MSc CS Sem I

Metaverse Technology

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What Is Metaverse ?

The Metaverse is a collective virtual shared space, created by the convergence of virtually enhanced physical reality and physically persistent virtual space, including the sum of all virtual worlds, augmented reality, and the internet.

How Metaverse Is Named?

The word "MetaVerse" is composed of the prefix "meta" and the root word "verse", meaning "beyond the universe". It has also been described as "Meta Universe".
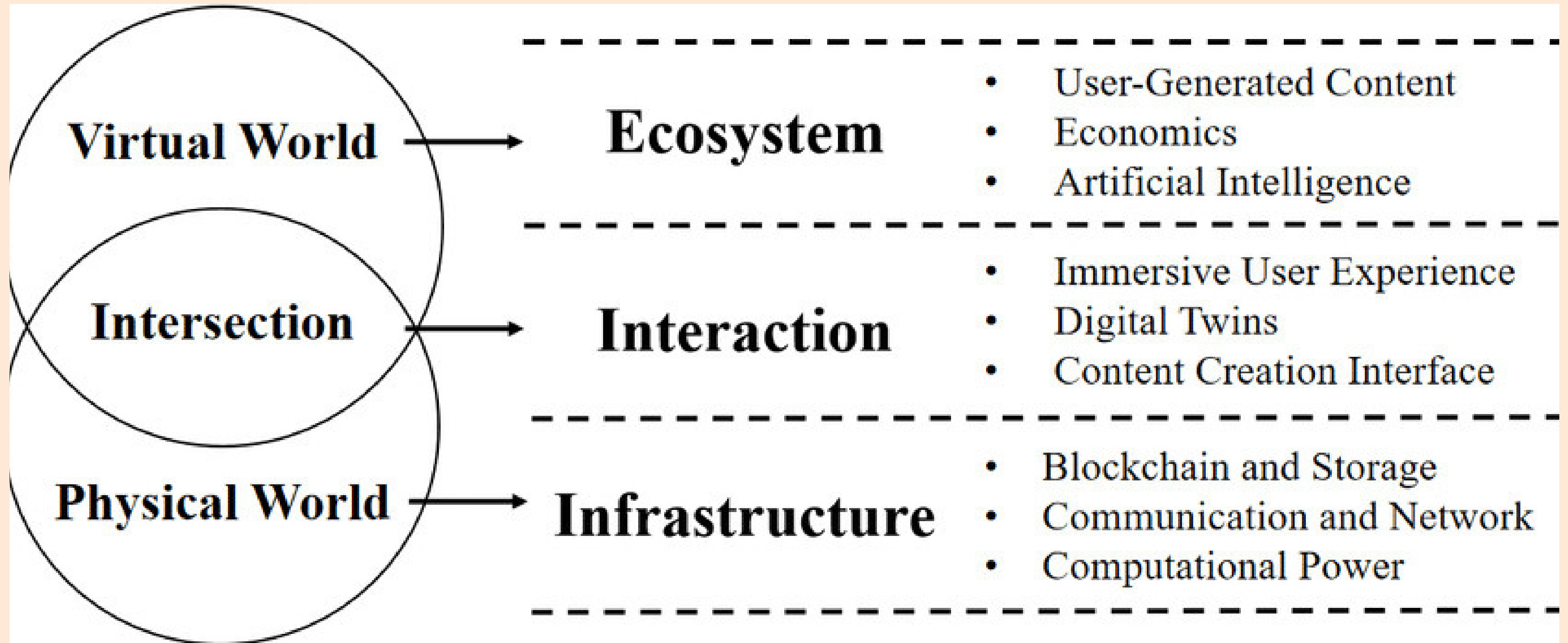
History Of Metaverse

