

Gearing up for the Metaverse

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/thoughtworks

Creating extraordinary impact together

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Step by Step

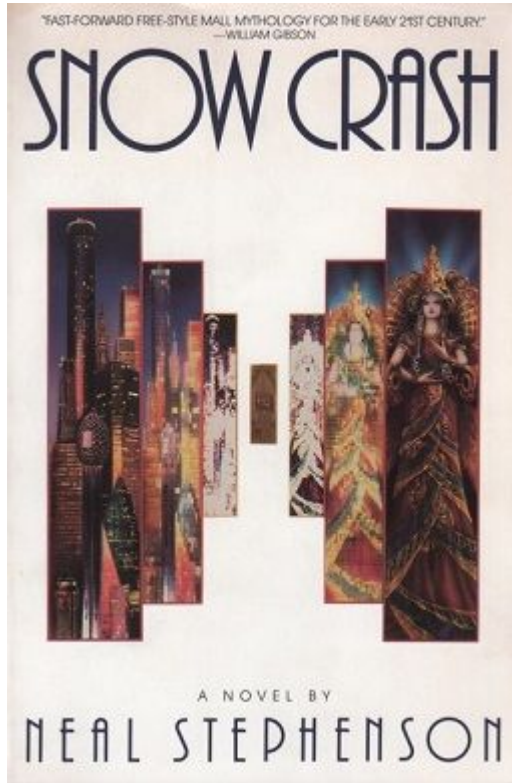
Let's understand the metaverse

Metaverse is a new buzzword in internet technology, let's understand it step by step. From definitions and opportunities to its concerns and how to get ready for it.

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Metaverse - the definition part

Snow Crash - 1992



Wait a minute, Juanita. Make up your mind. This Snow Crash thing—is it a virus, a drug, or a religion?"
Juanita shrugs. "What's the difference?"

— *Neal Stephenson* —

AZ QUOTES

A futuristic society encounters a computer virus that has the ability to scramble people's brains.

Oasis of Ready Player One



Second Life - Not just a game

Who don't want to live or try?



- 2001 - LindenWorld
- 2005 - InfoHubs, **Community** collab, Teen SL banned
- 2010 - **Open** Source, Second Life Marketplace, SL Viewer
- 2015 - Hosting biggest events, \$60m cashed out, \$500m GDP
- 2020 - a platform, creator economy, Linden **Dollar, immersive** - Sensor
- Linden Metaverse

Roblox, Fortnite, Minecraft...

Metaverse - more than collaboration

Is it what Meta or Microsoft define?



- Microsoft - terms “Windows”, “Mixed Reality”. Physical OS to virtual OS, Azure Cloud, Office 365, Teams **Platform**. Mesh
- Facebook - social network, billions of active users, microsoft funding, **collaboration** with skype, messenger, acq. Instagram, whatsapp, VR Oculus, **Internet.org** initiative (anti-internet), PyTorch, React native **open source**, open APIs, **payment, controversies**

