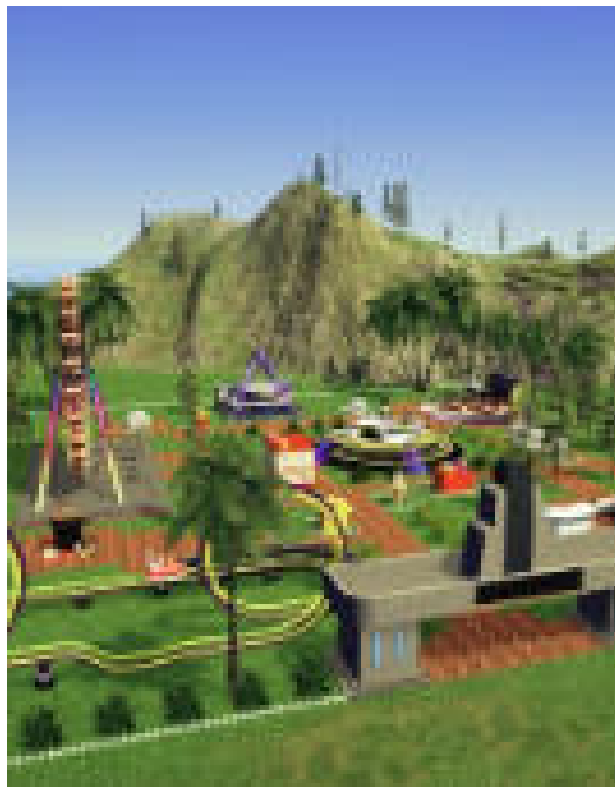
Our Universes (1/3)



From The Hub of AlphaVerse, the central place, you can join multiple universes. Each universe offers a unique experience.



Chain Games is a blockchain-integrated gaming network that allows for decentralized games of skill, contests offering play-to-win and play-to-earn titles, enabling gamers to earn cryptocurrency for their efforts.



MetaCoaster

Players will create their amusement park and compete against other players. The most valuable assets (land, coasters, shops) will be traded as NFTs. Solo mode, leaderboards, Open world with 90,000+ plots.



Apex

Apex Predators is developing a universe around super predators and offering over 5,000 figurative digital artworks of these powerful animals, associated with rights granted to engage the community on the development of this dedicated universe.

Our Universes (2/3)



Horyou

Horyou is an action oriented social network for Social Good where Members, Organizations and Personalities connect and interact within an internet-based global community.



Artech

Artech is a metaverse entirely dedicated to digital art and artist, where we're creating a whole digital art ecosystem with artists, gallerists, events and exhibitions through the use of NFTs and blockchain technology.



Chi Modu

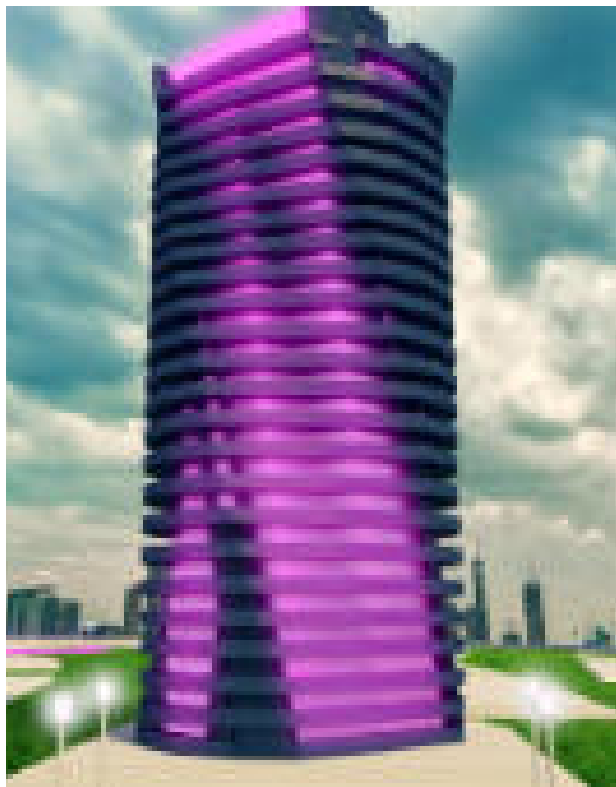
The creations of the legendary hip-hop photographer Chi Modu, who passed away in May 2021, will be available on AlphaVerse within a specific universe dedicated to Chi Modu, hip-hop artists and their fan community.



