Le Métavers, Mythe ou Réalité ?

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Directeur Digital Transformation

Janvier 2023

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#MakingInnovationHappen

Agenda

1 Introduction

2 AR – VR – MR - Metaverse

3 Use Cases

4 Metaverse in Luxembourg

5 Challenges & Opportunities

Luxinnovation

National Innovation Agency

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Digital Transformation Department
Digitalisation et data management expertise

Support companies in their digital transformation and in the management of their data assets towards a sustainable development

LUXEMBOURG DIGITAL INNOVATION HUB

> Acceleration of the Digital Transformation of Luxembourg's Industry towards Industry 4.0

SUPERCOMPUTING HPC — EURO LUXEMBOURG

> Provide unique competences in High Performance Computing and promote its utilization in industry, academia and public administration

Gaia-X Hub Luxembourg

> Shaping the future European sovereign cloud infrastructure & contribute to a coherent approach towards sectorial data spaces

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October 2021 / Meta

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Oasis = ?

enot-poloskun / Getty Images

oasis

ONTOLOGICALLY ANTHROPOCENTRIC SENSORY IMMERSIVE SIMULATION

Augmented/Virtual/Mixed Reality

Augmented Reality

Source: Marvel

Virtual Reality

Source: Sony

Mixed Reality

Source: Adobe

Source: Gartner

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Digital Twin

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eugenie.ai
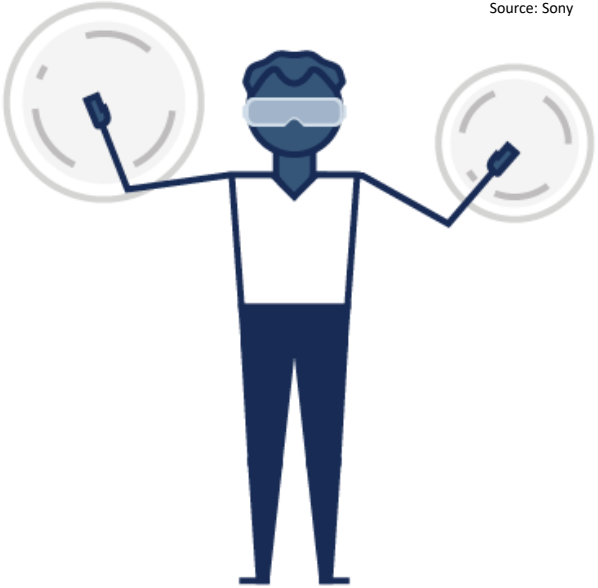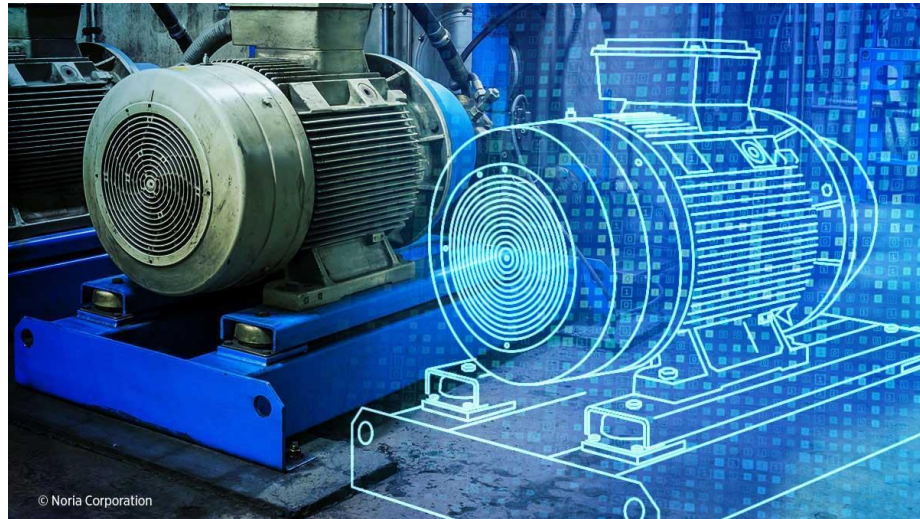
Inside the digital twin of BMW's assembly system, powered by Omniverse, an entire factory in simulation.

Introduction

Description of Metaverse

"an expansive network of persistent, real-time rendered 3D worlds and simulations that […] can be experienced synchronously by an effectively unlimited number of users, each with an individual sense of presence."

Matthew Ball

"A collective virtual shared space, created by the convergence of virtually enhanced physical and digital reality. A Metaverse is persistent, providing enhanced immersive experiences." A complete Metaverse will be device-independent and will not be owned by a single vendor: It will have a virtual economy of itself, enabled by digital currencies and nonfungible tokens (NFTs).
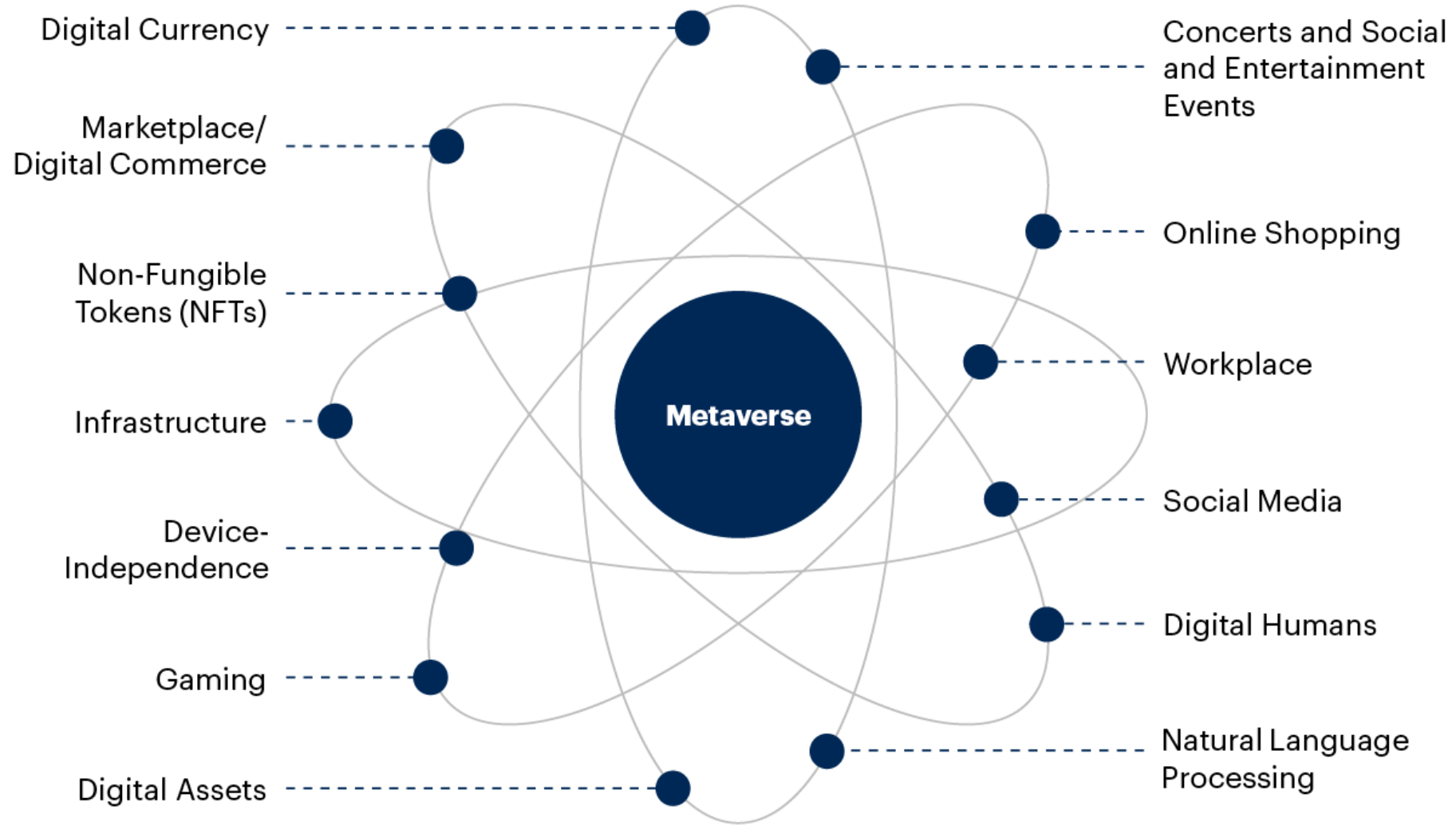
Gartner