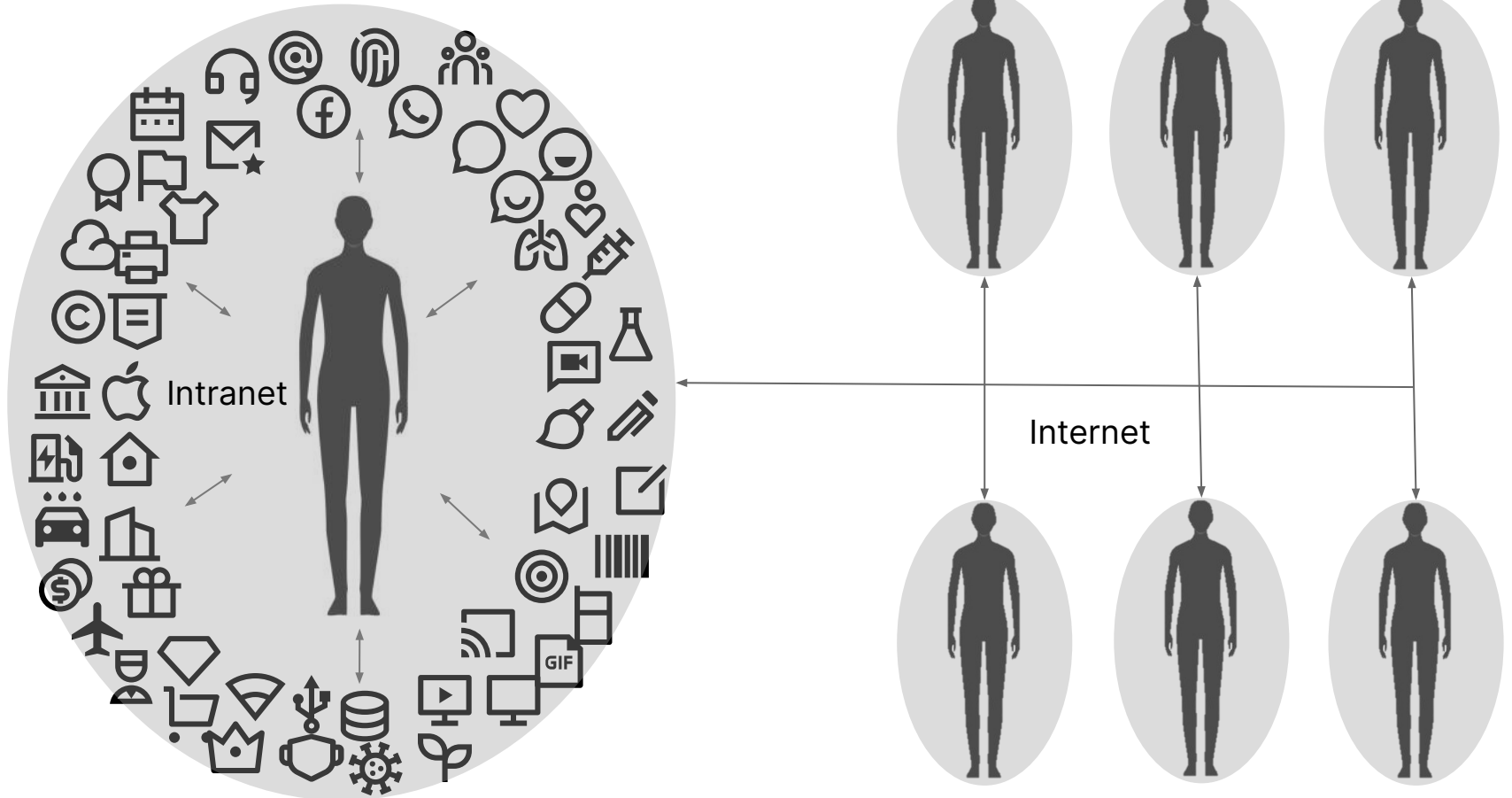
Real world metaverse - eXtending the Reality

Is it what Niantic define?



- **Niantic** - Best known for Ingress and **Pokémon Go, Mobile AR** at scale.
- Lightship Platform to **map** the whole world thru **communities**.
- Aims to make the same world more connected, more accessible
- NFT - gaming crypto **currency** to masses
- Google - Immersive Computing in AR
- Samsung - all online and digital behaviors and lifestyles, will be accelerated by the new normal that has become part of our daily lives.

“Metadata” and “Internet”



What is the Metaverse?

The definition part

Metaverse is an universe built up on the network of metadata around us and about us. In a universe where the real and fake blur together, photo-realistic avatars are making use of virtual identities, virtual intellectual properties / assets, virtual societies and their own virtual currencies.