United at home

Alongside this first NFT sale with United at Home, CBI is unveiling Beat AlphaVerse, a dedicated music metaverse by AlphaVerse. The primary goal with this exclusive United at Home NFT collection is to raise funds to support charity programs.

Our Universes (3/3)



Beat

Alongside this first NFT sale with United at Home, CBI is unveiling Beat AlphaVerse, a dedicated music metaverse by AlphaVerse. The primary goal with this exclusive United at Home NFT collection is to raise funds to support charity programs.



Qtopia

The Qtopia name for the LGBTQ Metaverse is based on the term Utopia, which describes a community or society that possesses highly desirable qualities for its members. Qtopia aims to be a safe, accepting and inclusive space.



Rave Age

Rave Age will be a metaverse devoted to rave and electronic music, its history, its key figures and its latest news. Players will be able to watch videos, collect NFTs and share experiences and content.



Xave

Xave World is a metaverse devoted to music that offers a wide range of features and experiences: communities, NFT marketplace, concerts, and a dedicated cryptocurrency (Xave Coin)

And many more...

Revenue Streams of AlphaVerse

The company plans to derive its revenue through the following sources:

- Binance Smart Chain (BNB) will power AlphaVerse and will be used to mint BEP20 Tokens and NFTs. The long-term goal is to be multichain.
- Sale of virtual land NFTs
- Sale of infrastructure NFTs: This includes buildings, monuments, display galleries/museums, roads/bridges for use on within land parcels. There will be different types of buildings and vehicles..
- Sale of Avatars
- Sale of Consumables: this includes the following potions or digital consumable [weapons, ammo, food, drinks, gas, fuel for vehicles, etc..].
- Sale of Cosmetics: this includes any type of digital wearable items (such as t-shirts or robes), customizable avatars, skins for avatars, digital pets, etc..
- Sale of Games inside the metaverse.

Revenue Streams of AlphaVerse – Play to Earn

- Renting land, house, flat or any other NFT is an attractive option for allowing other designers to use your land for an agreed-upon time
- Players customize the land, house or flat with something special and resell it
- Organize events to promote the uniqueness of an estate
- Multiple owners can form estates with each other's lands to connect similar themed experiences to help attract an audience
- Giveaways are a fantastic way to bring in people to check out or compete in a particular site/experience and expand the players following
- NFT owners have a stake in making the AlphaVerse something fantastic and unique!

The Blockchain Industry: **NFTs**

NFTs are Keys to Blockchain Gaming



Non-Fungible Tokens, or simply NFTs, are digital assets representing an image, a video, song, or any other type of digital file. NFTs are made on the same technology that cryptocurrency works on.

A data unit is stored on the blockchain, certifying that a particular digital file is unique and therefore not interchangeable. Every NFT has a contract attached to it, which includes information, such as, the amount of commission that the seller gets when the NFT is resold, any royalties relating to the licensing of the art, or multiple owners of the said art.

NFTs can be bought and sold on various platforms like OpenSea or SuperRare, or in stores of online world.