Metaverse

Ecosystem Layers
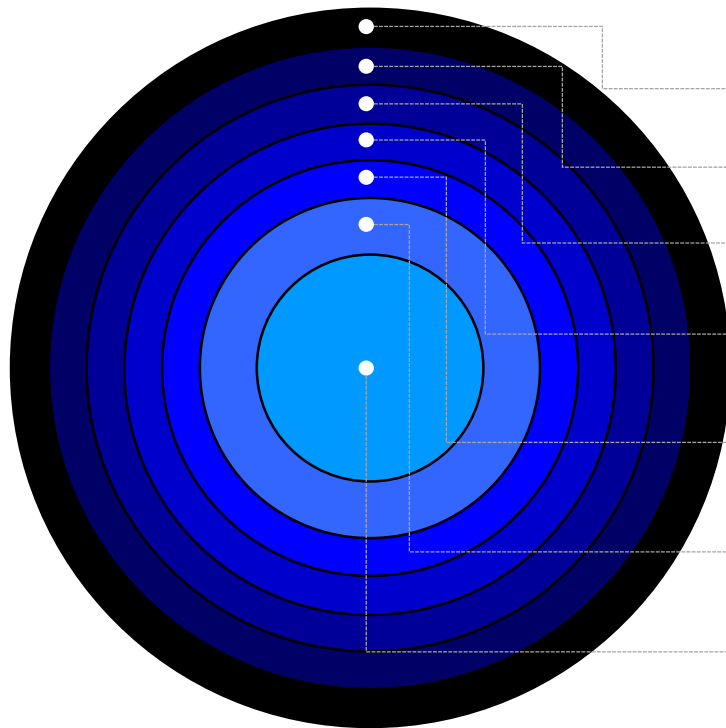
Experience — Games, Esports, Social, Theater, Shopping, Collectibles

Discovery — Ad Networks, Social, Curation, Ratings, Stores, Agents

The Creator Economy — Design tools, Assets Markets, Workflow, Commerce

Spatial Computing — 3D Engines, AR/VR/XR, Multitasking UI, Geospatial Mapping

Decentralization — Edge Computing, AI Agents, Microservices, Blockchain, Crypto, Web3

Human Interface — Mobile, Smartglasses, Wearables, Haptic, Gestures, Voice, Neural