**Metaverse is
Open &
Independent**

**Metaverse
is One &
Interoperable**

**Metaverse is for
Everyone &
Self-sustainable**



Metaverse is Internet

Metaverse is touted to be the next natural step in the evolution of the internet with use cases to boot

Metaverse

Artificial
Intelligence

Extended Reality
(XR)

Internet Of
Things

Augmented Reality
(AR)

Virtual Reality
(VR)

Mixed
Reality
(MR)



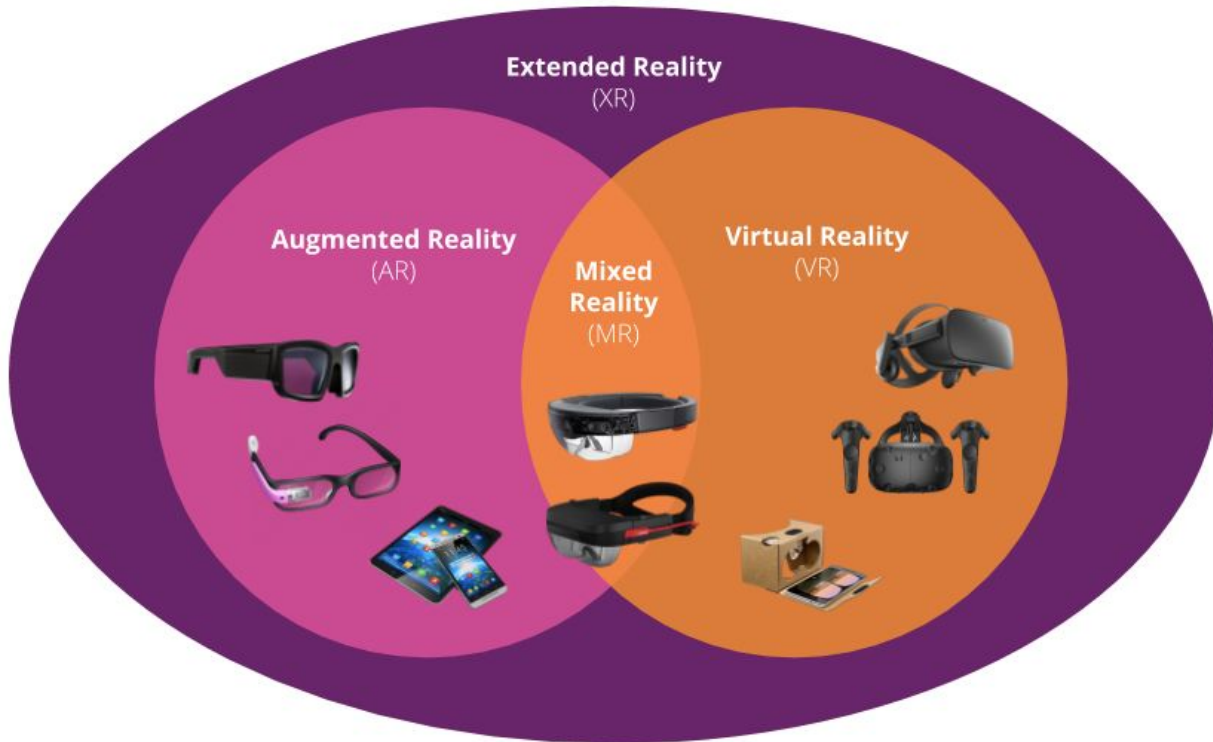
Cloud

Blockchain

5G/6G

eXtended Reality (XR)

Understanding multiple ways of extending the reality



AR - Augmented reality (AR) overlays digital content in the live environment.

VR - A complete immersive experience that shuts out the physical world and takes into the virtual world.

MR - Combination of both AR and VR, where physical world and digital objects interact.

Mobile XR – AR/VR enabled smart phones/tablets

Web XR – AR/VR enabled web

HUD - Heads up displays, projection based

Metaverse - The hype part

Are we already in Metaverse?

Yes and No

Yes - it is already happening around us. Our metadata is getting public, open and accessible day by day. Owning digital assets is quite common in Next Gen.

No - It is currently being driven by a very small number of industry giants, it's independence is not guaranteed.



“Metaverse is only for gaming” - This is as true as “Mobile phone is only for telephony”



“Metaverse is only about Facebook’s Meta transition” - Meta is just one of the force in Metaverse adaption. It looks any Meta.



“We will not be impacted” - Everyone will be impacted.



“We haven’t seen any great adoption in this area last 5 years” - Yes, but we will see what we have not seen till date in next 5 years.

