Tech Snapshots: Present and Future Stuff You Need

Bill Lublin, Moderator

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D. Patrick Lewis: Building a Tech Stack

Artwork created by :https://app.wombo.art/

The Brokerage Tech Stack

D. Patrick Lewis – Designated Broker

REALTY EXECUTIVES

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THE REAL ESTATE TECH LANDSCAPE

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FIRM PROVIDES OR ENCOURAGES AGENT/BROKER USE OF SPECIFIC SOFTWARE, BY NUMBER OF OFFICES AT FIRM

(Percent of Respondents)

	Number of Offices at Firm				
	All Firms	One office	Two offices	Three offices	Four or more offices
E-signature	83%	84%	82%	89%	92%
Comparative market analysis	82	82	81	92	88
Electronic contracts/form	80	80	81	90	86
Multiple listing	79	80	82	78	83
Document preparation/Management	55	54	58	76	72
Contact management	50	48	61	77	70
Transaction management	39	37	48	63	59
Market statistics	38	36	44	51	57
Social media management tools	35	31	50	61	62
Customer relationship management	32	28	48	54	52
Video	31	26	46	59	59
Graphics/Presentation	29	26	35	45	56
Home visualization (e.g. virtual tours or virtual staging)	27	25	30	43	47
Property management	23	22	26	28	24
Marketing automation	14	12	19	29	34
QR Code	14	12	18	33	30
Agent rating	13	11	16	25	30
Loan analysis	12	11	14	13	25

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FEATURES ON FIRM'S WEBSITE, BY RESIDENTIAL AND COMMERICAL FIRMS

(Percent of Respondents)

	All Firms	Residential Firms	Commercial Firms
Property listings	91%	92%	87%
Agent/staff profiles	72	75	65
Customer reviews/testimonials	57	60	37
Information about the home buying and selling process	46	50	18
Mortgage/financial calculators	45	48	27
Community information/demographics	42	45	25
Links to social media accounts	40	42	27
Virtual tours	37	39	23
School reports	30	33	14
Home valuation/comparative market analysis tools	26	28	10
Videos	24	25	16
Links to state/local government websites	21	21	18
Links to mortgage lenders' websites	20	22	16
Market statistics	17	18	14
Appointment scheduler	16	16	7
Links to real estate service providers	13	14	12
Current mortgage rates	12	12	11
Link to local association	9	9	11
Live agent chat	9	9	2
Link to state association	7	7	13
Link to NAR	6	6	7
Language Translation	6	7	2
Link to commercial information exchange (CIE)	4	3	27

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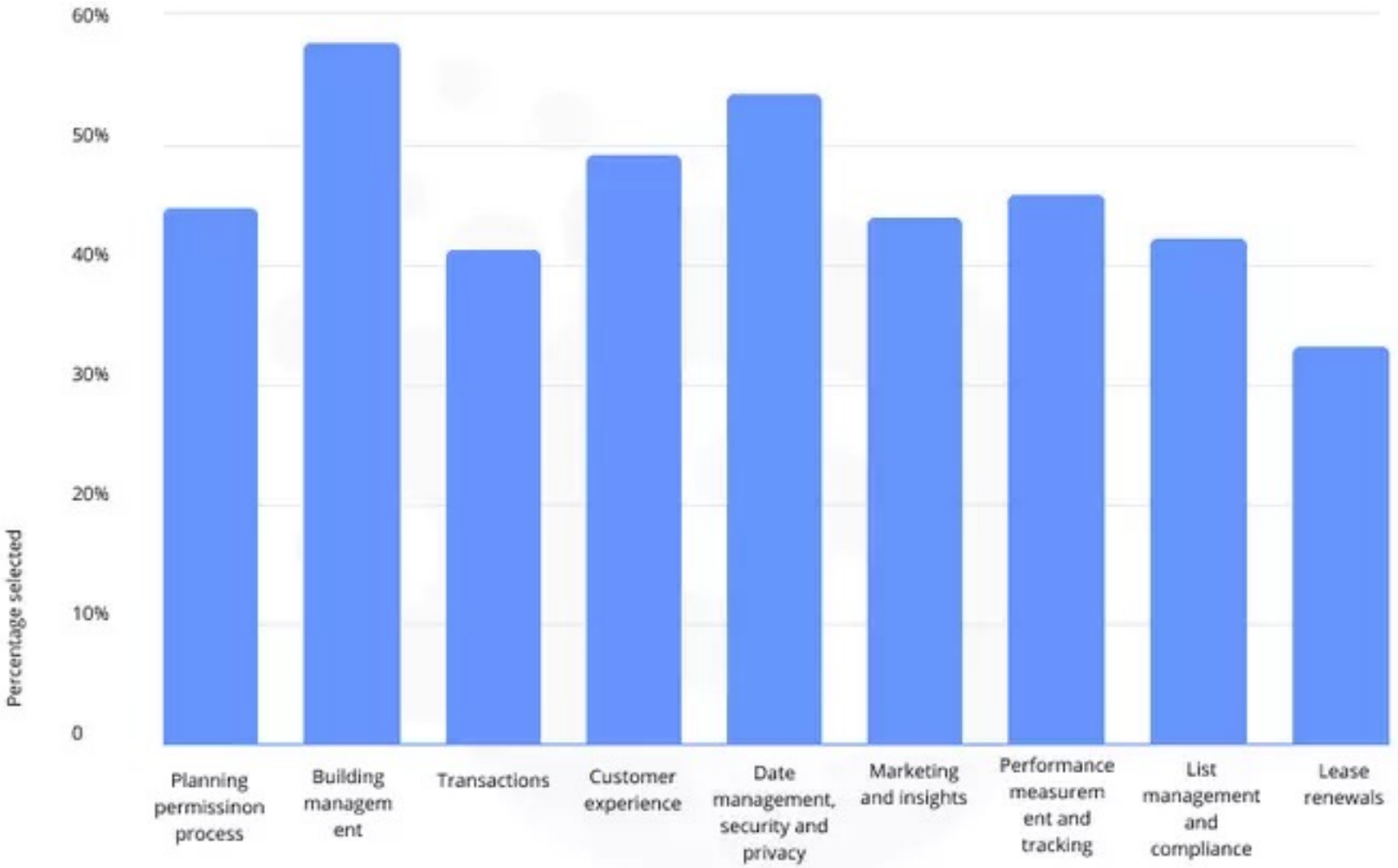
The Biggest real estate challenges PropTech can help with



Source: An annual review of the real estate industry by KMPG

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BACK TO THE BASICS

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Home Search by Generation

	Weeks Searched	Homes Viewed	Homes Viewed Only Online
Younger Millennials	8	6	0
Older Millennials	10	7	1
Gen X	8	8	2
Younger Boomers	8	7	4
Older Boomers	10	6	4
Silent Generation	6	5	0

Source: *2022 Home Buyers and Sellers Generational Trends*

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FIRST STEP TAKEN DURING THE HOME BUYING PROCESS

Exhibit 3-1 *(Percentage Distribution)*

	AGE OF HOME BUYER						
	All Buyers	23 to 31	32 to 41	42 to 56	57 to 66	67 to 75	76 to 96
Looked online for properties for sale	41%	34%	39%	45%	47%	44%	38%
Contacted a real estate agent	19	17	18	19	21	24	21
Looked online for information about the home buying process	10	16	12	8	5	6	5
Contacted a bank or mortgage lender	9	11	11	11	8	4	3
Talked with a friend or relative about home buying process	7	14	8	5	3	4	7
Drove-by homes/neighborhoods	5	2	3	5	6	6	10
Visited open houses	2	1	2	2	3	3	3
Contacted builder/visited builder models	2	1	1	1	3	3	4
Contacted a home seller directly	1	1	1	1	1	2	3
Looked up information about different neighborhoods or areas (schools, local lifestyle/nightlife, parks, public transportation	1	1	2	1	1	1	1
Attended a home buying seminar	1	2	1	1	*	*	*
Looked in newspapers, magazines, or home buying guides	*	*	*	*	*	*	*
Read books or guides about the home buying process	*	1	*	*	*	*	*
Other	1	1	1	1	1	1	3

*Less than 1 percent

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ACTIONS TAKEN AS A RESULT OF INTERNET HOME SEARCH

Exhibit 3-7 *(Percent of Respondents Among Buyers Who Used the Internet)*

	AGE OF HOME BUYER						
	All Buyers	23 to 31	32 to 41	42 to 56	57 to 66	67 to 75	76 to 96
Walked through home viewed online	55%	51%	55%	57%	58%	57%	49%
Saw exterior of homes/neighborhood, but did not walk through home	38	42	41	39	31	31	21
Found the agent used to search for or buy home	35	38	32	31	36	40	37
Pre-qualified for a mortgage online	30	39	34	26	27	23	20
Requested more information	28	34	31	25	22	21	18
Applied for a mortgage online	27	37	30	25	24	19	14
Put in a contract/offer on a home	26	25	22	22	30	31	36
Looked for more information on how to get a mortgage and general home buyers tips	15	32	20	12	5	3	5
Found a mortgage lender online	15	23	17	14	11	10	9
Contacted builder/developer	10	5	8	8	11	12	9

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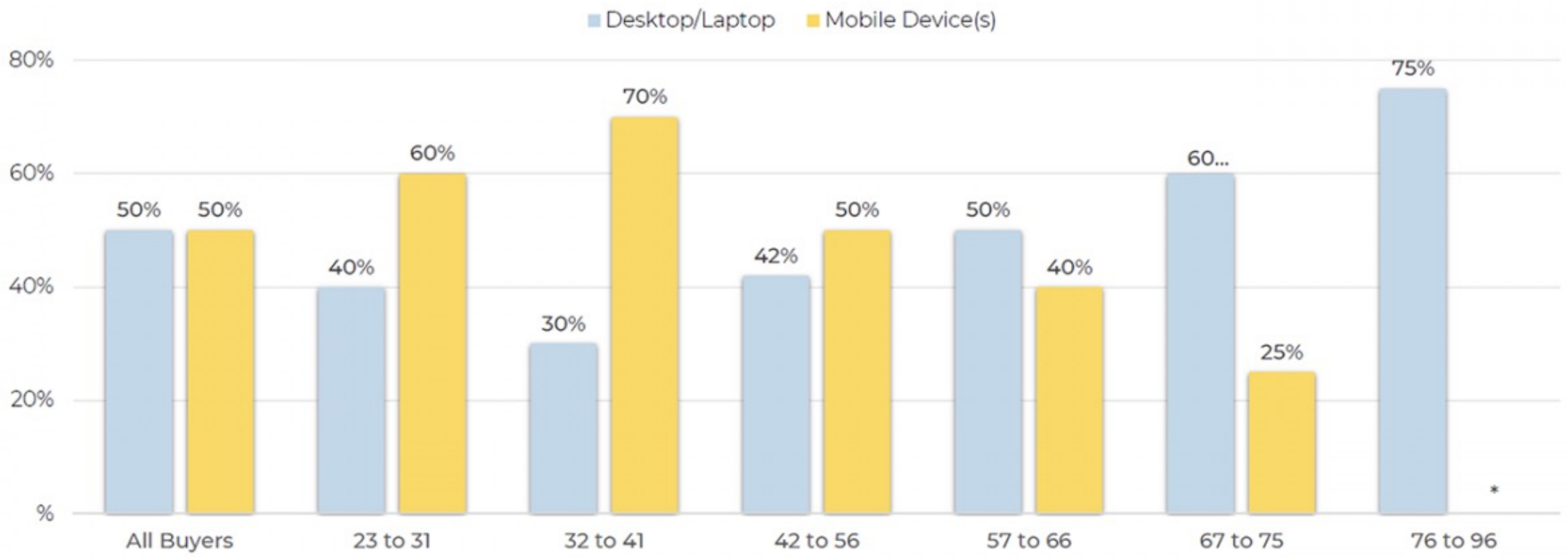
PERCENTAGE OF TIME USING DEVICES IN HOME SEARCH

Exhibit 3-9 *(Percent of Respondents Among those Who Used the Internet to Search)*