Metaverse may have become the buzzword only recently, but it is well-known Tim Berners-Lee invented the World Wide Web (www) in 1989. Then in 1992, sci-fi writer Neal Stephenson coined the term 'metaverse' to describe a 3D virtual space.
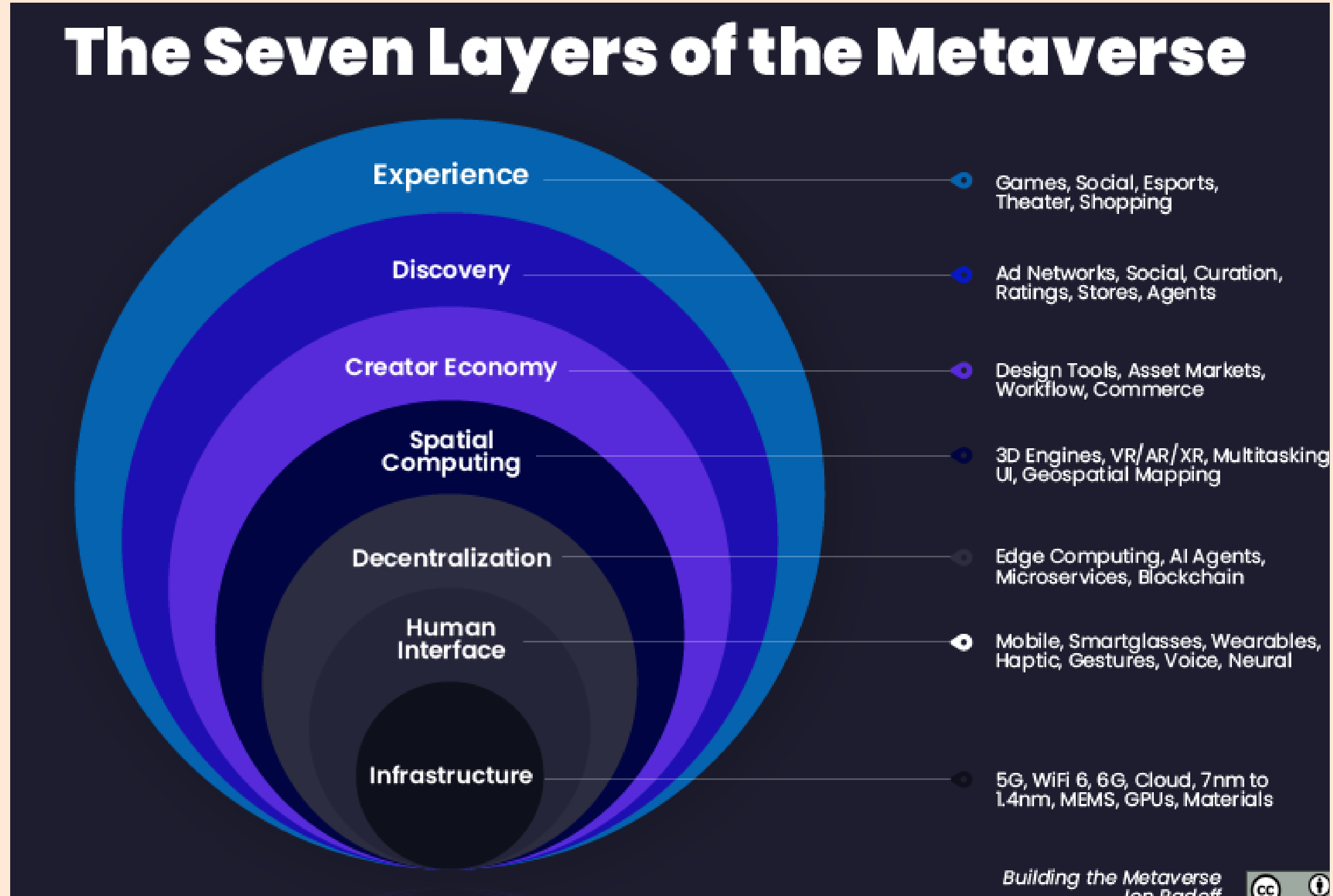
Metaverse and Snow Crash

. Neal Stephenson's use of the term "metaverse" in his 1992 sci-fi novel Snow Crash was unprecedented. In the years and decade that followed, Snow Crash would serve as a touchstone for some of Silicon Valley's most illustrious founders, who looked to the novel's prescient vision of a virtual universe merged with the physical one as a roadmap for the future.

Three Layer Architecture of Metaverse

Virtual World → **Ecosystem**
- User-Generated Content
- Economics
- Artificial Intelligence

Intersection → **Interaction**
- Immersive User Experience
- Digital Twins
- Content Creation Interface

Physical World → **Infrastructure**
- Blockchain and Storage
- Communication and Network
- Computational Power

Value Chain Of Metaverse

The Seven Layers of the Metaverse

Experience — Games, Social, Esports, Theater, Shopping

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

Creator Economy — Design Tools, Asset Markets, Workflow, Commerce

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

Decentralization — Edge Computing, AI Agents, Microservices, Blockchain

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

Infrastructure — 5G, WiFi 6, 6G, Cloud, 7nm to 1.4nm, MEMS, GPUs, Materials

Building the Metaverse
Jon Radoff

Mark Zuckerbergs Meta

In 2021 Mark Zuckerberg tells CNET that one of Facebook's objectives for Horizon, which is currently in a beta phase and accessible by invite only, is "to get as many people as possible to be able to experience virtual reality and be able to jump into the metaverse and to have these social experiences within that."

Zuckerberg believes the metaverse is going to be "an internet where you feel like you're there and you're present with people and in other places."

Mark Zuckerberg sees the metaverse as the "successor to the mobile internet," an invention that reshaped all our lives by allowing us to go in Virtual World.

METAVERSE

THANK YOU