Metaverse - facts and figures

Digital and physical worlds are conversing through the Internet. USD 47.69 Billion in 2020, at a CAGR of 43.3%. Increasing emphasis on developing metaverse platforms and global marketplace. [ARVR, NFT, Gaming, Social Media, 5G]

**A path to
\$800 billion
Market size
with double
digit growth
in next 5 yrs**

**Global digital
marketplace,
3D online**

**Live
entertainment,
gaming
software and
service, ads**

**Gaming SW/
HW, AR/VR,
Blockchain, AI
powered 3D
engines**

**Cost-effectiveness,
universal
acceptance,
co-creation**

Finding opportunities

- Race of normal looking glasses.
- Every other enterprise is finding their 3D strategy, by acquisitions or partnership
 - Tiktok → Pico, Google → North
 - Epic Games → SketchFab
 - Qualcomm → Wikitude, ClayAir
- Network and computing speed is increasing
- Pandemic impact

Jio Glass



Google

Normal Looking glasses

Pioneer in ARVR,
100s of android based XR devices,
now acquires North, normal
looking glasses.

Lenovo

ThinkReality A3

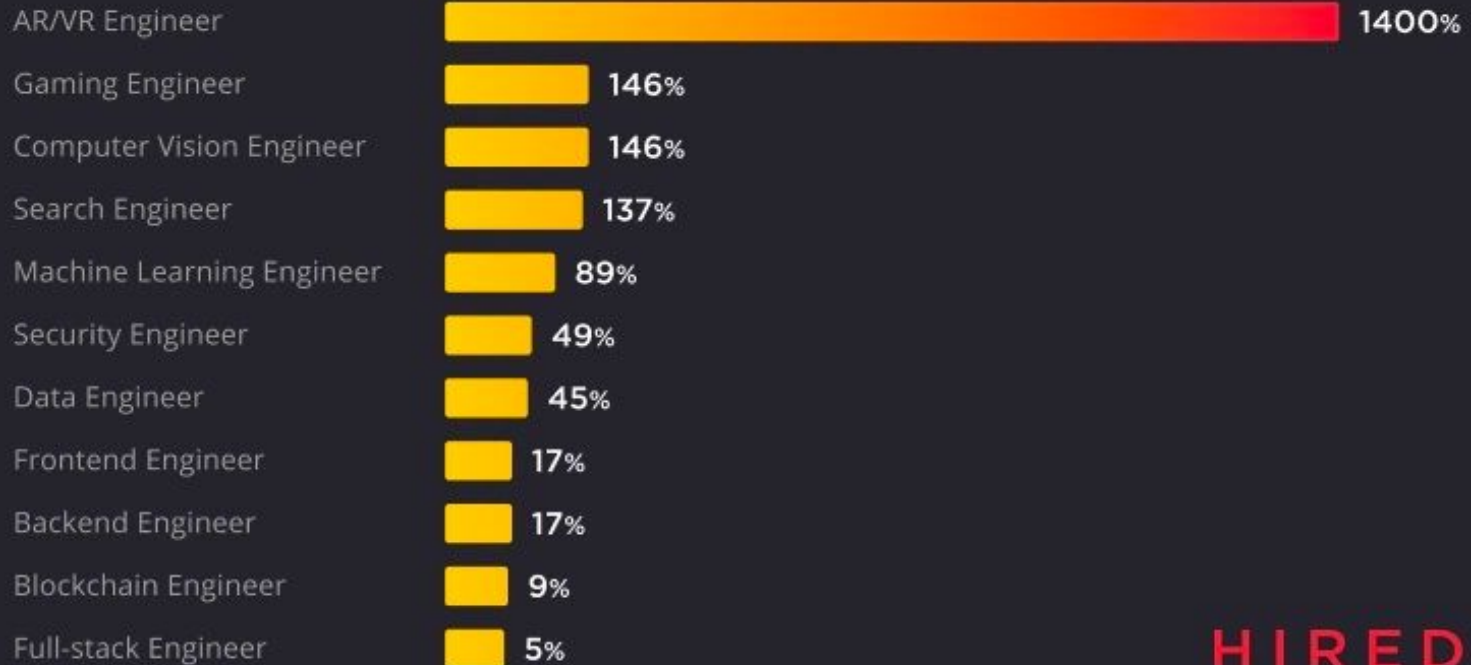


Ray-Ban | FACEBOOK





Source : <https://medium.com/xrpractices/the-growing-list-of-xr-devices-f102262e4a58>

Role**Percentage Growth****HIRED**

Metaversal Hiring

Content driven economy

Hiring will be changing permanently in the new normal, more and more independent establishments popups and will challenge the existing setups and traditional ways.