*Less than 1 percent

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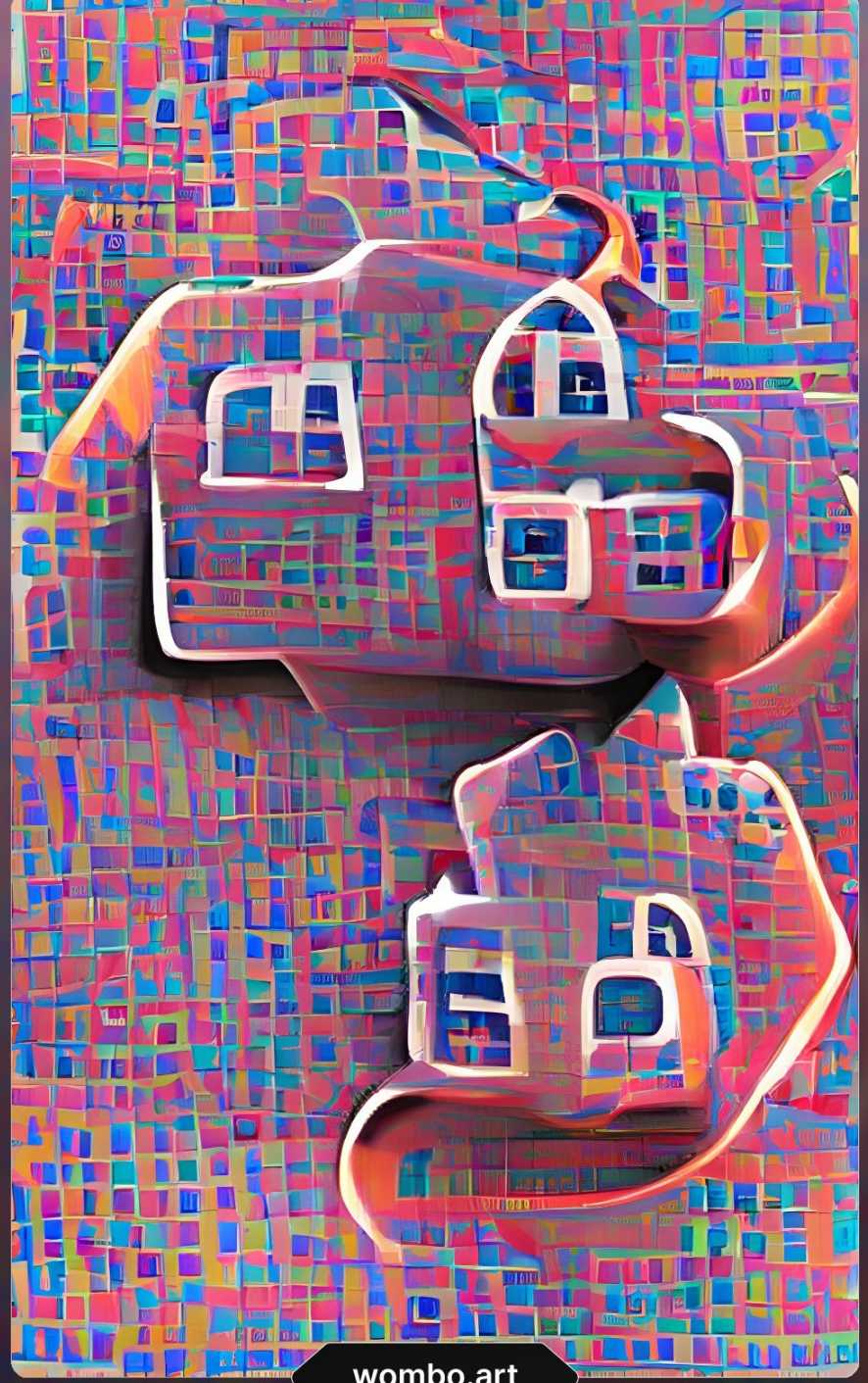


Kristen Smith: CryptoCurrency for Brokers

Artwork created by :https://app.wombo.art/

CRYPTOCURRENCY | NFT'S |
BLOCKCHAIN TECHNOLOGY

KRISTIN SMITH

SPEAKER, REALTOR, INVESTOR

CRYPTOCURRENCY

WHAT IS CRYPTOCURRENCY?

A digital currency in which transactions are verified and records maintained by a decentralized system using cryptography, rather than by a centralized authority.

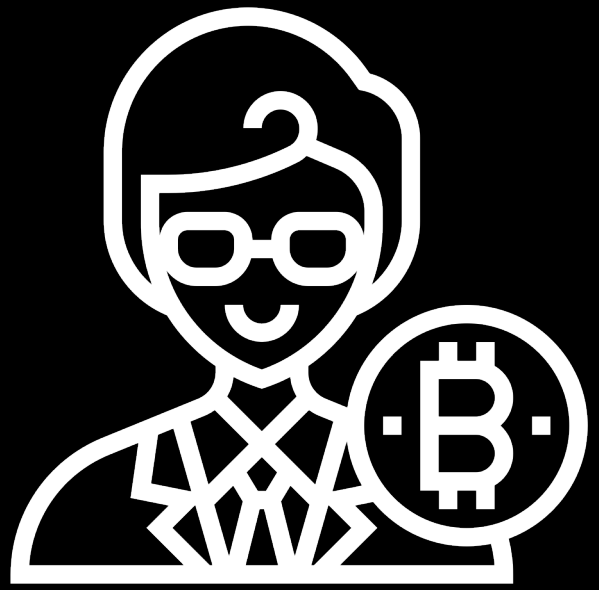
"Decentralized cryptocurrencies such as bitcoin now provide an outlet for personal wealth that is beyond restriction and confiscation"

WHO IS SATOSHI?

SATOSHI NAKAMOTO

THE INVENTOR OF BITCOIN.

No one really knows who is behind the pseudonym Satoshi Nakamoto that has been credited as developing the world's first and largest, cryptocurrency – Bitcoin. Nakamoto was the one who mined the first blockchain of Bitcoin and was the one who published the whitepaper for the digital currency. Nakamoto had envisioned Bitcoin to be a token of transaction that would be widely adopted by the world to protect against inflation.



THE SILK ROAD STORY

A STACK OF $100 BILLS CAN FINANCE A DRUG DEAL OR BE DONATED TO AN ORPHANAGE. BITCOIN IS NO DIFFERENT, DESPITE ITS PERCEPTION AS AN OUTLAW CURRENCY.

9-5

TRADITIONAL BANKING

VS

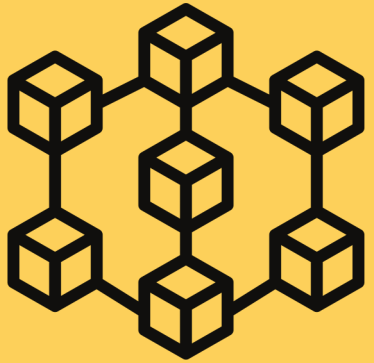
CRYPTO

ABOUT THE BLOCKCHAIN

WHAT IS THE BLOCKCHAIN?

BLOCKCHAIN IS A SHARED, IMMUTABLE LEDGER THAT FACILITATES THE PROCESS OF RECORDING TRANSACTIONS AND TRACKING ASSETS IN A BUSINESS NETWORK.

AN ASSET CAN BE A HOUSE, CAR, CASH, LAND -- OR INTANGIBLE (INTELLECTUAL PROPERTY, PATENTS, COPYRIGHTS, BRANDING)



BLOCKCHAIN IS THE TECHNOLOGY THAT ENABLES THE EXISTENCE OF CRYPTOCURRENCY

ADDRESSES

EVERYONE ON THE BLOCKCHAIN HAS ONE OF THESE NUMBER-LETTER JUMBLES TO KEEP IT ANONYMOUS

ONE ADDRESS FOR EVERYONE TO SEE ON THE LEDGER AND THE OTHER ADDRESS IS FOR THE PRIVATE KEY NEEDED TO ACCESS YOUR OWN CRYPTOCURRENCY.

MINING

SOCIAL REQUIREMENTS

THE BLOCKCHAIN LEDGER REQUIRES A DISTRIBUTED NETWORK OF VOLUNTEER COMPUTERS. WHY WOULD ANYONE GO TO THE TROUBLE OF LENDING THEIR COMPUTER TO THIS GLOBAL RECORD-KEEPING SYSTEM?

SATOSHI INCENTIVE

LOTTERY SYSTEM. THIS SYSTEM INVITES ANYONE TO ENTER A CONTEST TO WIN BITCOIN BY SOLVING A MATH PROBLEM THAT CAN ONLY BE DEDUCED THROUGH A MASSIVE PROCESS OF TRIAL & ERROR.

MINING

WHAT DOES A MINER WIN?

THE CONTEST TAKES PLACE EVERY 10 MINUTES OR SO, AND WHOEVER IS FIRST TO FIND THE ANSWER BROADCASTS IT TO THE OTHER COMPUTERS ON THE NETWORK. IN DOING SO, THAT PERSON ADDS THE LATEST BLOCK -- WHICH CONTAINS BOTH THE SOLUTION TO THE MATH PROBLEM AND THE MOST RECENT BATCH OF BITCOIN TRANSACTIONS -- TO THE LEDGER.

MINING

WHAT DOES A MINER WIN?

PROVIDED THE SOLUTION IS CORRECT, THE LOTTERY PARTICIPANTS -- KNOWN AS MINERS IN THE BITCOIN WORLD -- MOVE ON TO SOLVING THE NEXT MATH PROBLEM.

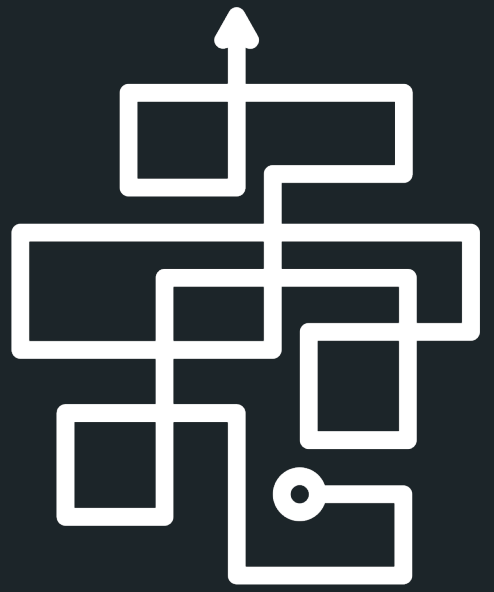
FOR THEIR TROUBLE, WINNER GETS A STASH OF BITCOIN ASSOCIATED WITH EACH BLOCK.

SOME PEOPLE CALL THIS STASH THE BLOCK REWARD.

COINBASE

TECHNICAL MIDDLEMAN

COINBASE REMOVED THE COMPLEXITY AND MADE COINBASE RESEMBLE ONLINE BANKING



HOT WALLET
VS
COLD WALLET

WHAT'S THE DIFFERENCE?

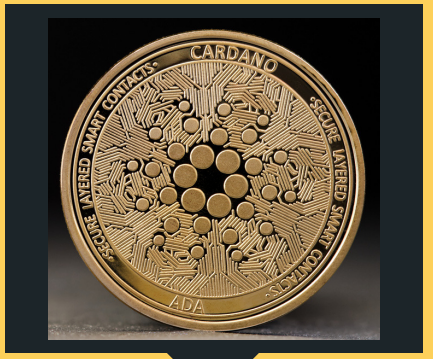
CONNECTED TO THE INTERNET/NOT CONNECTED TO THE INTERNET

TOP 5 CRYPTO

BITCOIN

ETHEREUM

CARDANO



LITECOIN

UTILITY

BITCOIN

DIGITAL GOLD

10 MIN - 1 HOUR

ETHEREUM

Smart contracts are simply programs stored on a blockchain that run when predetermined conditions are met. They typically are used to automate the execution

XRP

CROSS BORDER PAYMENTS

5 SECONDS

COSTS LEST THAN 1 CENT

CARDANO

Cardano enables people to skip the middleman, such as banks and other financial institutions, to transact directly and on a permission-less basis with other individuals or entities.

LITECOIN

Litecoin is a peer-to-peer Internet currency that enables instant, near-zero cost payments to anyone in the world. Litecoin is an open source, global payment network that is fully decentralized without any central authorities. Mathematics secures the network and empowers individuals to control their own finances. Litecoin features faster transaction confirmation times and improved storage efficiency than the leading math-based currency. With substantial industry support, trade volume and liquidity, Litecoin is a proven medium of commerce complementary to Bitcoin.