Infrastructure — 5G, Wi-Fi 6, 6G, Cloud, 7nm to 1.4nm, MEMS, GPUs
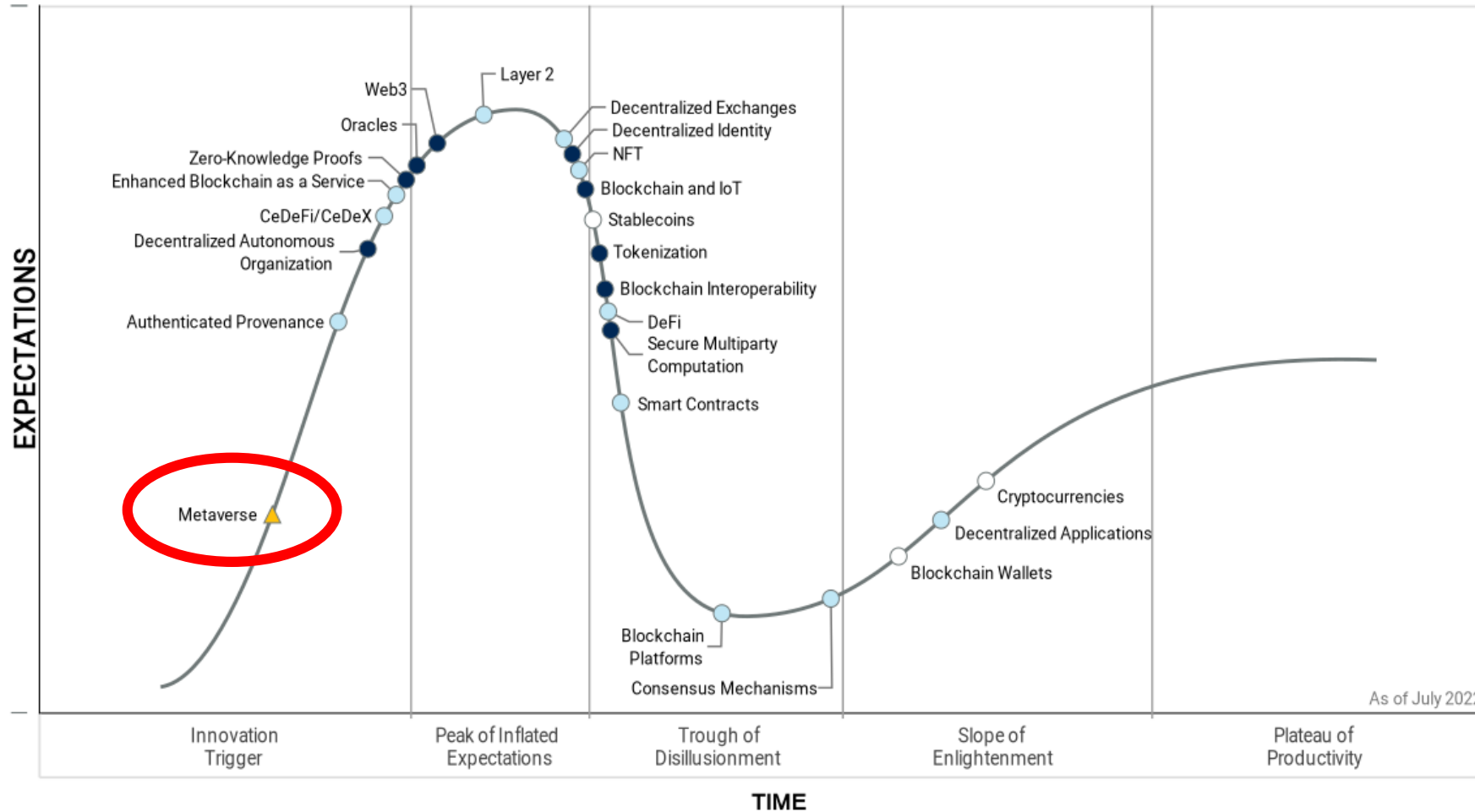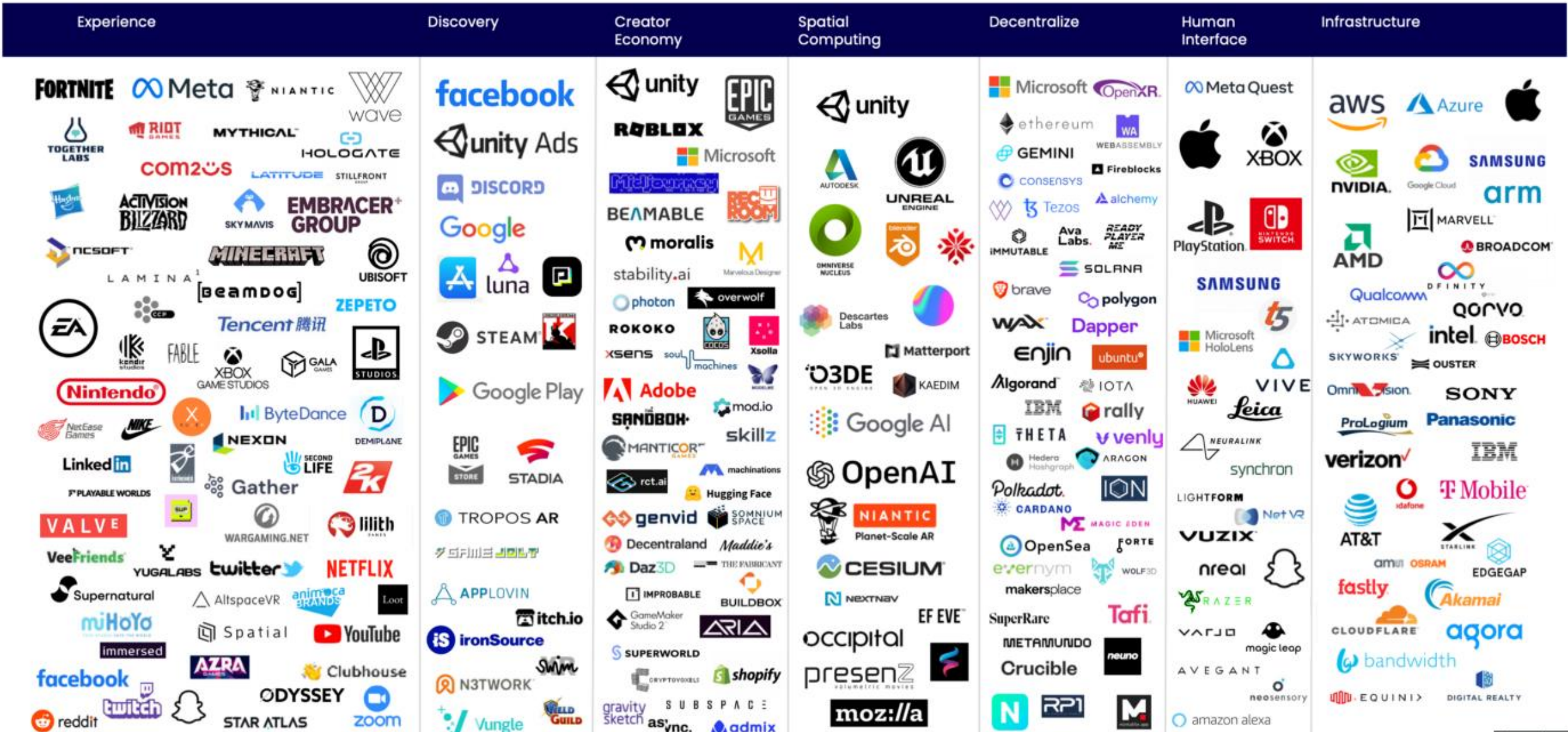
Source: John Radoff, 2021

Elements of a Metaverse

Digital Currency

Concerts and Social and Entertainment Events

Marketplace/Digital Commerce

Online Shopping

Non-Fungible Tokens (NFTs)

Workplace

Infrastructure

Metaverse

Social Media

Device-Independence

Digital Humans

Gaming

Natural Language Processing

Digital Assets

Source: Gartner

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Maturity

Metaverse Market Map

| Experience | Discovery | Creator Economy | Spatial Computing | Decentralize | Human Interface | Infrastructure |

Source: medium.com

Agenda

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Metaverse across the world

Developing countries love the Metaverse, rich nations not keen

% with positive feelings about engaging with extended reality in their daily life

CA 30%
US 42%
MX 65%
CO 67%
PE 74%
BR 60%
CL 57%
AR 58%

DE 31% SE 40%
NL 35%
BE 30%
GB 26%
FR 31%
ES 43%
PL 51%
HU 39%
TR 63%
CH 40% IT 46%
SA 71%
ZA 62%
CN 78%
JP 22%
KR 63%
IN 75%
MY 51%
SG 57%
AU 36%