Why Blockchain and NFTs Make Sense in an Online World

Land

- Exact area is known, divided in multiple NFTs
- Area and number of each type of NFTs is known to everyone
- NFTs can be transferred instantly between players, outside of the game
- Each of such transfers can be traced on the blockchain

Buildings

- For each type of buildings: quantities, ownership are known
- Any transaction can be settled immediately on the blockchain

Mini-Games

- Can be developed by the publisher or the player
- Any result can be verified on the blockchain

Casino games

- Each slot machine spin and its payout are traceable on the blockchain
- Payments can be made instantly

Lottery Games

- Each ticket is printed on the blockchain
- Exact number of tickets is known
- Combinations played are known to everyone, games are provable

In-App Purchases vs. Non-Fungible Tokens

IAPs in an Apple Game

NFT on Blockchain

Reasons for purchasing

- Some assets only available against cash
- Convenience

- Convenience
- Re-usability
- Gifting

Future Value

- No future value
- Lost if not used by the user

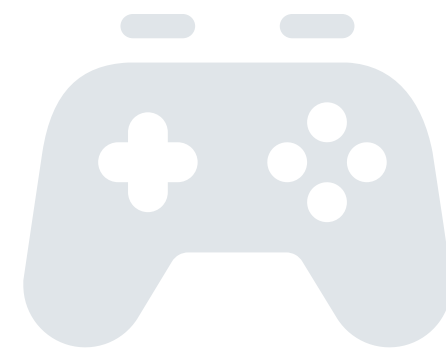
- Potential value depends on demand/supply
- Tradable value

And Much More!

- Traceability
- Security
- Economic Benefit

The Blockchain Industry / The Gaming Opportunity

RECAP:



Why would a gamer play a blockchain-based game instead of a standard game on PSN, Xbox, Switch...?

Some games are available only on the blockchain

This is due to their gameplay: Crypto-kitties, a game where players “breed cats”, is by nature only available on the blockchain.

Players buy 2 cards (NFTs), combine them and receive a 3rd NFT as a result.

Each NFT is part of a limited series, with a defined number known to everyone.

More and more, even standard games will incorporate a blockchain layer

This is due to the very nature of the NFTs: these digital cards embed data which make them valuable.

Adding a blockchain layer will bring value to the players.

Tokenomics

CRYS tokens

- Crystal (CRYS) is the governance token and medium of exchange of The Hub and of some universes.
- CRYS can be purchased to build / enjoy amazing experiences and to build a self sustainable economy within Alphaverse.
- CRYS token holders are able to vote to govern features and upgrades to the Alphaverse.
- The AlphaVerse DAO will enable CRYS token holders to participate in staking and other rewards including NFT drops.
- 600 million CRYS tokens.

Last transactions

A sale already took place in Calendar Q4 2021, as a price of \$0.083 per CRYS token.

Typology of buyers:

Vesting schedule was as follows:

Until October 31, 2022, the Purchased Tokens are fully locked

- 25% Purchased Tokens become available on January 31, 2023
- 25% Purchased Tokens become available on April 30, 2023
- 25% Purchased Tokens become available on July 31, 2023
- 25% Purchased Tokens become available on October 31, 2023

Financials / Cap Table

04

Financials

CBI has been created early 2021 and is receiving capital contributions from the holding companies of F. Chesnais (See next slide).

The contributions include:

- Cash
- Investments in companies (National Carrier Exchange, a transportation platform)
- Investments in game companies (OP Productions, Free Reign East) which have been generating cash and profits for the last 2 years.

Accounts have been reviewed by RSM and Avvens, the auditors of CBI.

Initial contributions

(000'S of euros)	Capital Increase	US\$
Cash	549.1	635.3
Atari shares	1 953.0	2 259.6
Crypto-currencies	9 338.6	10 804.7
Investments in companies	12 171.6	14 082.6
Investments in companies	3 438.0	3 977.7
Total contribution	27 450.2	31 759.9
Issuance of shares	18 000.0	20 826.0
Consolidation premium	5 000.0	5 785.0
Shareholders' Loan	4 450.2	5 148.9
Total compensation	27 450.2	31 759.9

There is no value allocated to the AlphaVerse, to the NFTs, etc...