2-8 MINUTES

PIZZA STORY

IN 2010, LASZLO PURCHASES 2 PIZZAS FOR 10,000 BITCOIN

KNOWN AS BITCOINS HERO

10,000 BITCOIN ARE CURRENTLY WORTH:

$395,000,000

HOW CRYPTO IS DECOUPLING THE TRADITIONAL SYSTEM

BITCOIN

IS THE DECOUPLING OF MONEY & STATE

CRYPTO

IS THE DECOUPLING OF MONEY & BANKS

DEFI

IS THE DECOUPLING OF FINANCE & WALL STREET

WHERE TO BUY CRYPTO

SCAN TO FOLLOW

INSTAGRAM:

KRISTIN_SMITH

Bill Lublin: From AR to VR to the Metaverse!

Artwork created by :https://app.wombo.art/

Why are we talking about this?

Gartner Predicts 25% of People Will Spend At Least One Hour Per Day in the Metaverse by 2026

Metaverse Hype to Transition into New Business Models that Extenc Digital Business

By 2026, 25% of people will spend at least one hour a day in the metaverse for work, shopping, education, social and/or entertainment, according to Gartner, Inc.

"Vendors are already building ways for users to replicate their lives in digital worlds," said Marty Resnick, research vice president at Gartner. "From attending virtual classrooms to buying digital land and constructing virtual homes, these activities are currently being conducted in separate environments. Eventually, they will take place in a single environment – the metaverse – with multiple destinations across technologies and experiences."

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Technology is changing commerce

Physical to Physical Commerce – going to the store

Virtual to Virtual Commerce – buying things in a game

Physical to Virtual Commerce – Walking into a store and using a VR headset for in store promotions and to see extended product linea

Virtual to Physical Commerce – buying a burger in the metaverse delivered to your physical location

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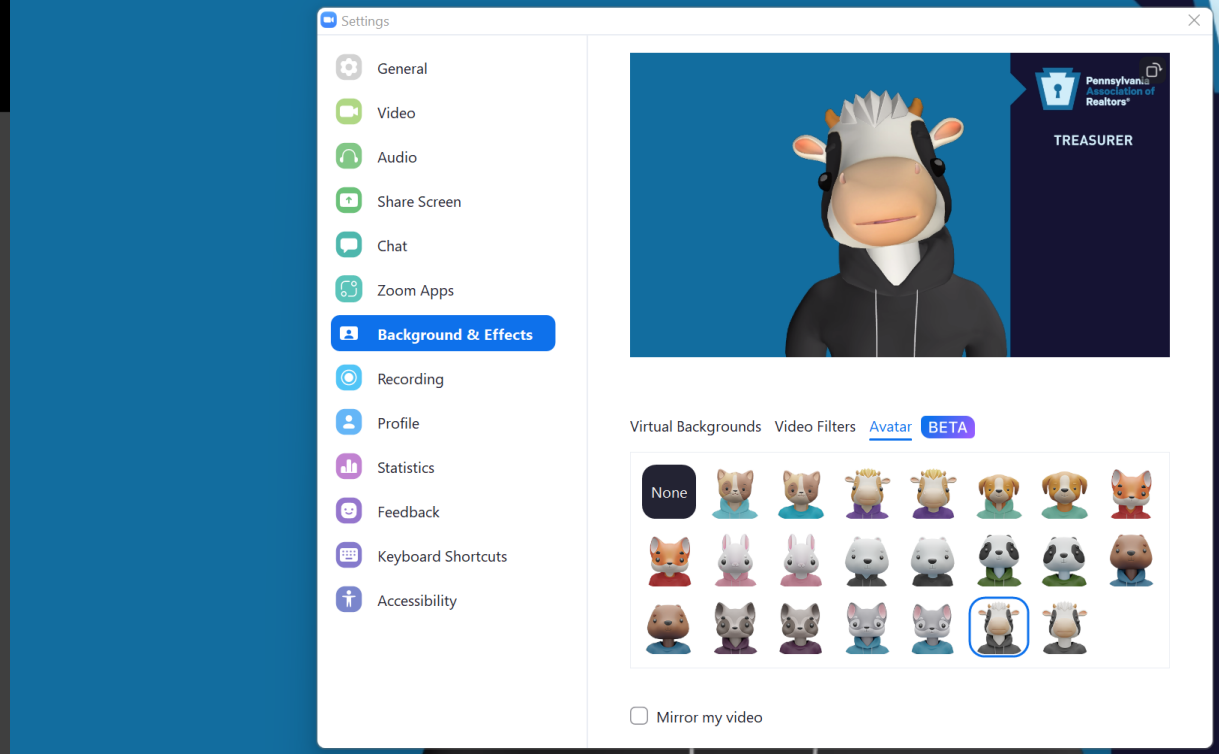
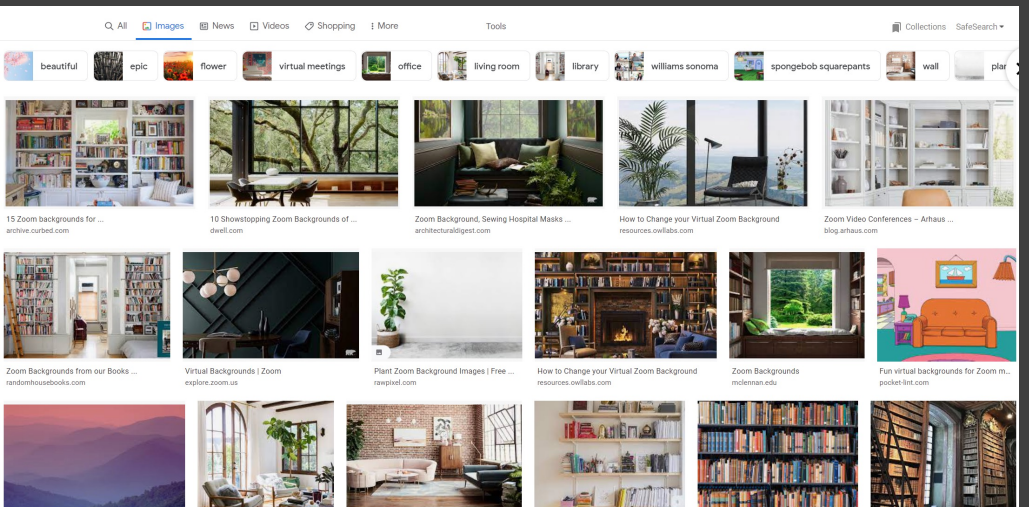
Augmented Reality
AR

- “An enhanced version of the real physical world achieved using digital visual elements, sound, or other sensory stimuli delivered via technology.”





VR includes backgrounds, filters and masks

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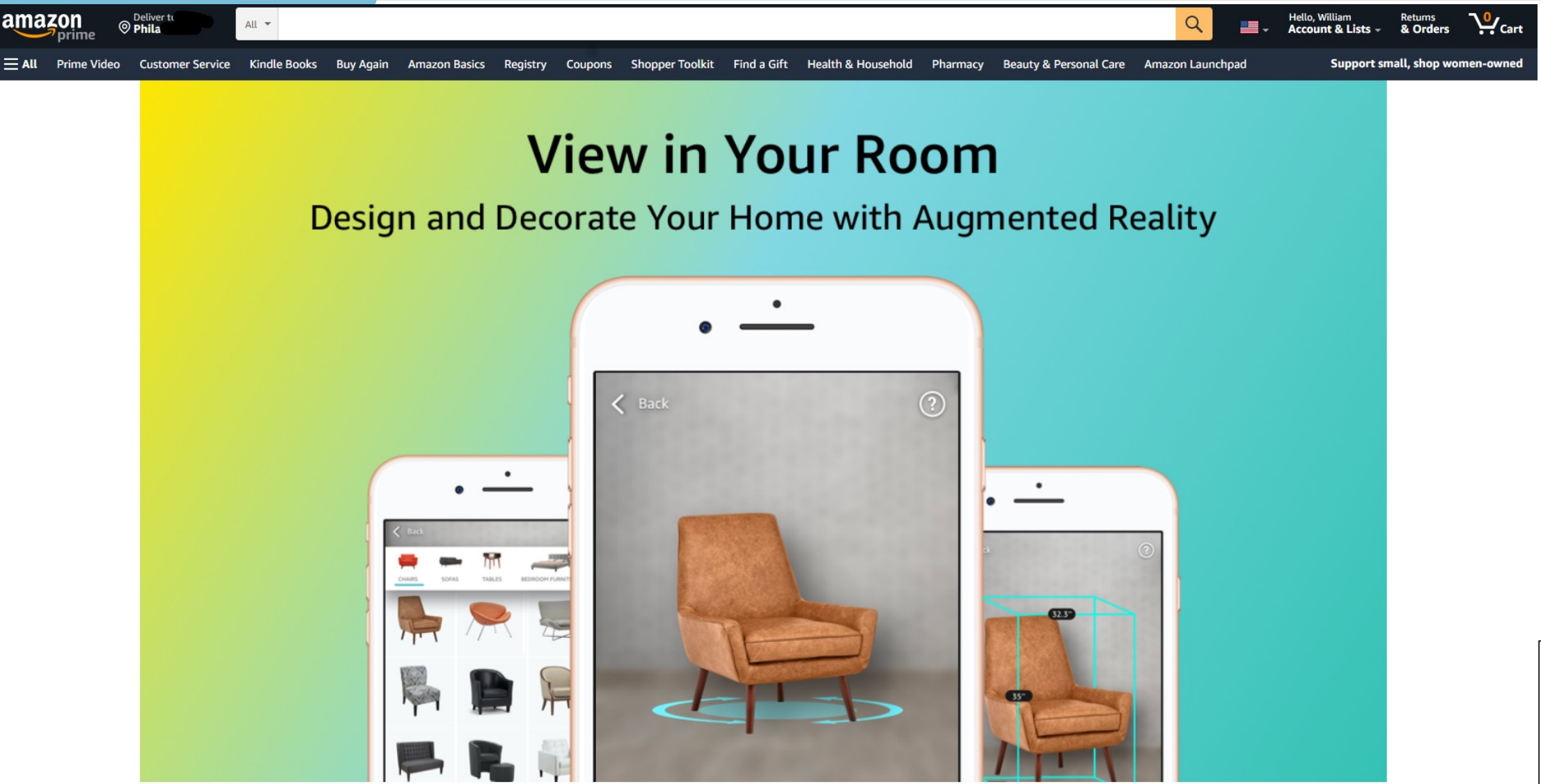
Product Visualization - Try Before You Buy!



View In Your Room

Shopping for your home just got easier

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Product Visualization using AR increases “add to cart” by up to 300% and decreases Returns

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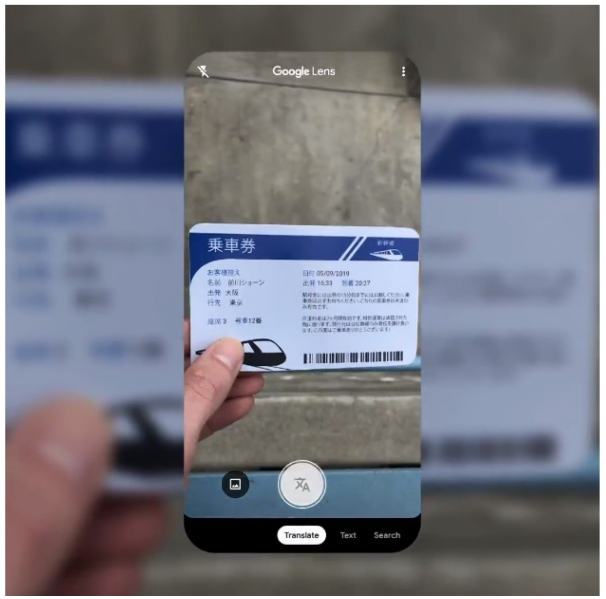
Google Lens

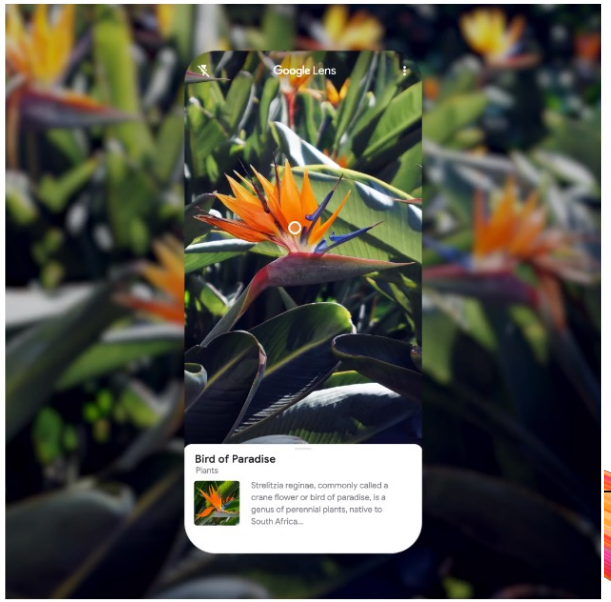


Scan and translate text

Translate text in real time, look up words, add events to your calendar, call a number, and more. Or just copy and paste to save some time.