Feelings by country of engaging in a metaverse in daily life, darker areas indicate higher percentage of positive feelings in that region. Source: Ipsos
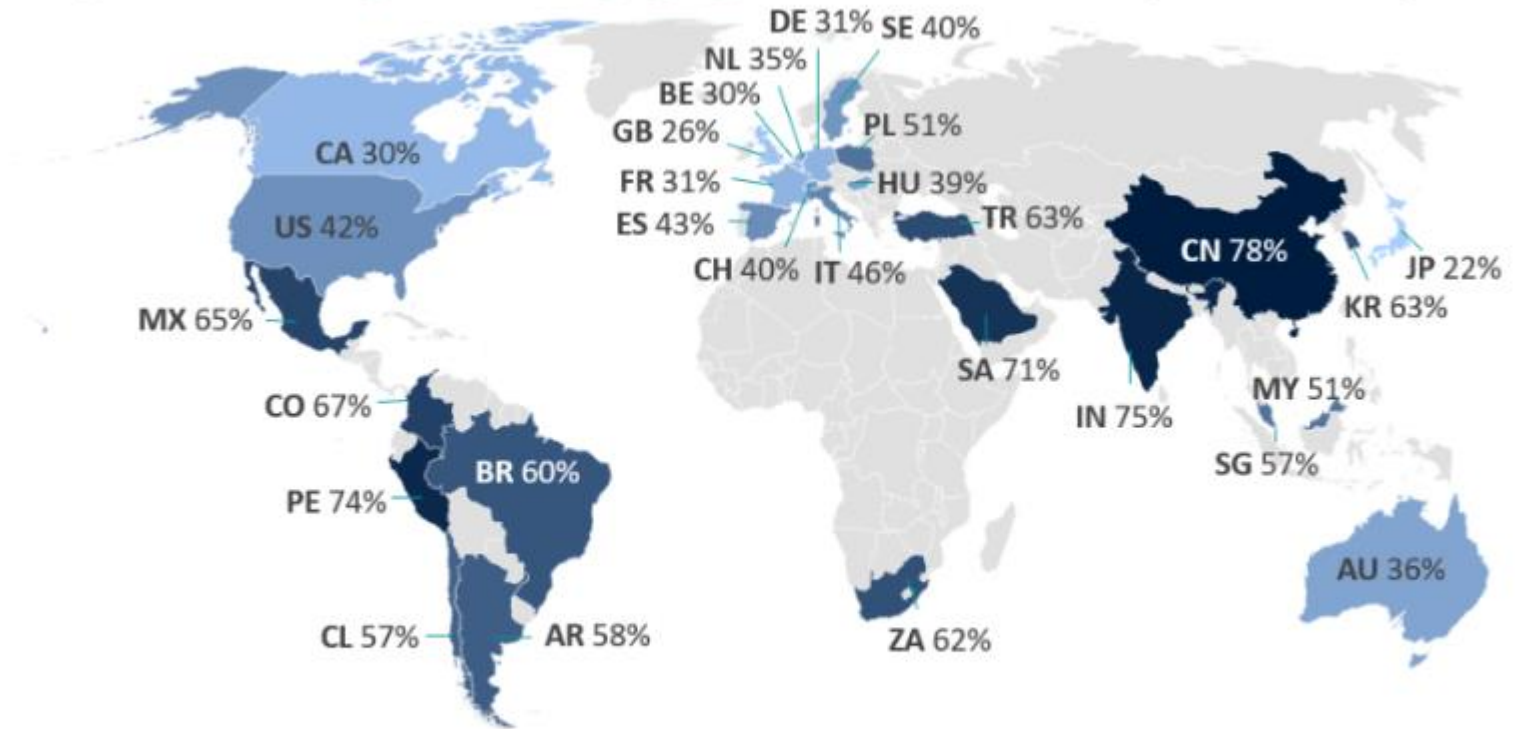
Source: World Economic Forum

Metaverse across the world

Search engine statistics

Which countries are embracing the metaverse?

	Country	Average monthly searches	Population	Average monthly searches per million people
1	Singapore	18,000	5,685,810	3,166
2	New Zealand	16,000	5,084,300	3,147
3	Hong Kong	17,000	7,481,800	2,272
4	United Arab Emirates	19,000	9,890,400	1,921
5	Republic of Ireland	9,500	4,994,720	1,902
6	Canada	72,000	38,005,240	1,894
7	Israel	16,000	9,216,900	1,736
8	Denmark	10,000	5,831,400	1,715
9	Romania	31,000	19,286,120	1,607
10	Netherlands	24,000	17,441,140	1,376
11	Norway	7,200	5,379,480	1,338
12	Greece	14,000	10,715,550	1,307
13	Malaysia	41,000	32,366,000	1,267
14	Sweden	13,000	10,353,440	1,256
15	Croatia	4,700	4,047,200	1,161

Source: Broker chooser

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A highly elaborate digital twin of Singapore is headed to the metaverse

Related News

Source: The Star

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South Korea is betting on the metaverse — and it could provide a blueprint for others

Jonathan Keane
@HTTPS://TWITTER.COM/J_K9

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KEY POINTS

- South Korea's investment of around $177.1 million is among the first investments in the nascent industry to be made by a national government and is a cautious first step into the metaverse.

- It signals an interest in a technology that could take center stage in the coming years — and it could provide a blueprint for others to follow.

- But there are many issues that South Korea and other governments will have to address when venturing into the metaverse, whether it's using the technology to improve citizen engagement, or in deciding the role they will play as regulators of a rapidly expanding technology.
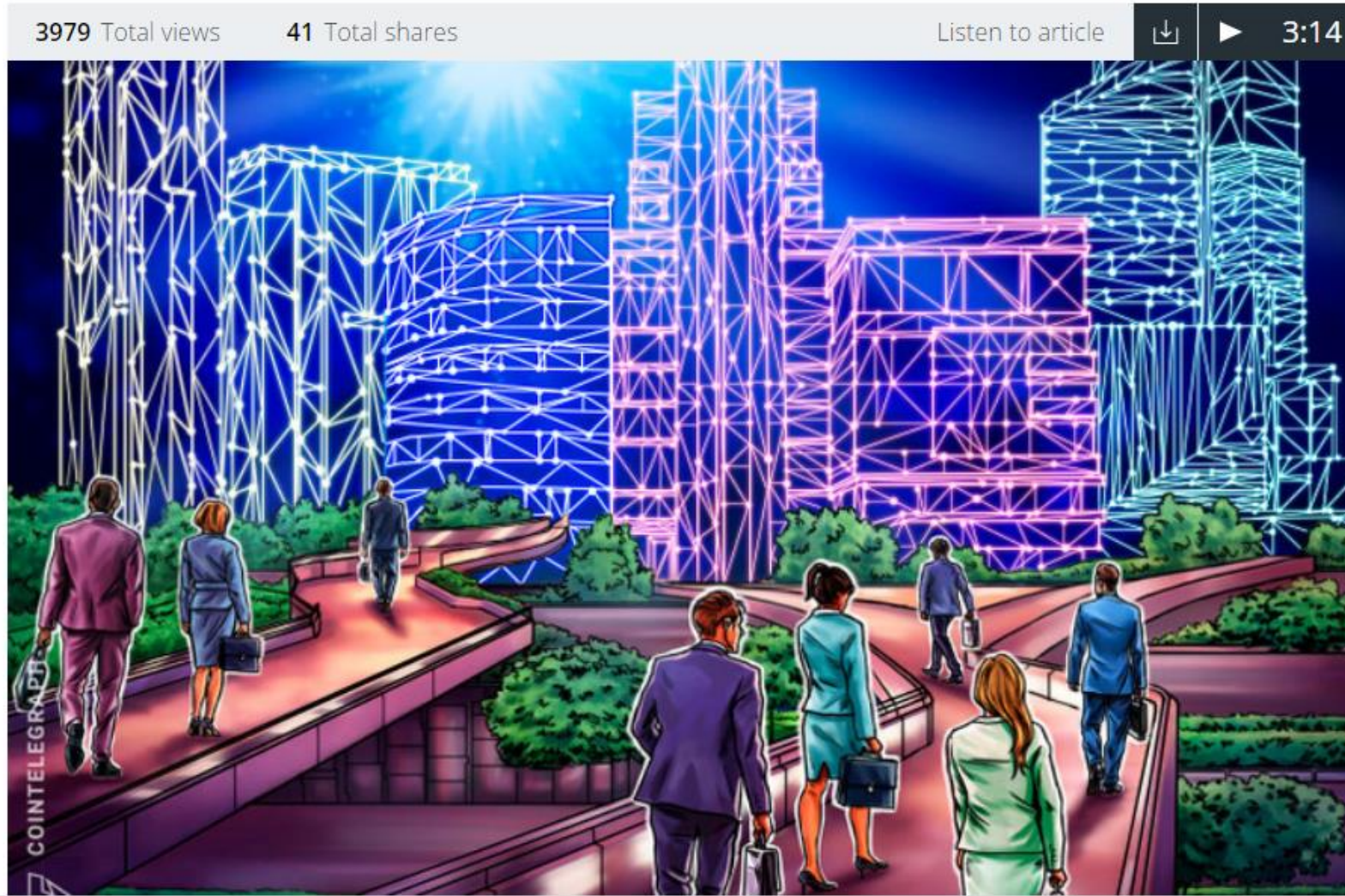
iCap