Note: as of 31 March 2022

Investors Presentation

(000'S of €)	March 31, 2022	March 31, 2021
Revenue	-	-
Other income	4 280.7	-
Cost of goods sold	(487.1)	-
Gross margin	3 793.6	-
Research and development expenses	(538.5)	-
Marketing and selling expenses	(562.5)	-
General and administrative expenses	(749.6)	(5.0)
Other operative income (expense)	-	-
Current operating income (loss)	1 943.0	(5.0)
Restructuring costs		
Other income (expense)	0.0	-
Operating income (loss)	1 943.0	(5.0)
Cost of debt	(62.2)	-
Other financial income (expense)	2 044.7	-
Income tax	-	-
Net income (loss) from continuing operations	3 925.5	(5.0)
Net income (loss) from discontinued operations	-	-
Net income (loss) for the year	3 925.5	(5.0)
Group share	3 807.0	(5.0)
Minority interests	118.5	0.0

Revenue

- Sale of tokens.
- Licenses fees.

Expenses

- Classification by destination.

Financial income

- Trading of CBI shares by TSAF.

Income taxes

- No income tax payable.

Consolidated Balance Sheet / Assets

ASSETS (000'S of €)	March 31, 2022	March 31, 2021
Intangible assets	11 014.5	-
Property, plant and equipment	11.8	-
Rights of use relating to leases	2 236.2	-
Non-current financial assets	8 144.9	-
Deferred tax assets	-	-
Non-current assets	21 407.4	-
Inventories	2 828.5	-
Trade receivables	440.4	-
Other current assets	-	-
Cash and cash equivalents	2 647.2	37.0
Assets held for sale	-	-
Current assets	5 916.1	37.0
Total assets	27 323.5	37.0

Intangible assets

- See next slide

Long-term Rights of Use

- Long-term assets correspond to a restatement of leases (IFRS 16) - See also Liabilities

Non-current financial assets

- Non-current financial assets represent shareholdings in unconsolidated subsidiaries (NCX)

Inventory

- The portfolio of tokens and NFTS is recorded as inventory for Euro 2,828.5K (see slide 35)

Intangible Assets

INTANGIBLE ASSETS (000'S of €)	March 31, 2022	March 31, 2021
Games	1 794.2	-
Logos and brands	1 013.2	-
Rights on token NCX	4 101.7	-
Goodwill	4 105.5	-
Total contribution	11 014.6	-

Comments

Non-current financial assets represent shareholdings in unconsolidated subsidiaries (NCX)

Consolidated tokens and NFT inventory

As of 31 March 2022

Token	# Tokens	Market Price/Token US\$	Market Value US\$	Market Value Euro	Gross Value Euro	Accrual Euro	Net Value Euro
	A	B	A*B	C = A*B 1.1085	D	E = C - D (IF < 0)	D-E
ETH	126.76	\$3 282.3000	\$416 049.83	€ 375 326.86	€ 492 355.39	-€ 117 028.53	€ 375 326.86
USDT	6 277.00	\$1.0000	\$6 277.00	€ 5 662.61	€ 5 340.62	€ -	€ 5 340.62
BTC	26.98	\$45 528.0000	\$1 228 345.44	€ 1 108 114.97	€ 1 160 681.88	-€ 52 566.91	€ 1 108 114.97
USDC	738 763.02	\$1.0000	\$738 763.02	€ 666 452.88	€ 652 443.70	€ -	€ 652 443.70
CHAIN GAMES	-	\$0.2000	\$0.00	€ -	€ -	€ -	€ -
BNB	1.00	\$428.7600	\$428.76	€ 386.79	€ 164.58	€ -	€ 164.58
WETH	0.59	\$3 286.2700	\$1 942.86	€ 1 752.69	€ 1 674.15	€ -	€ 1 674.15
MATIC	-	\$1.6200	\$0.00	€ -	€ -	€ -	€ -
CRYS	499 860 000.00	\$0.0833	\$41 653 333.80	€ 37 576 304.74	€ 499.86	€ -	€ 499.86
ATRI	326 489.00	\$0.0250	\$8 166.07	€ 7 366.78	€ 19 633.52	-€ 12 266.74	€ 7 366.78
LIGHTS	6 520 000 000.00	\$0.0025	\$16 300 000.00	€ 14 704 555.71	€ 652.00	€ -	€ 652.00
NFTs	-	\$0.0000	\$0.00	€ -	€ -	€ -	€ 19.80
ATRI (Contribution)	30 000 000.00	\$0.0250	\$750 353.40	€ 676 908.80	€ 676 908.80	€ -	€ 676 908.80
TOTAL			\$61 103 660.18	€ 55 122 832.82	€ 3 010 354.50	-€ 181 862.19	€ 2 828 512.00