Identify plants and animals

Find out what plant is in your friend's apartment, or what kind of dog you saw in the park.



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Google Glass

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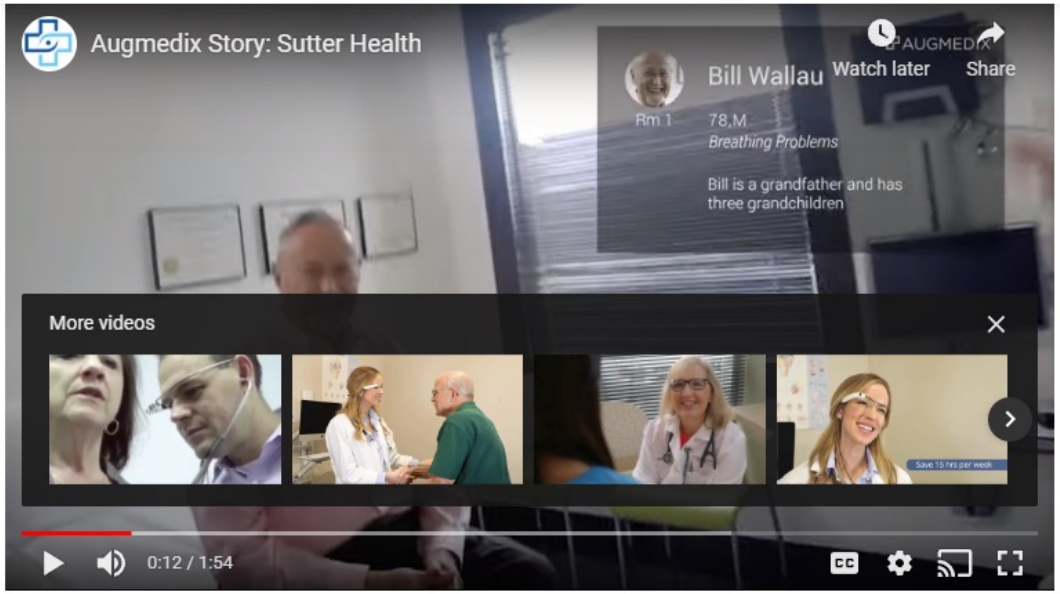
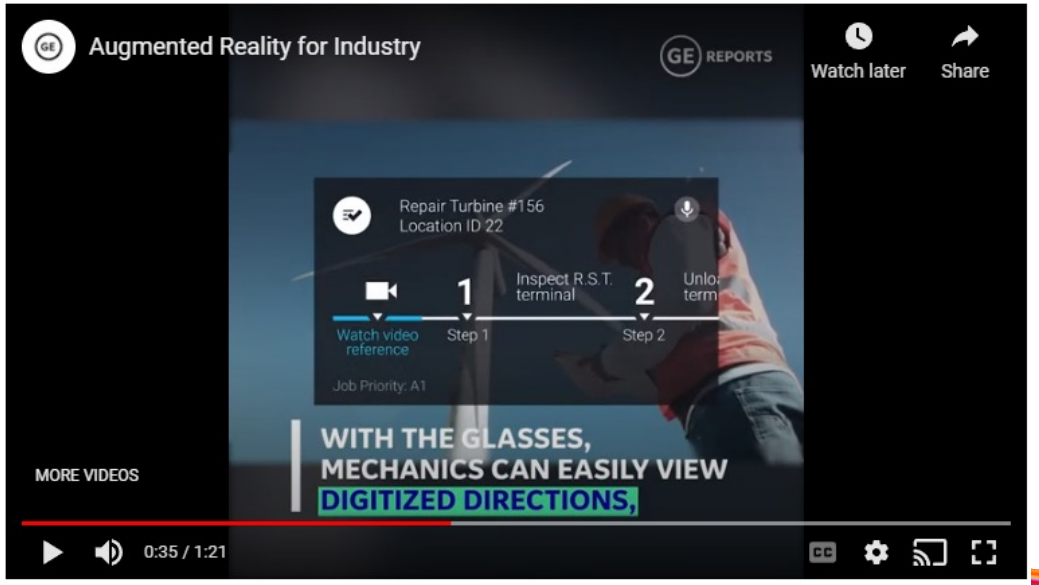
Google Glass



"In the past, almost a third of my day was spent with my computer; now I spend maybe just two or three minutes per patient using it."

— Dr. Teresa Nauenberg, M.D



"With Upskill, we can support our Brilliant Factory strategy by offering technology that enables workers to be more agile and effective in their jobs, be it in the factory, the warehouse or in the field."

— Ralph Taylor-Smith, Managing Director, GE Ventures

Virtual Reality

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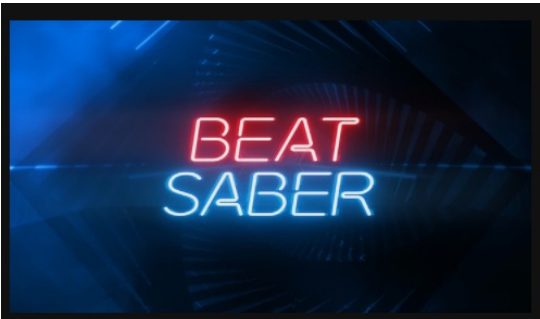
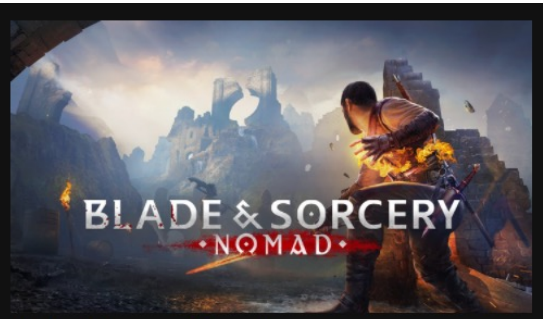
the computer-generated simulation of a three-dimensional image or environment that can be interacted with in a seemingly real or physical way by a person using special electronic equipment, such as a helmet with a screen inside or gloves fitted with sensors.

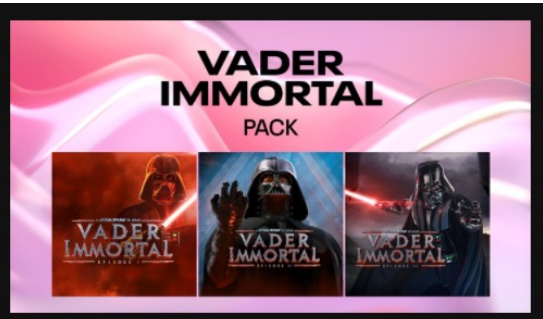
VR is immersive



Beat Saber
Purchased



Blade & Sorcery: Nomad
$19.99



Vader Immortal Pack
-9% $26.99 ~~$29.97~~

The Thrill of the Fight
$9.99

Job Simulator
$19.99

Onward
$24.99

SUPERHOT VR
$24.99

The Walking Dead: Saints & Sinners
$39.99

Creed: Rise to Glory

Drunkn Bar Fight

POPULATION: ONE

Walkabout Mini Golf

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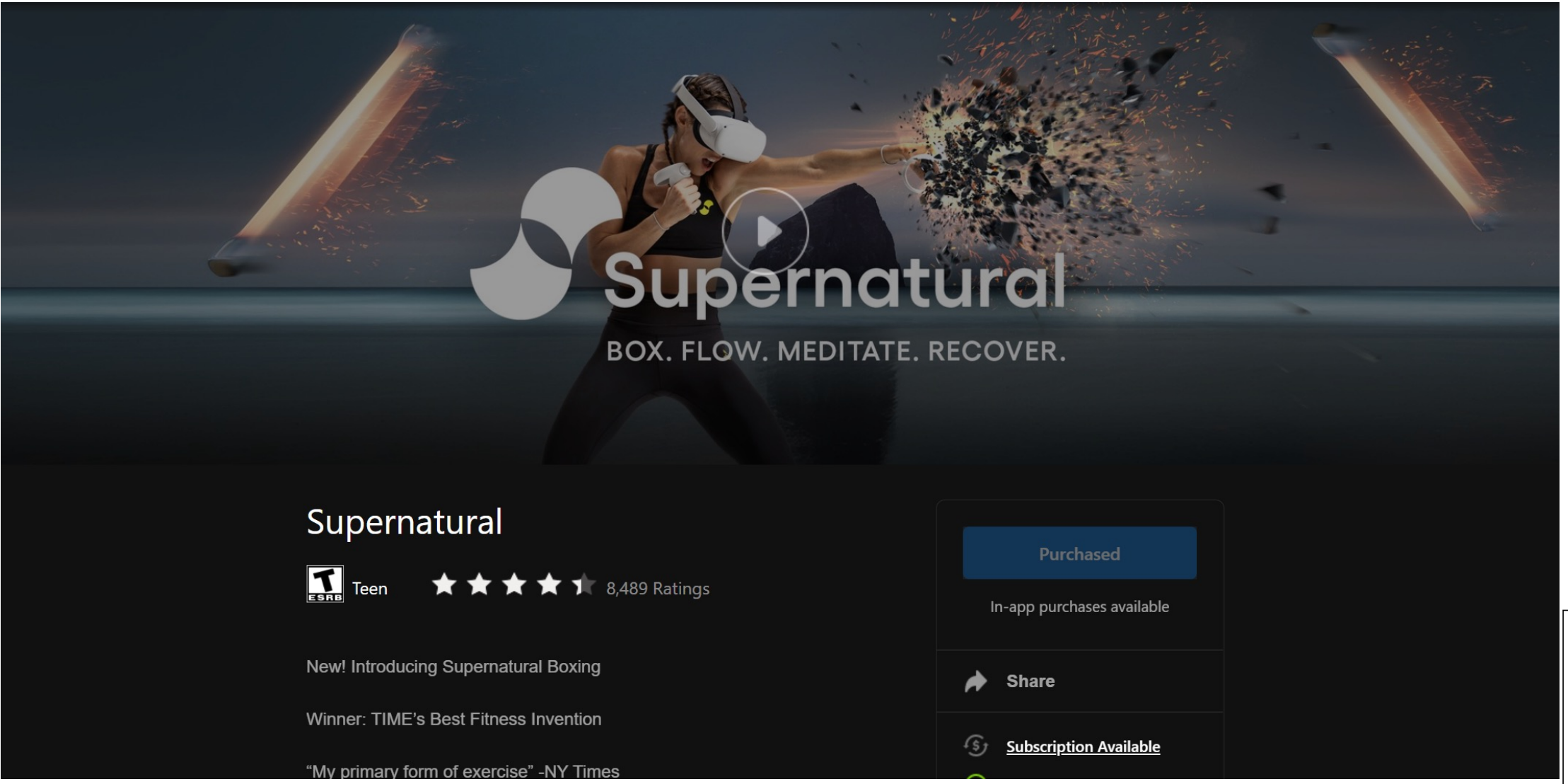
VR is exhausting!



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VR is Addictive and Intriguing – Even In Vegas!

- Competing with Casinos, Shows, Magicians, and an immense Ferris Wheel, Virtual Reality Rides are a thing!

VR is Addictive and Intriguing – Even In Shanghai!