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Three mon

A 'very ambitious' $100M Metaverse R&D hub is being built in Melbourne

"We're really designing a whole world," Two Bulls founder James Kane said about the role his business will play in the yet-to-launch metaverse.

3979 Total views   41 Total shares   Listen to article   3:14

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2021 - Launch
- Open Beta Launch
- Buy & Sell Feature
- Only Thonglor-Ekkamai
- Support MVP Coin and BUSD
- Audited Tax and Advisory Service in Singapore

Q4-2021
- DeFi on Land Plot Feature
- Update 2D/ 3D Model
- New Partnership
- Use Case Governance Token
- Business Forum Function

Q2-2022
- New Partnership
- Major Update 3D Game Engine
- Offshore Incorporation Service
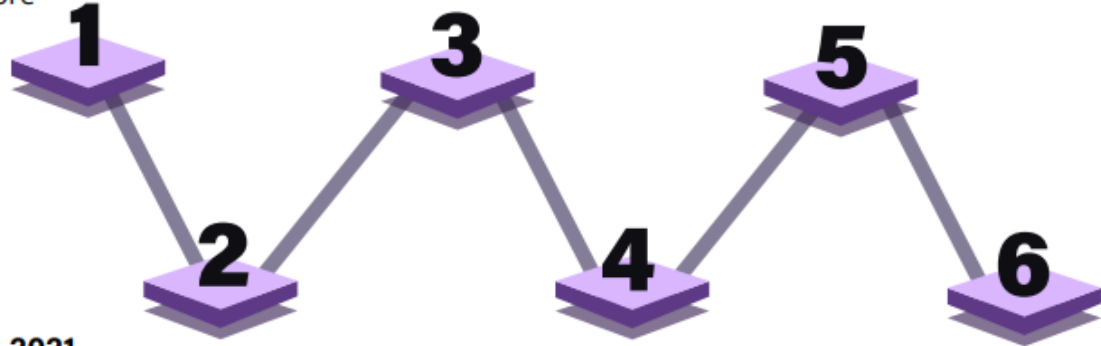
Q3-2021
- Merge/ Split Land Feature
- Purchase Offer Function
- 2D/ 3D Model on Maps
- Governance Token Announcement
- Stable Coin Announcement
- User Profile
- New Partnership
- Corpxervice Business Virtual Office

Q1-2022
- Audited by Certik
- Listing on CEX
- Listing on Coingecko, CMC
- New Update Feature
- New Partnership
- Morison Global Business Partnership