Consolidated Balance Sheet /

Equity and Liabilities

TOTAL EQUITY & LIABILITIES (000'S of €)	March 31, 2022	March 31, 2021
Capital stock	24 258.8	37.0
Share premium	-	-
Consolidated reserves	(10 446.8)	-
Net income (loss) Group share	3 807.0	(5.0)
Shareholders' equity	17 619.0	32.0
Minority interests	206.6	-
Provisions for non-current contingencies and losses	0.0	-
Non-current financial liabilities	4 573.4	-
Deferred tax liabilities	-	-
Long term lease liabilities	2 015.6	-
Other non-current financial liabilities	-	-
Non-current liabilities	6 589.0	-
Provisions for current contingencies and losses	-	-
Current financial liabilities	-	-
Short term lease liabilities	236.5	-
Trade payables	2 559.2	5.0
Other current liabilities	113.2	-
Current liabilities	2 908.9	5.0
Total equity and liabilities	27 323.5	37.0

Evolution of shareholders' equity

- Contribution in kind
- Private round
- Repurchase of Atari warrant offset against the reserves

Payables

- Mainly consulting fees
- Employee benefits are not significant (less than 2 KEuros)

Non-current financial liabilities

- Non-current financial liabilities correspond to a Shareholder's Loan (Euro 4,573.4K)

Long term lease liabilities

- Long term lease liabilities correspond to a restatement of leases (IFRS 16) - See also assets

Cap Table

As of 31 March 2022

	Shares		Voting Rights	
	#	%	#	%
Ker Ventures, SARL	224 392 425	92,50%	224 392 425	92,50%
Ker Ventures, LLC	205 999	0,08%	205 999	0,08%
Total F. Chesnais	224 598 424	92,58%	224 598 424	92,58%
Other shareholders	17 989 076	7,42%	17 989 076	7,42%
Total	242 587 500	100,00%	242 587 500	100,00%



Exhibits

05

Teams

**Fred CHESNAIS**

Chairman,
Chief Executive Officer,
Non-independent director

Frédéric CHESNAIS is a graduate of the Institute of Political Studies Paris, and has a degree in Finance and Law. He began his career as a financial advisor and practiced as a lawyer specializing in mergers and acquisitions. He then worked for Lazard Bank from 1995 to 2000.

From 2001 to 2007, he was a member of the Atari Group's management team, first as Group Deputy Chief Operating Officer and Chief Financial Officer, then as Chief Executive Officer of Atari Interactive.

In 2007, he left Atari to create his own video game company. In 2013, he became the largest shareholder of the Atari Group by purchasing Atari shares. He was the Chief Executive Officer of Atari from 2013 to 2021.



Christophe CHAIX
Independant director

Christophe CHAIX has more than three decades of experience in the luxury retail industry, which started at Richemont Group with Montblanc then Alfred Dunhill to develop the brand in France. From there, he moved to Van Cleef & Arpels to rebuild the international distribution network after its takeover by Richemont Group.