- In the third tallest building in the world, people waited in line to see a VR tour of Shanghai instead of looking out the windows

The Metaverse

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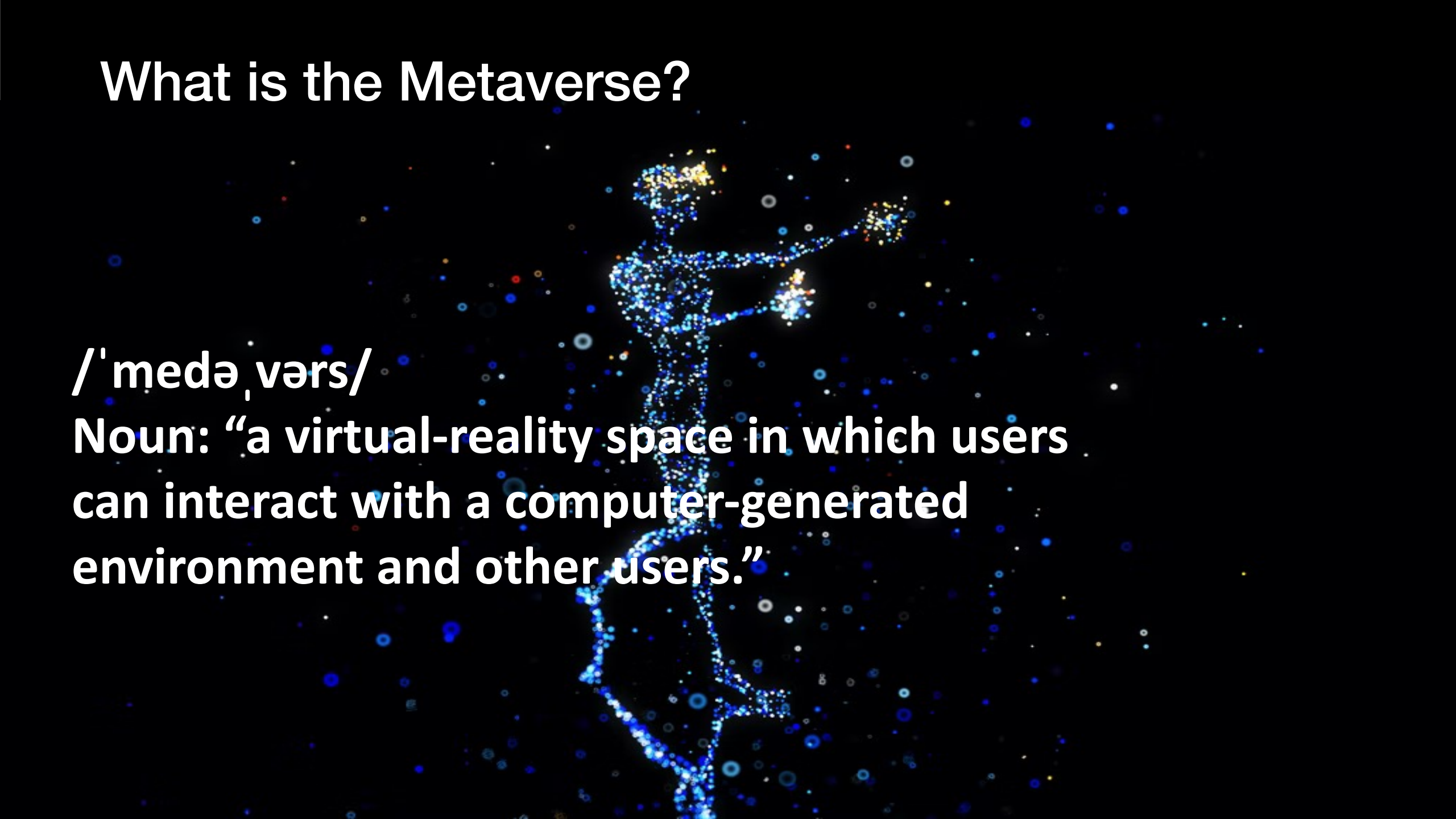
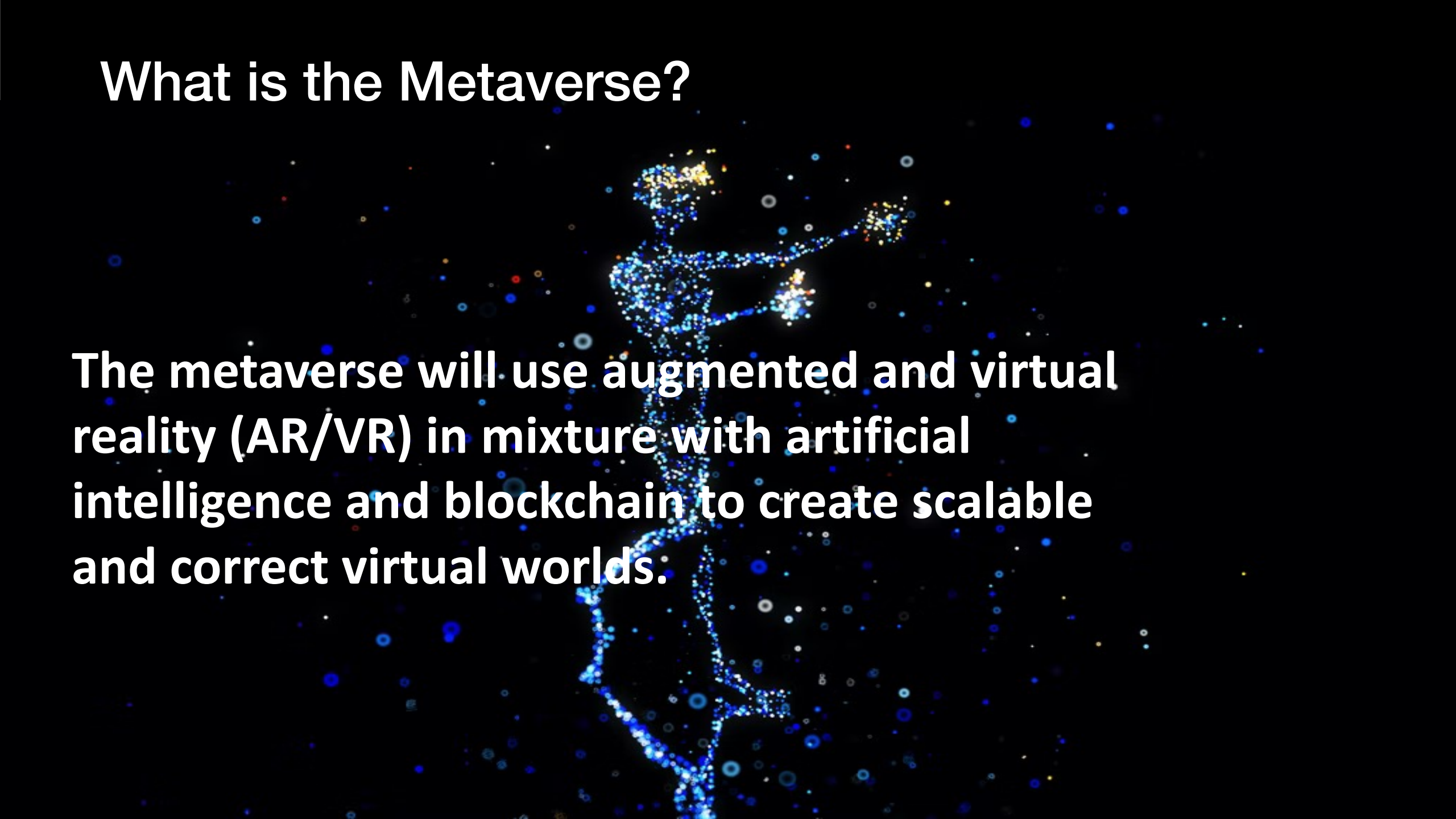
What is the Metaverse?



/ˈmedəˌvərs/
Noun: “a virtual-reality space in which users can interact with a computer-generated environment and other users.”

What is the Metaverse?



The metaverse will use augmented and virtual reality (AR/VR) in mixture with artificial intelligence and blockchain to create scalable and correct virtual worlds.

You Know the Metaverse

Photo courtesy of Pimkie on Flickr

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You Know the Metaverse

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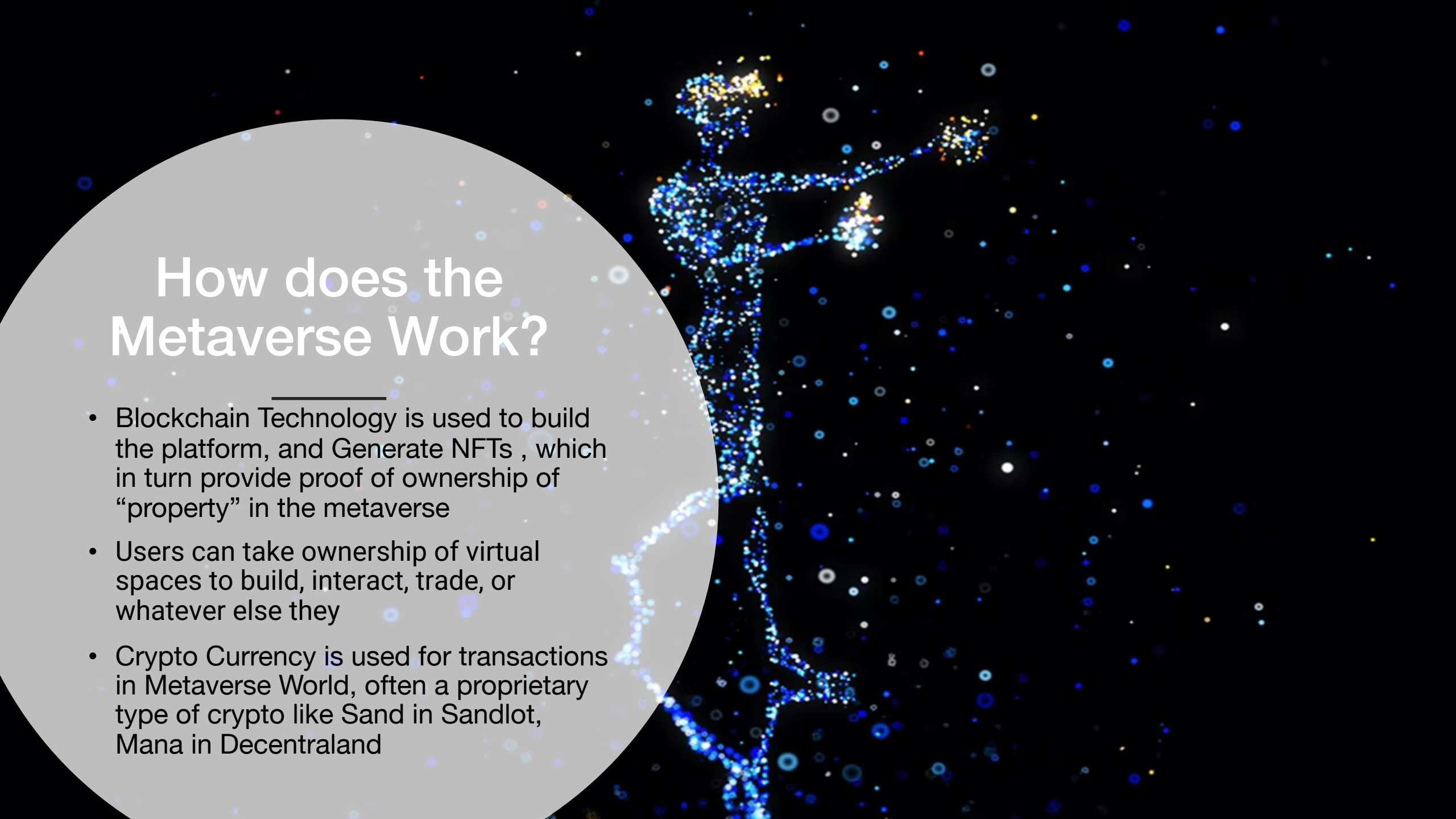

How does the Metaverse Work?

- Blockchain Technology is used to build the platform, and Generate NFTs , which in turn provide proof of ownership of “property” in the metaverse
- Users can take ownership of virtual spaces to build, interact, trade, or whatever else they
- Crypto Currency is used for transactions in Metaverse World, often a proprietary type of crypto like Sand in Sandlot, Mana in Decentraland

Who is building the Metaverse?