2022 Metaverse Global
- Metaverse Singapore
- Metaverse Dubai

Catalonia is building its own metaverse, says innovation minister

The government is hoping to make Barcelona a digital hub by offering various skills programs to university students and boot camps to cultivate talent.
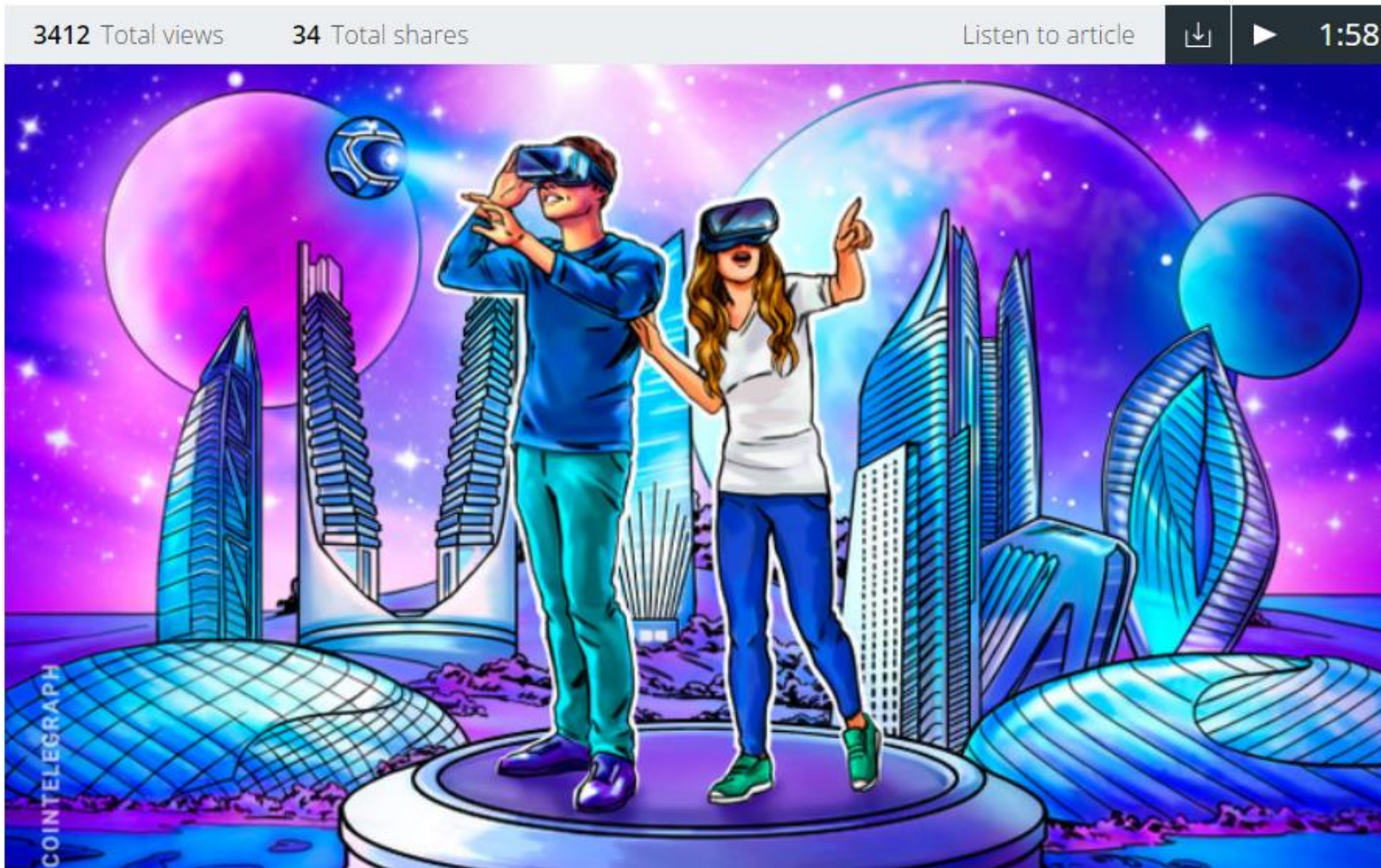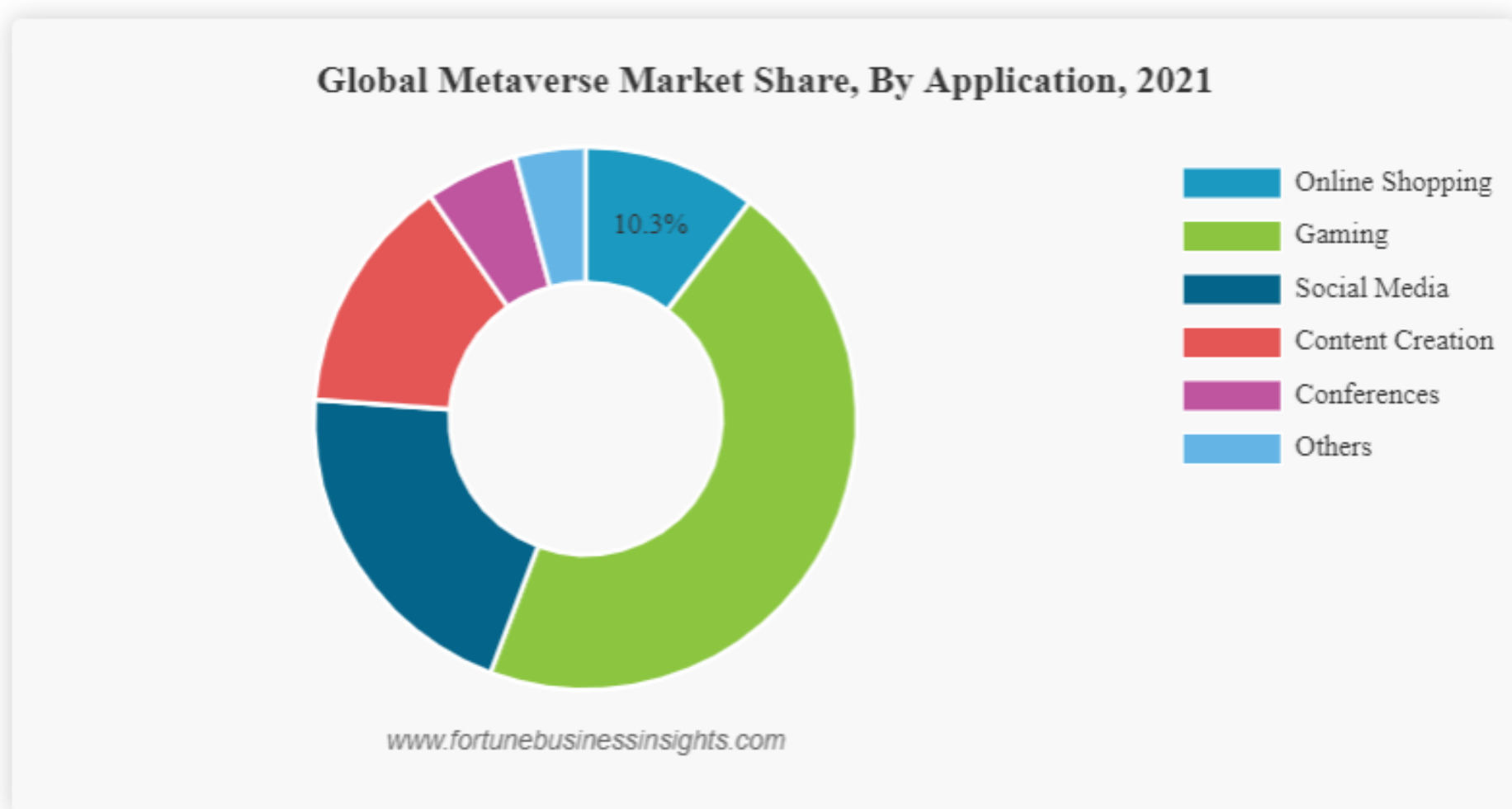

Source: Coin Telegraph

05 janv. 2023

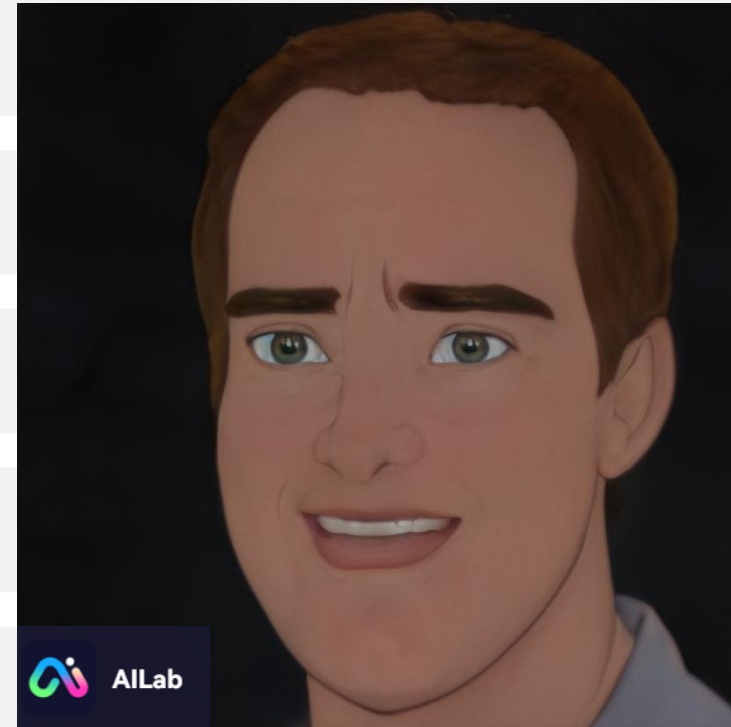FIAT au CES de Las Vegas 2023 : Première mondiale du
FIAT Metaverse Store