His experience with merchandising luxury continued at his subsequent role as International Director and Member of the Executive Committee at La Montre Hermès in Switzerland, the watch division of the Hermes Group. Christophe served also as the Vice President of International Sales, Business Development, and Retail Operations at Coach from 2008 to 2012 in New York before joining DFS in January 2013 as Senior Vice President, Global Merchandising based in Hong Kong. Christophe has been responsible for strengthening DFS Group position as the leading luxury retailer. Last Christophe joined Melco in 2019 to lead their Retail Department. He defined and implemented the retail vision and strategy for Melco Resorts existing properties and projects in Macau and Japan notably, deciding the brand line-up and concepts and negotiating with major brands.



Edward MOALEM
Independant director

Edward MOALEM brings more than 25 years of technology experience to Ultra, having previously held positions at leading gaming companies and major corporations, including NewsCorp, Apple, and Google. While working at Google as Senior Director of Content Acquisition, Moalem initiated and brokered the acquisition of Adscape, an in-game advertising company. He also initiated and brokered the first DRM deal with Disney for their PC version of Toy Story.

Other notable experience includes working with Microsoft to encrypt and distribute Office2000, as well as brokering the first networking deal between the GameSpy publisher services group and Nintendo.

Investment Process

- Identification and Sourcing
- Product Evaluation
- Financial Analysis
- Risk Management
- Selection and Monitoring

06

Identification and sourcing

- 01** Internal proprietary ideas
- 02** Team relationships within the industry /
Personal network
- 03** Industry focus is essential - being able to follow closely one industry, and attendance of all major industry events are key success factors