(builders of Fortnite)

Meta

(Creators of Pokemon Go)

Decentraland

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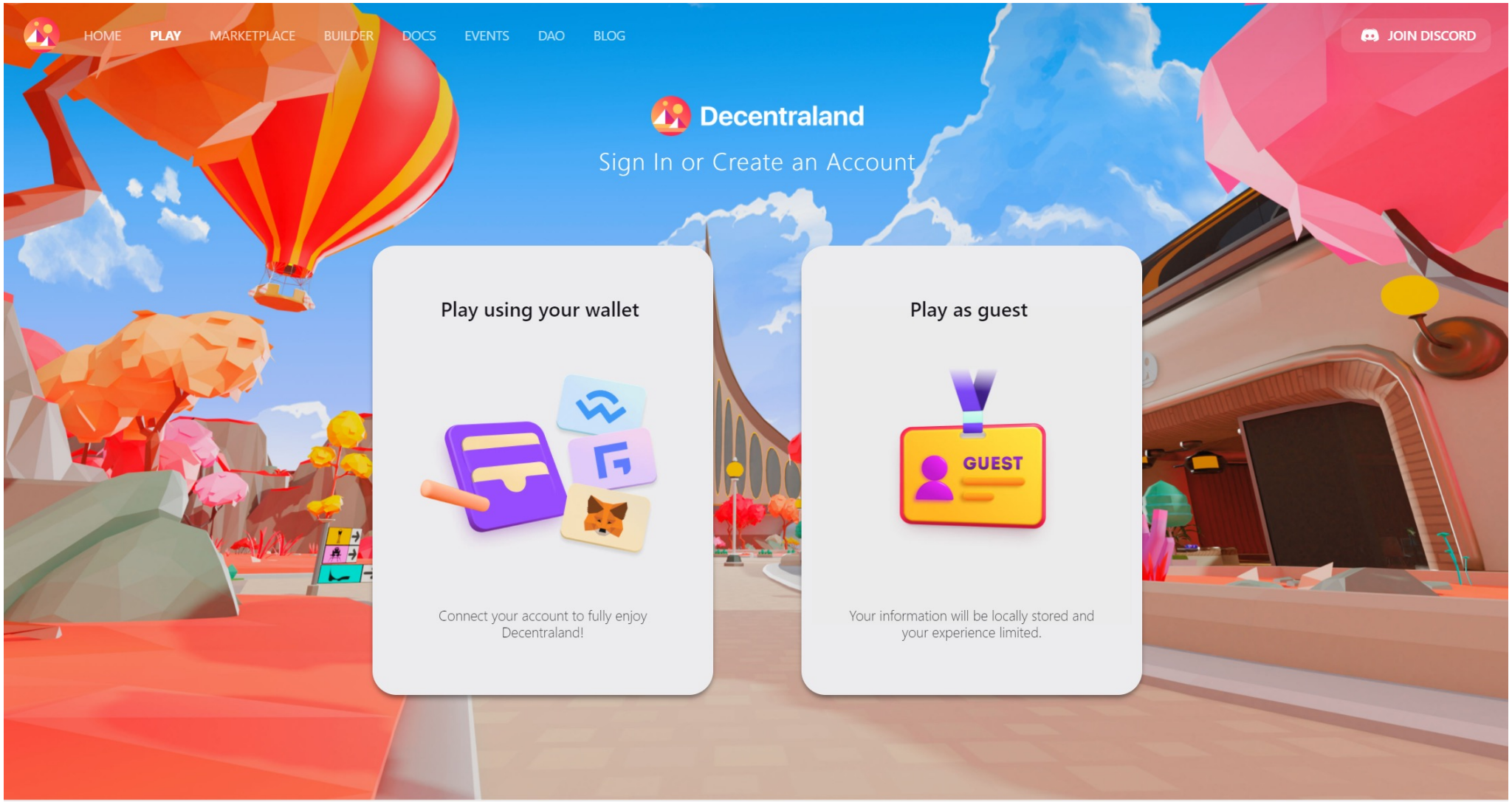
Decentraland



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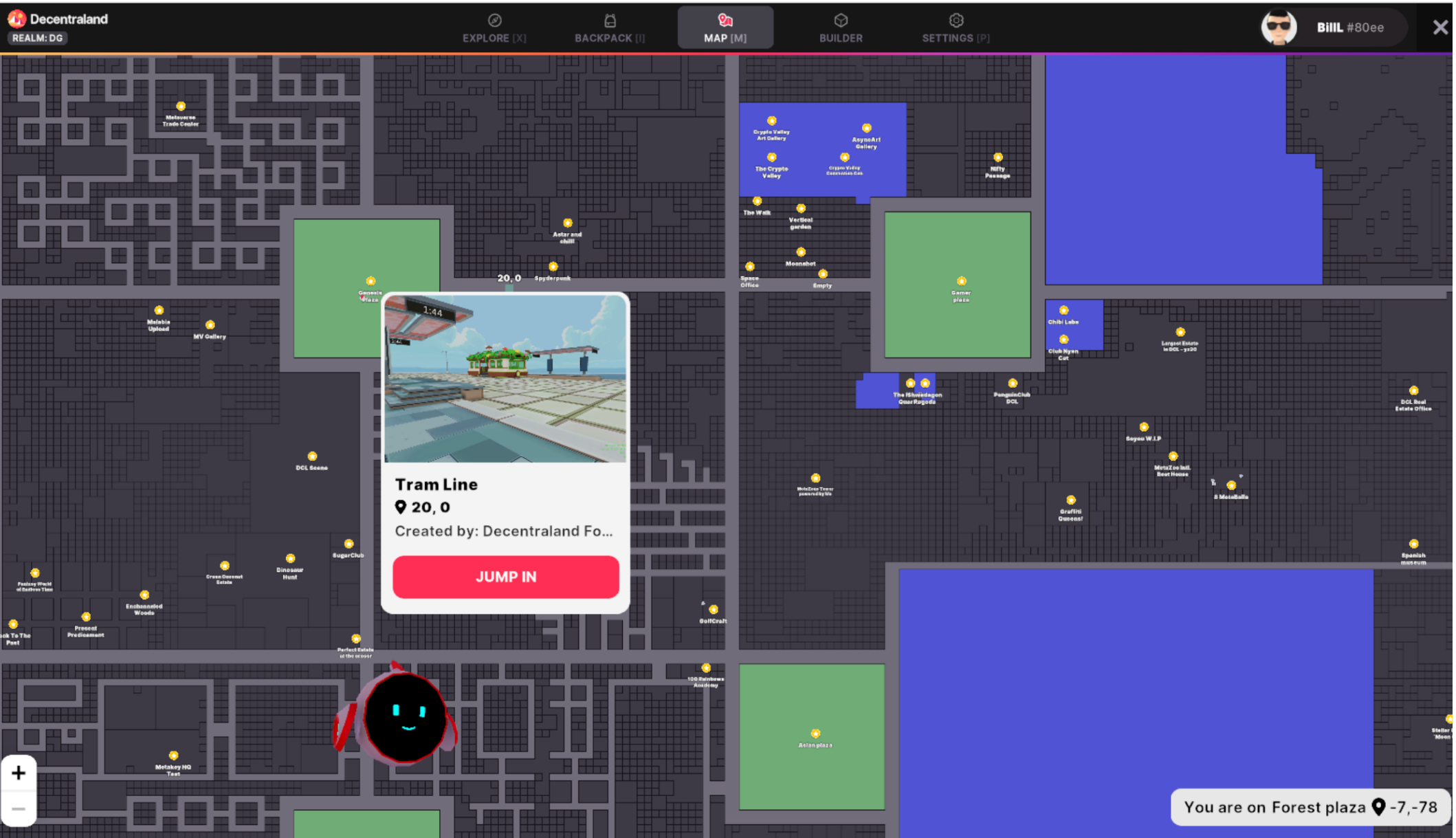
Decentraland Map



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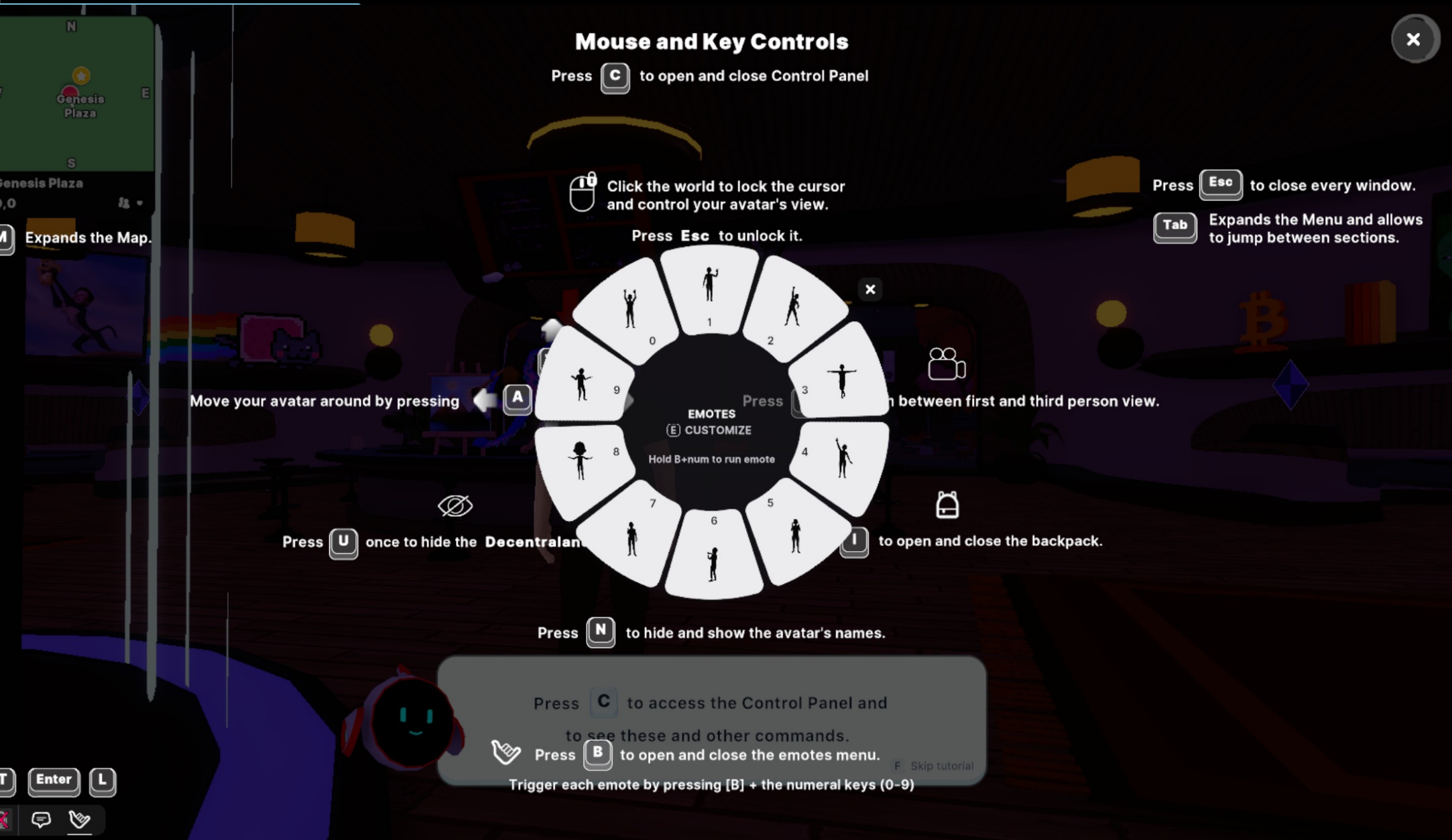