"I am a youtuber" - Unboxing videos/
Toys / Playing game.



Chief Metaverse Officer,
Metaverse Developer, Metaverse Safety
Officer, Metaverse scientist



Creator / Storyteller / Freelancer



Play-to-Earn / Just stay in the metaverse



Owning Digital Place / Trading



Metaversal Cyber Security

Metaverse - the opportunities part

Location agnostics work environment

Work from anywhere or work from nowhere

Metaverse will bring capabilities of the real world and overcome limitations and challenges of real-world.



- **Be in your comfort - Not always on camera**
- **Everything Digital - No need to carry too many hardware**
- **Infinite and Interoperable Space**
- **See problems in 3D solve in 3D**
- **Eco-friendly - less travel, less wastage**
- **Remote collaboration**

Skilling and Reskilling

Tackling the workforce shortage, and shifting skills.

Onboarding

Training

Working with gadget geeks

New safety and compliance

Record, rewind and correct

Source : [Future-of-Work-Talent-Crunch-Report](#)



10K baby-boomers reaching retirement age every day for next 19 years, covid19 making it faster



50% companies are facing skilled labour shortage. Covid19 has increased it more.



75% of global workforce will be millennials by 2023



Outdated methods of training and onboarding



Enterprise complexity is increasing, need to re-invent. Human machine collaboration, simulations



Workforce safety and compliance requirements. Multi-shift working

Assets and Market

The creator economy

Metaverse will be self sustainable, with it's own way to fund creator and co-creators.

Economy of creators and co-creators. - Youtube, Snap AR Lens, Stories, Reels



- **NFT (Non-Fungible Token) - Viable solution for artists to create financial value from the digital artwork they produce. % royalty on every sale of art.**
- **Marketplaces - Cryptopunks, Hashmasks, SuperRare, Rarible, Sandbox, NFTically, WazirX...**

Real Estate and Event Management

Buy/Sell/Rent properties in metaverse

It there is a currency, then there would be way to trade the properties. Monetize the metaverse.



Picture credit : <https://www.nicepng.com/>

THE
SANDBOX
WELCOME TO THE METAVERSE

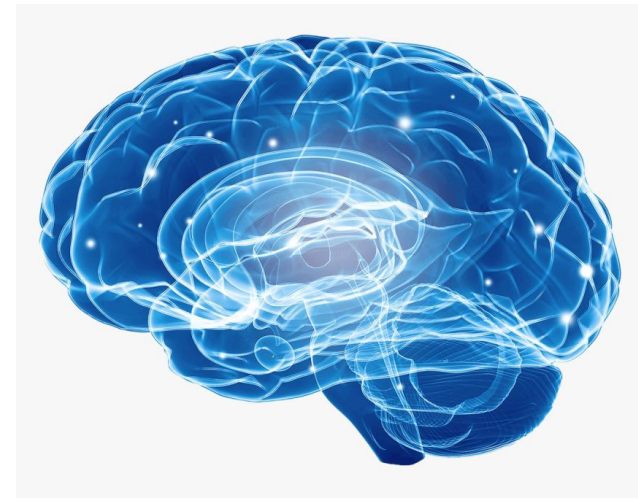
Visit www.sandbox.game to learn more

- Buy land, build house, and sale or may be rent
- Concerts, events, conferences
- Allow advertisements, and get paid
- Different platforms being built - buy Taj, monuments and more..

Meet and Greet

Beyond the reality

Meet and greet in metaverse/XR within capabilities of real world and beyond it... Metaverse can bring the real power of being human.