Source: Stellantis

Current usage of Metaverse
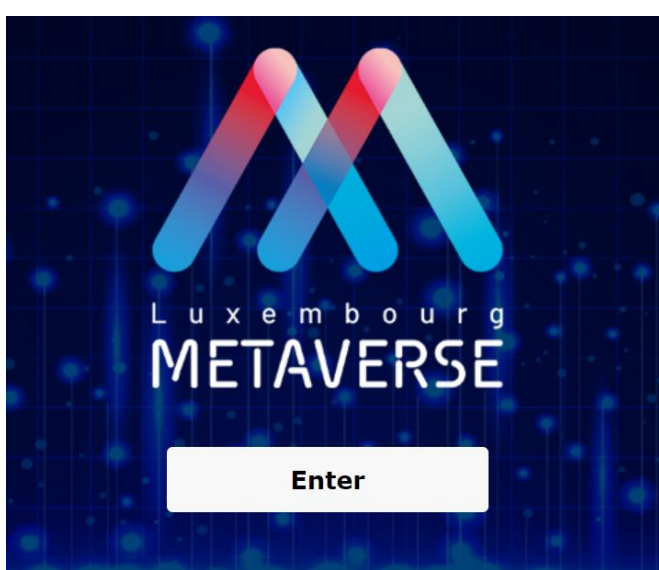

Global Metaverse Market Share, By Application, 2021

10.3%

- Online Shopping
- Gaming
- Social Media
- Content Creation
- Conferences
- Others

www.fortunebusinessinsights.com

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https://www.luxembourgmetaverse.com/

Key Players

Users

Companies in Luxembourg

https://www.orange.lu/fr/actualites/orange-digital-center-dans-le-metaverse/?utm_source=linkedin&utm_medium=socialseeder&utm_campaign=digital-center-metaverse

The Duchy

Enter the Metaverse of Luxembourg

Fully available from End 2022.

Explore
In order to interact and travel within the virtual environment each member will receive their individual 3D avatar.

Invite
Every landowner will be able to invite an unlimited number of people from all over the world to their virtual property.

Monetize
By leveraging non-fungible ERC-271 technology, we allow every member to buy and trade any virtual product.

Roadmap

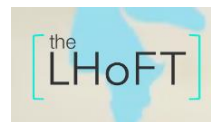| 11.21	01.22	07.22	01.23	02.23
Launch of the Project	Begin of technical development	Initial offering of available land	Opening for invitation only exploration	Official Opening

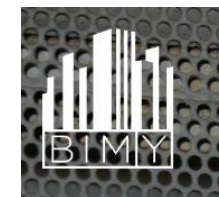Key Players · Vizz · Sumo's NFT Project · the LHoFT · SUMO! · BIMY

The Duchy.lu

Companies in Luxembourg

NEWS

Infinite Reality plans for European HQ in Luxembourg

The metaverse has the power to transform how consumers interact with brands. We spoke to John Acunto, CEO of metaverse leader Infinite Reality, about how he thinks the metaverse will develop in Europe and about the company's plans to set up its European HQ in Luxembourg.
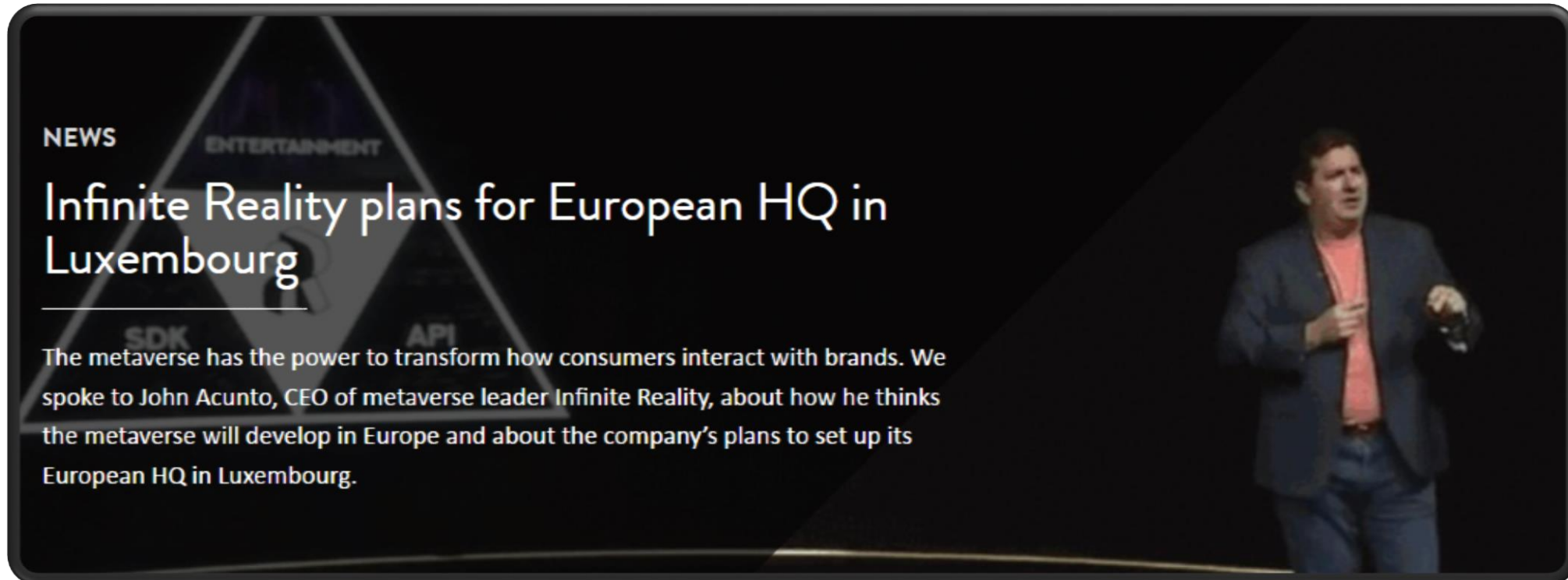
https://www.tradeandinvest.lu/news/infinite-reality-plans-for-european-hq-in-luxembourg/

THE INFINITE PLAYA™
WELCOME HOME

Welcome to The Infinite Playa, a virtual playa that provides the simulated experience of going "Home".