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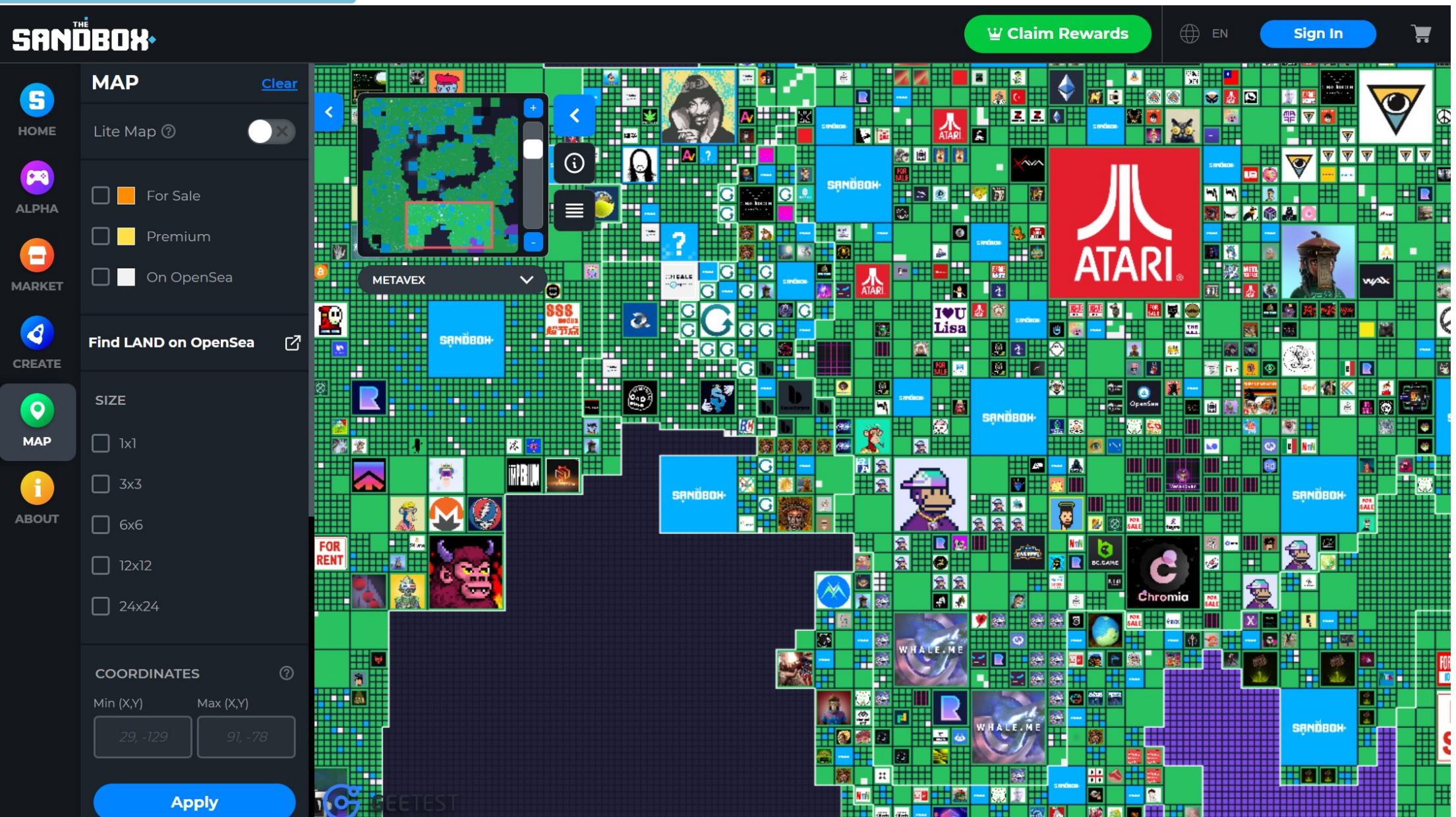
Sandbox Map



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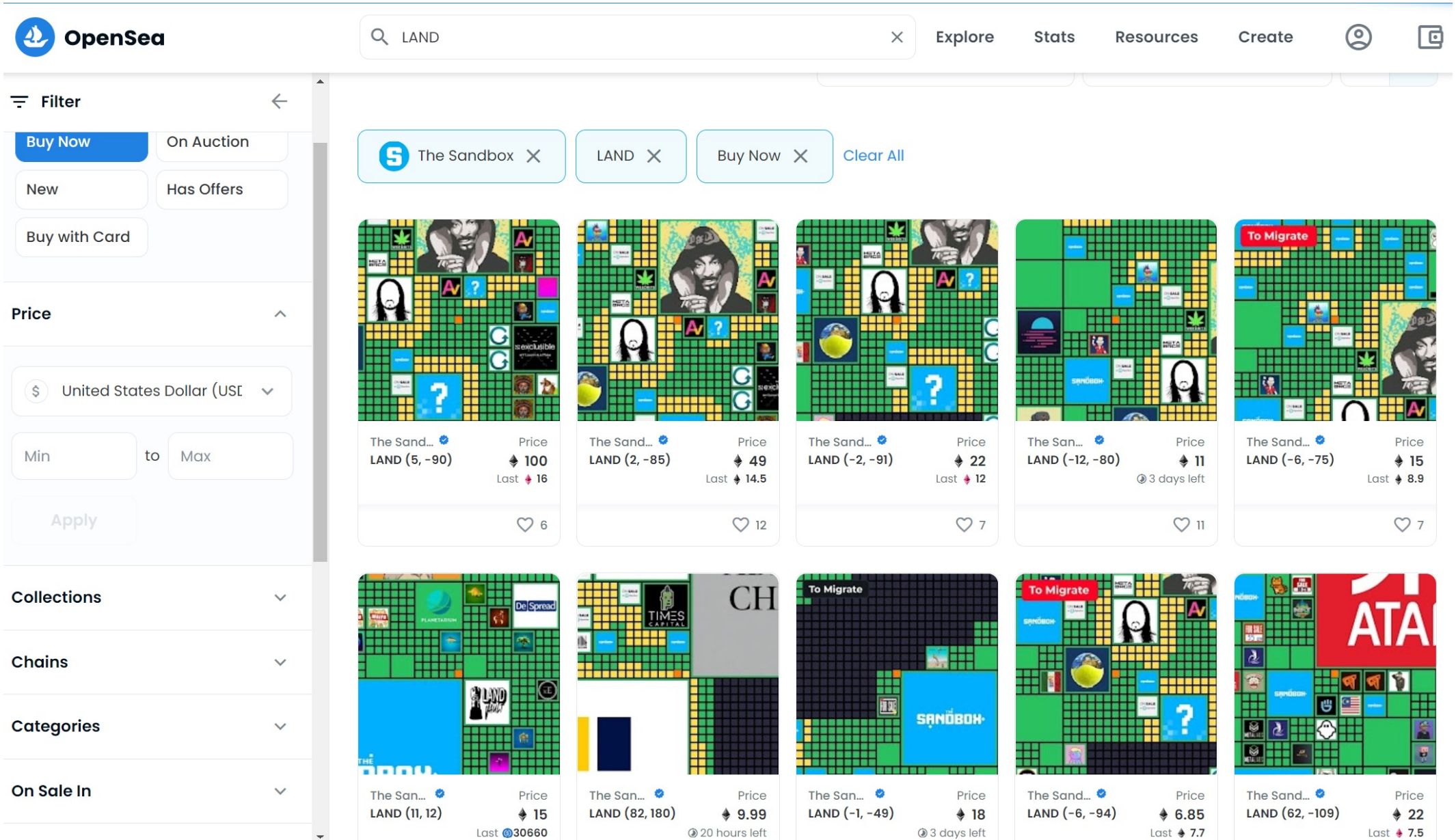
What are Land Sales in the Metaverse based on?

- **Scarcity - Both Decentraland and Sandbox will release only a limited number of digital parcels—ever. 166,464 parcels in the Sandbox and 90,601 in Decentraland. They intentionally (and artificially) made land scarce.**
- **Perceptions of Utility – a house at the beach**
- **Perceptions of Locational Value**
- **Straight up Crypto Speculation**

OpenSea



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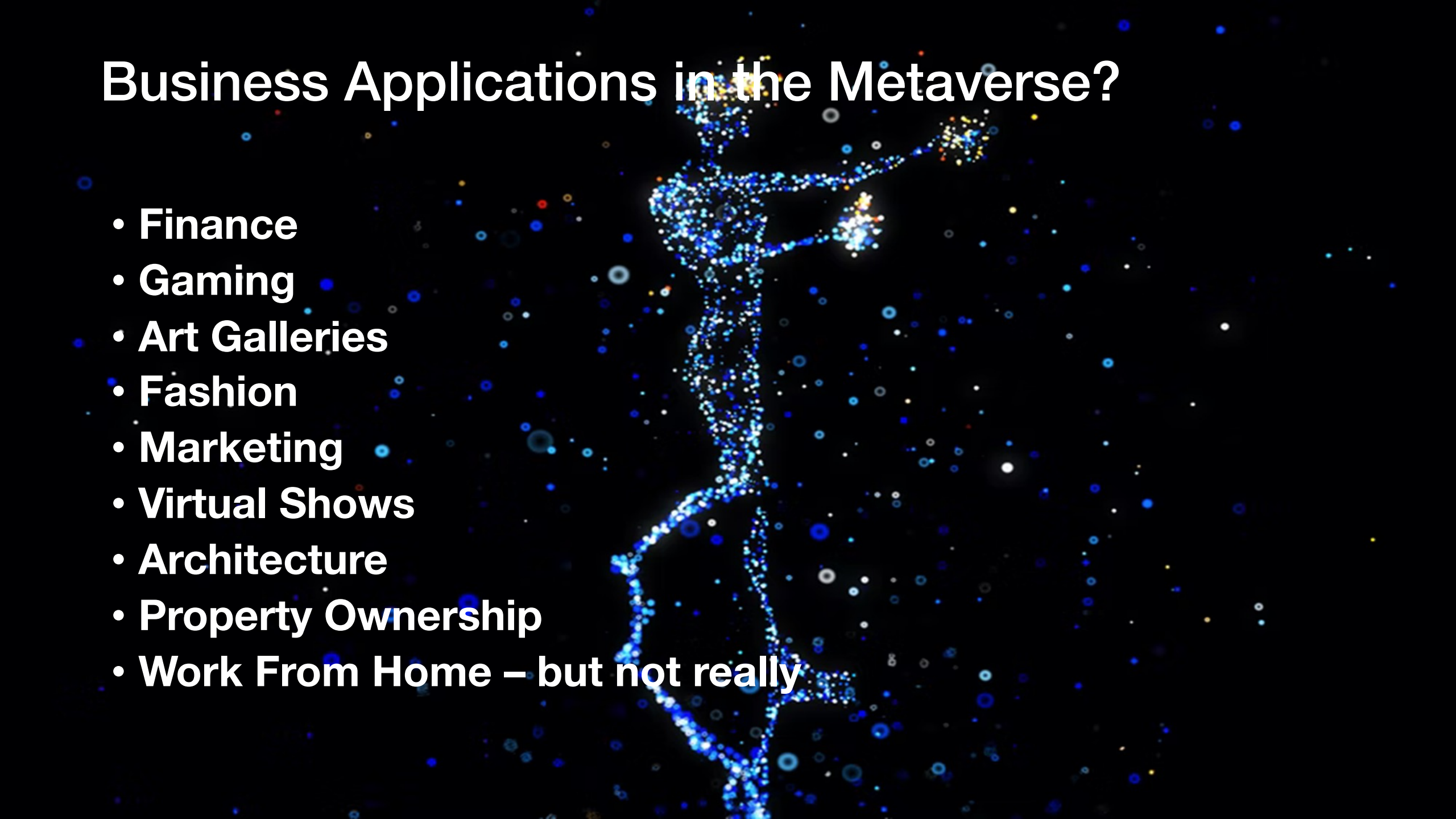
Business Applications in the Metaverse?



- Finance
- Gaming
- Art Galleries
- Fashion
- Marketing
- Virtual Shows
- Architecture
- Property Ownership
- Work From Home – but not really

Panera BREAD®

Branded Games & Experiences?
Virtual Food & Drink?
Home Delivery?