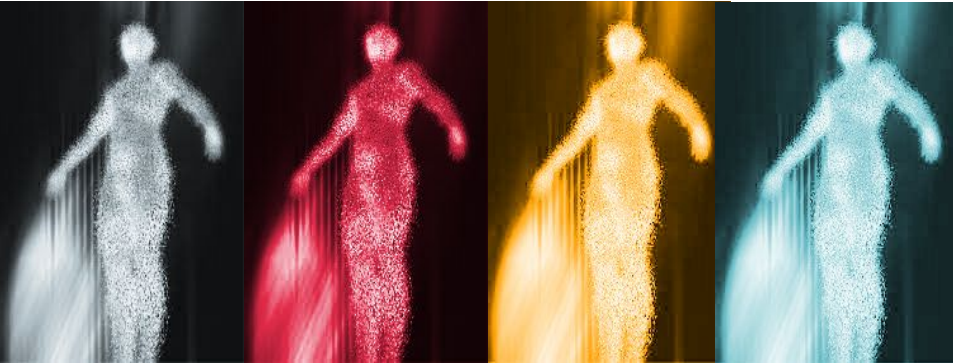
- Meeting with the ones who are no more
- Metaversal ability for specially abled
- It DOSEs - Dopamine, Oxytocin, Serotonin, and Endorphins - Meeting family.
- Metaversal therapy, pain less, or just as as Drug.
- Virtual social identity(ies)

Metaverse - the concerning part

Protecting Identity

Future identify is at Risk

Safeguarding identify would be difficult part, without strong laws and regulations. It is easy to impersonate people when identity is based on interests. People may want to keeps multiple social profiles and personas.



Someone represent you in your office, society, without your knowledge.



Someone accessing your property/assets without your knowledge



Social media trials, by the time truth prevails, damage happen



What is real or fake?



Need of Virtual Universal ID



Attention from government, institutions, enterprises to come together and safeguard my future identity.

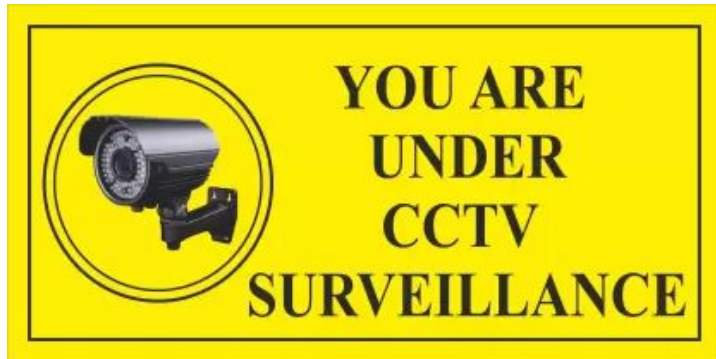
Protecting Privacy

Always under surveillance

What is public?

What is private?

Who has access to what?



Connecting to Internet → Connecting to Metaverse. Always connected



Restrictions - you are not allowed here?
Movie theater, museums, antique designs etc.



Smart glass detector devices - super surveillance.



Fear of going out - post pandemic world + restrictions



New ways of information exposures, and may be more vulnerable.



What are the legal options?

Mind Blowing

Configuring the mind



Pic Credit : www.medicaldaily.com

Metaverse is an immersive experience and we will be going into internet, into people's imagination, and mind.



DOSE - Setting the chemical equations



As drug - A [Legal Heroin](#)? Addictions.



You may be a king/queen of your metaverse, why would you want to come out and live in real world?



Metadata explode - accessing information lying in mind. BCI and more...



Influence your decisions



What are the legal options?

Law and Order

What would be metaversal justice?

Metaverse is growing without meaningful rules and regulations. So what is right and wrong in Metaverse is not known. Crime in real world may not be a crime metaverse.

Can we deal with crime in metaverse with physical legal system?



Will we have metaverse constitution?



Will we have metaverse court?



How to identify crime, tools and tech?



Who will maintain law and order? will there be police?