Product evaluation

Overall assessment of the product

Market study/market trends

Review of competition

Technological assessment

Management / Track-record, References

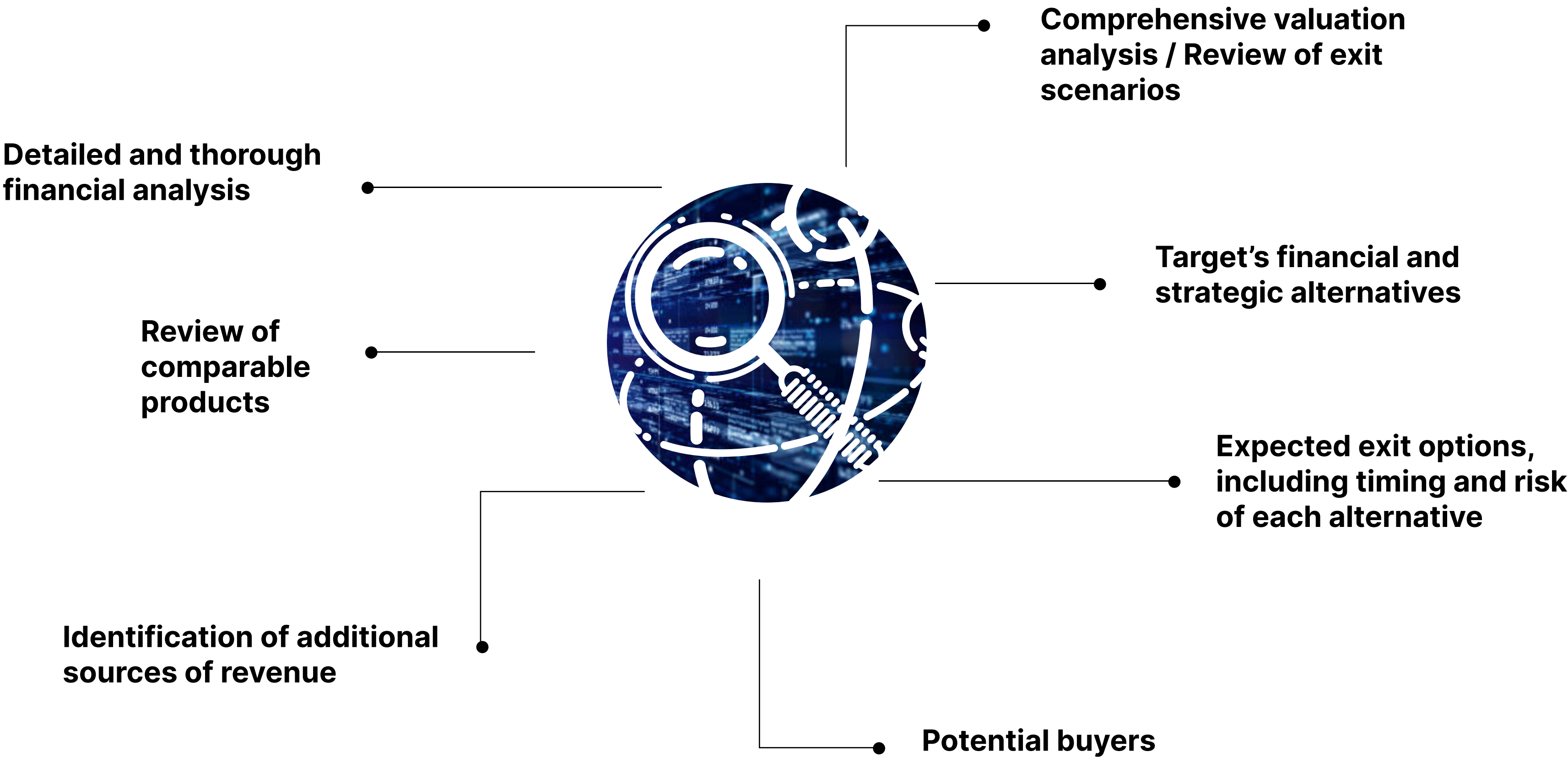
Technology

Financial condition of company / Review of reasonability, Back-up plans

Clean chain of title

If licensed property, criteria for approval have to be available

Financial and analysis



Risk management

Size individual positions

Relative Risk/Reward profiles

Downside risk and liquidity

Consider industry factors

Trends

Possible buyers on the exit

Emphasis on diversification of portfolio

Selection and monitoring

- 01** Decision / Signing / Closing
- 02** Review of projects
- 03** Constant contact / Management meetings

Glossary

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Blocks: Every chain consists of multiple blocks and each block has three basic elements

Data: the data in the block.

Nonce: A 32-bit whole number called a nonce. The nonce is randomly generated when a block is created, which then generates a block header hash.

Hash: The hash is a 256-bit number wedded to the nonce. It must start with a huge number of zeroes (i.e., be extremely small). When the first block of a chain is created, a nonce generates the cryptographic hash. The data in the block is considered signed and forever tied to the nonce and hash unless it is mined. In a blockchain every block has its own unique nonce and hash, but also references the hash of the previous block in the chain, so mining a block isn't easy, especially on large chains.

Miners: Miners create new blocks on the chain through a process called mining.

Miners use special software to solve the incredibly complex math problem of finding a nonce that generates an accepted hash. Because the nonce is only 32 bits and the hash is 256, there are roughly four billion possible nonce-hash combinations that must be mined before the right one is found.

When that happens, miners are said to have found the "golden nonce" and their block is added to the chain. When a block is successfully mined, the change is accepted by all of the nodes on the network and the miner is rewarded financially.

Making a change to any block earlier in the chain requires re-mining not just the block with the change, but all of the blocks that come after. This is why it's extremely difficult to manipulate blockchain technology.

Nodes: One of the most important concepts in blockchain technology is decentralization. No one computer or organization can own the chain. Instead, it is a distributed ledger via the nodes connected to the chain. Nodes can be any kind of electronic device that maintains copies of the blockchain and keeps the network functioning.

Every node has its own copy of the blockchain and the network must algorithmically approve any newly mined block for the chain to be updated, trusted and verified. Since blockchains are transparent, every action in the ledger can be easily checked and viewed. Each participant is given a unique alphanumeric identification number that shows their transactions.

Combining public information with a system of checks-and-balances helps the blockchain maintain integrity and creates trust among users. Essentially, blockchains can be thought of as the scalability of trust via technology.



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