Meet up with your friends and make new ones as you explore our fully interactive and photo-real playa, a 3D, to scale environment that features art, live music, talks, performances, games and so much more.

https://www.infiniteplaya.com/

Metaverse
LU Ecosystem
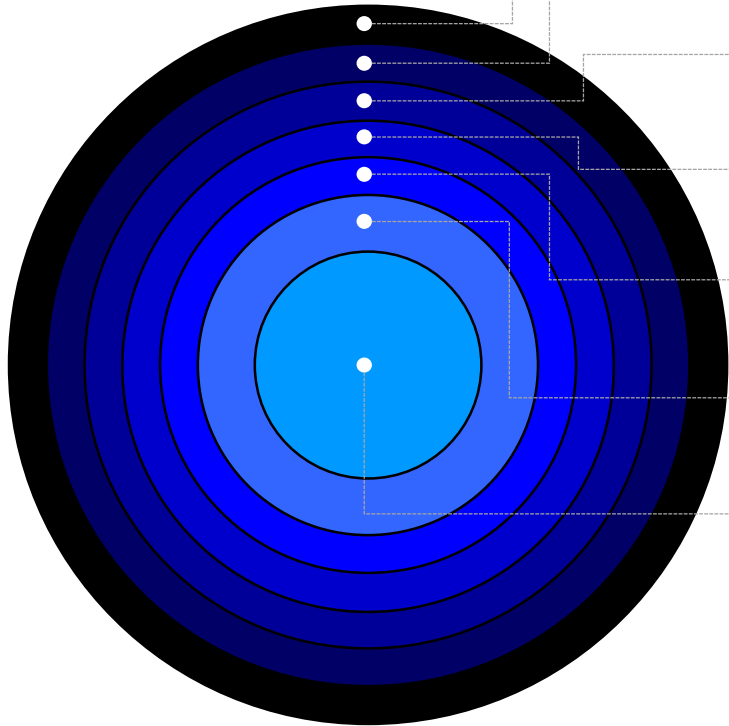
Experience	VR	Vizz	INFINITE REALITY	URBAN TIMETRAVEL
Discovery	Vizz		VR	the DOTS.
The Creator Economy	INFINITE REALITY	SUMO!	BIMY	Vizz	VR
Spatial Computing				
Decentralization				
Human Interface				
Infrastructure	POST LUXEMBOURG	proximus	orange	
Enablers	EY Building a better working world	Deloitte. pwc	orange	LUXEMBOURG INSTITUTE OF SCIENCE AND TECHNOLOGY / LIST / uni.lu / SnT	the LHoFT	HIRO METAVERSE ACQUISITIONS
Users	AXA / ebrc	CFL	POST / orange	breVer BOIS BREVER S.A. - HULDANGE	BEYN BUILDING BRIDGES	Luxembourg National Research Fund / MNM MUSÉE NATIONAL DES MINES RUMELANGE	DLH DIGITAL LEARNING HUB

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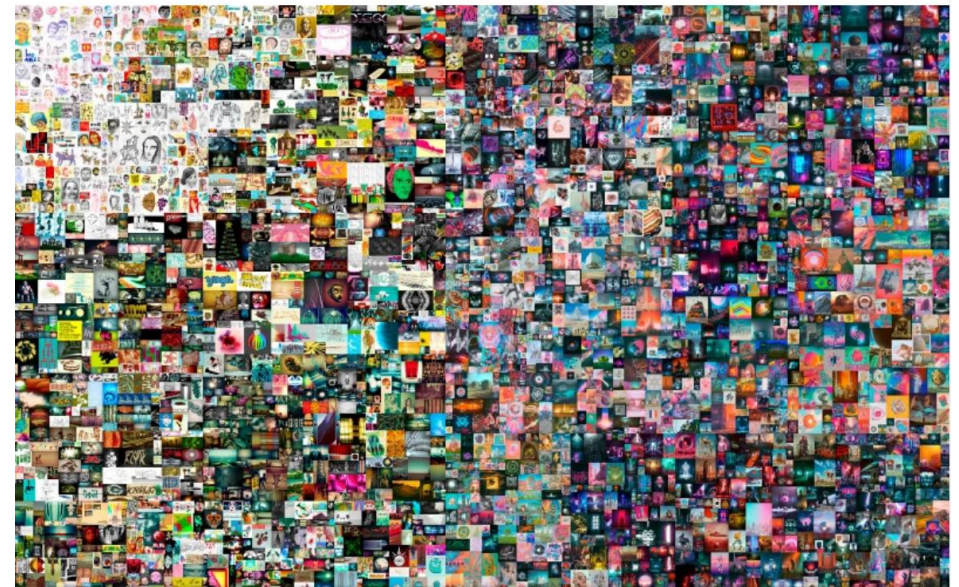|	
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Opportunities

New User Experience – New World

New Business Models

NFTs Are Shaking Up the Art World—But They Could Change So Much More
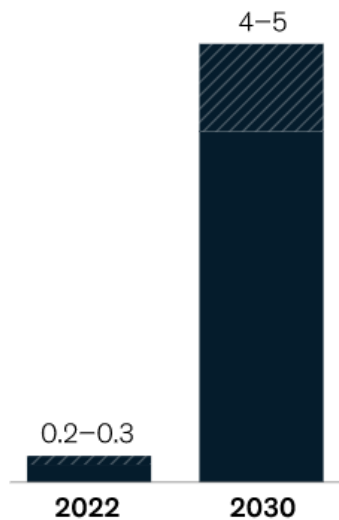
TIME

New Market ?

By 2030, the metaverse could generate $4 trillion to $5 trillion across consumer and enterprise use cases.

Metaverse revenue estimates, $ trillion

2022: 0.2–0.3
2030: 4–5

Relative 2030 use case potential

	Low	Medium	High
Consumer use cases	• digital media • health and fitness • virtual assets • VR/AR[1] hardware	• ads • education • gaming • live entertainment	• e-commerce
Enterprise use cases	• central government • construction • consumer services • insurance • investment • local government • resource industries • utilities	• education/training • healthcare provider • transportation • wholesale	• banking • discrete manufacturing • media • process manufacturing • professional services • retail • telecommunications

[1]Virtual reality and augmented reality.
Source: McKinsey analysis

McKinsey & Company

METAVERSE MARKET: COMPONENT DYNAMICS (USD BILLION)

2021 — 2030
■ Hardware   ■ Software
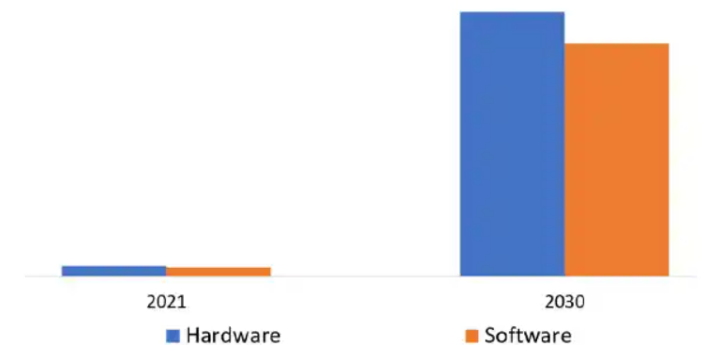
Source: www.emergenresearch.com

Challenges

Wild West – needs rules, security & compliance

User experience

Interoperability

Business model

Sustainability

Green IT

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Thank you!

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