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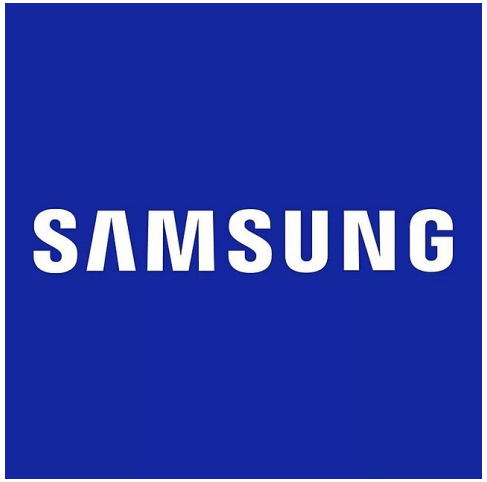
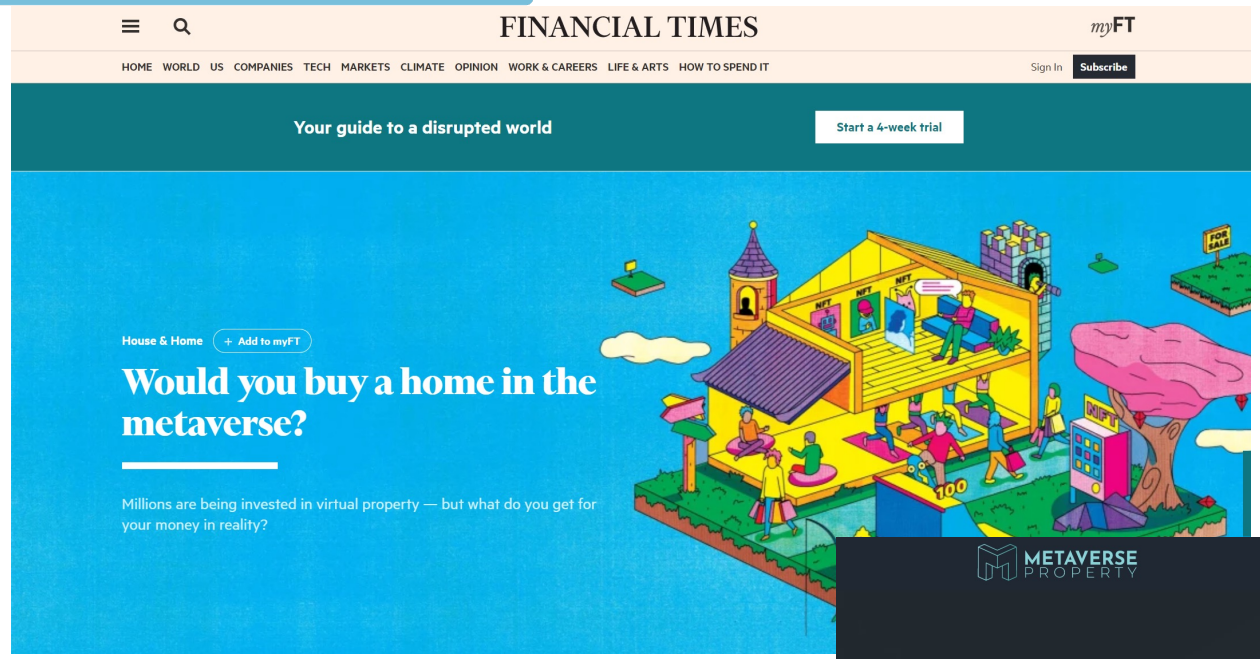
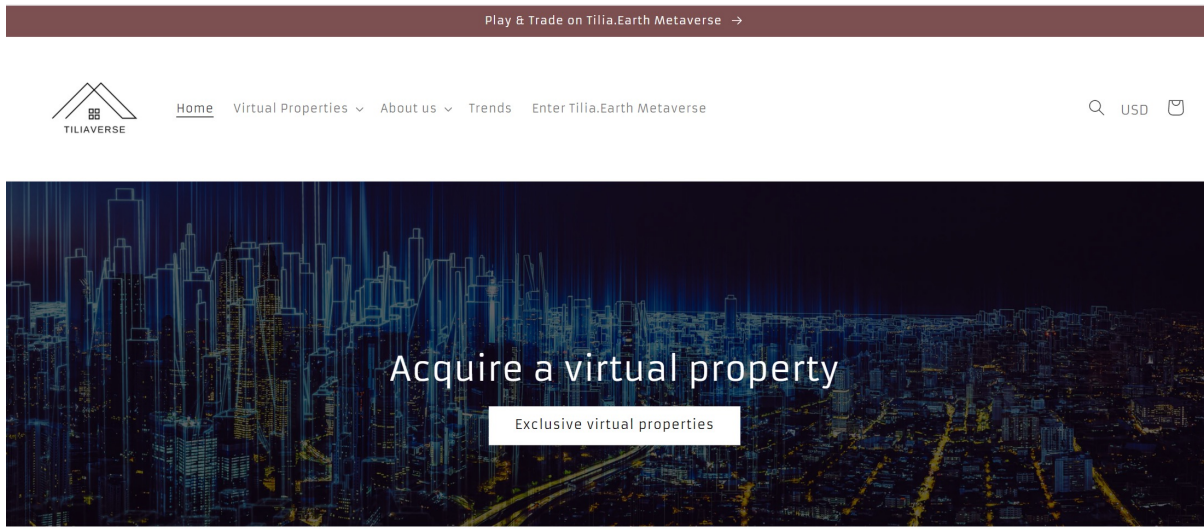
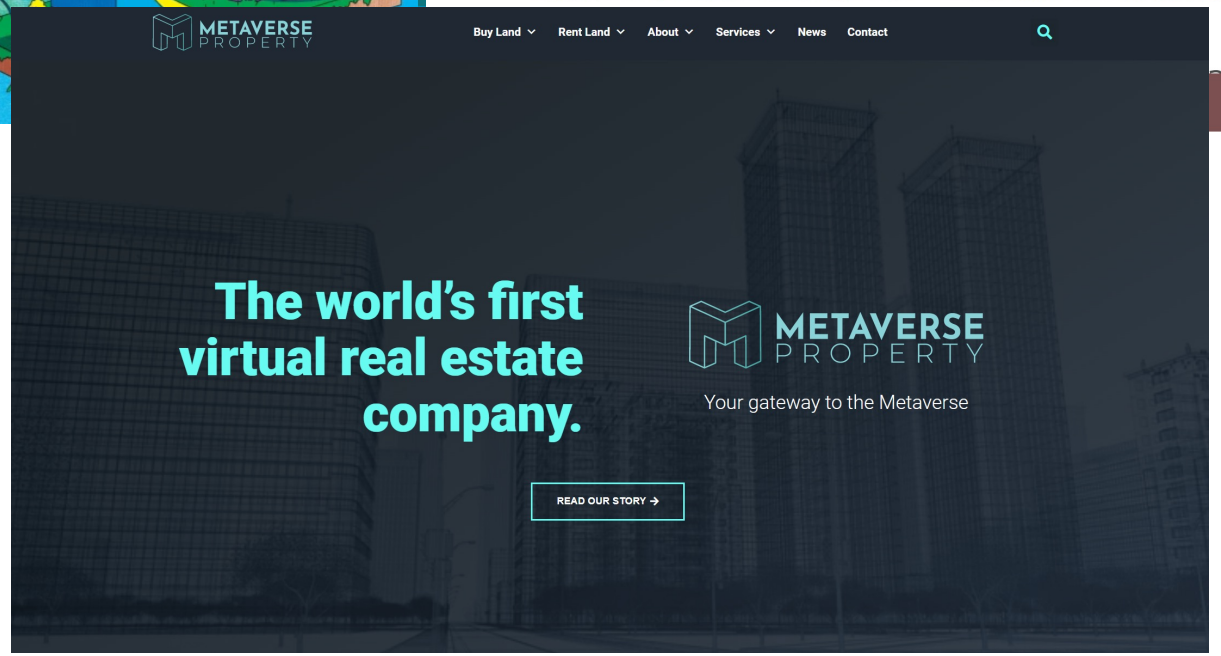
Large Companies are betting on the Metaverse



We may end up Selling in the Metaverse – or not







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So What should we do?

Gartner Information Technology Roles Experts Research & Tools Insights Events Client Success Stories

Gartner Information Technology Research

What Do Consumers Think of the Metaverse? Not Much

Summary

Despite the hype around the metaverse, few consumers surveyed by Gartner are confident that they know what it actually is. Those that are "meta-aware" mostly have no opinion or are concerned about what the metaverse might evolve into. It might be time to temper our expectations.

Published: 10 February 2022

ID: G00765977

Analyst(s): Kyle Rees , Consumer and Culture Insights Team

Gartner Predicts 25% of People Will Spend At Least One Hour Per Day in the Metaverse by 2026

Metaverse Hype to Transition into New Business Models that Extenc Digital Business

By 2026, 25% of people will spend at least one hour a day in the metaverse for work, shopping, education, social and/or entertainment, according to Gartner, Inc.

"Vendors are already building ways for users to replicate their lives in digital worlds," said Marty Resnick, research vice president at Gartner. "From attending virtual classrooms to buying digital land and constructing virtual homes, these activities are currently being conducted in separate environments. Eventually, they will take place in a single environment – the metaverse – with multiple destinations across technologies and experiences."

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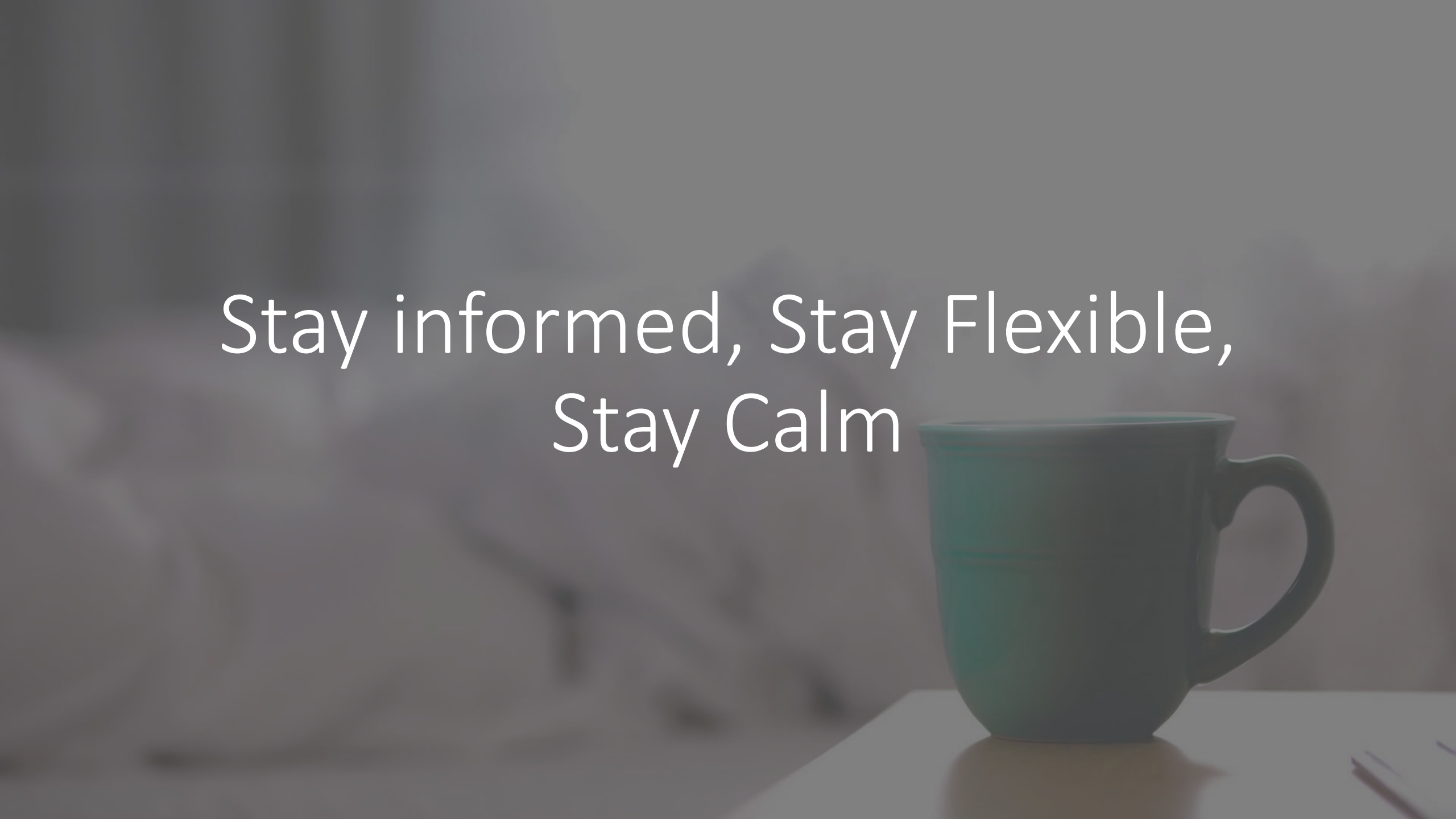
Stay informed, Stay Flexible, Stay Calm



THANK YOU