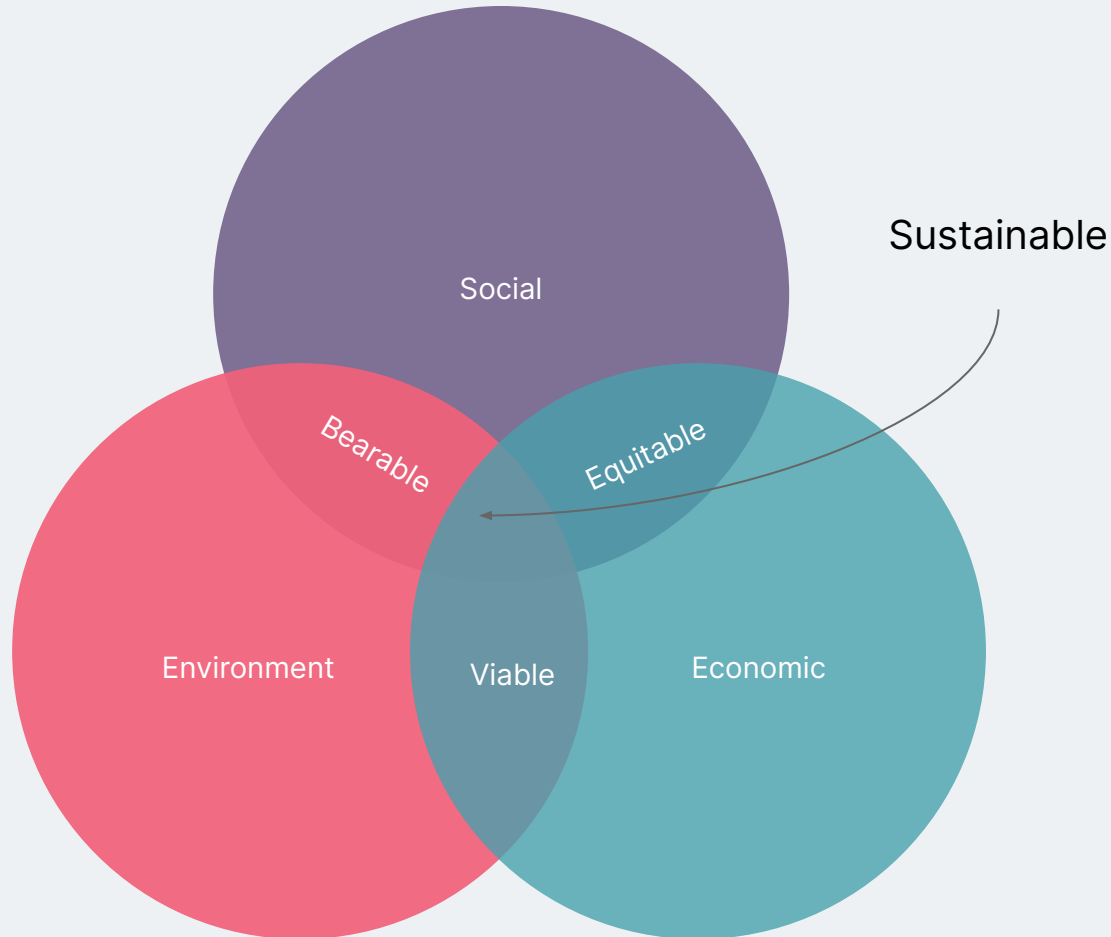
What would be punishments? Block people/ put them in virtual jail?



Very hard achieve all this....

Metaverse - the getting ready part

Sustainable Development



Three pillars :

1. Environmental sustainability,
2. Economic sustainability
3. Socio-political sustainability

The three 'pillars' intersected together to create an equitable economy for the society, while making it viable for the environment, so that it is bearable for the society and thus result in achieving the sustainable development concept - [Source](#)

Stay Invested

Adapt Metaverse Ethically

In long run, **not using metaverse** or staying away from it would **not** be an **option**. No matter how scary it looks, it is coming closer than we think.

Need more standards and regulations for hardware, network and software makers.

- XR Safety Initiative (xrsi.org)
- [IEEE SA - XR](#)
- XR Ethics Manifesto



Awareness - start using it



Training - get ready to build for it.



Developing - **co-create** the metaverse for right use cases. Innovate and solve the concerning parts.



Contribute - Build practices, standards and contribute share with **communities**.



Join hands with enterprises and governments, institutions, systems and people.



Play your part, and save the future.

Thanks and Keep in touch

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