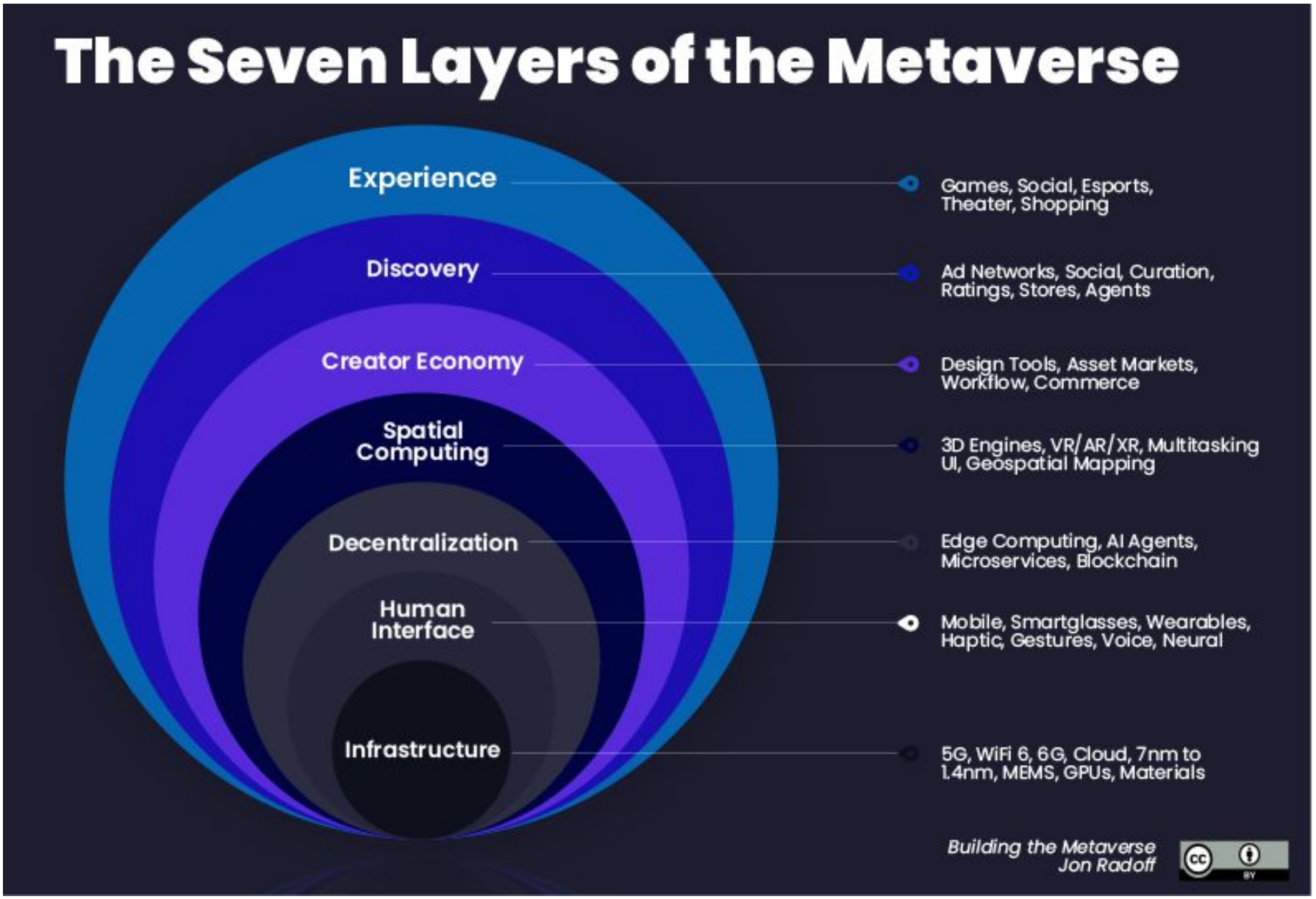
The Metaverse Value-Chain



Metaversed by www.TommasoDiBartolo.com

Source: **Jon Radoff**

Layer 1: Experience

What happens when physical space is dematerialized? **Formerly scarce experiences may become abundant**. Games will evolve to incorporate more events that are informed by live entertainment, such as the music concerts and immersive theater that have already emerged in Fortnite, Roblox, and Rec Room.

Esports and online communities will be **augmented by social entertainment**. Meanwhile, traditional industries such as travel, education, and live performance will be reshaped around game-thinking and the virtual economy of abundance.

Layer 2: Discovery

The discovery layer is about the push and pulls that introduces people to new experiences. Broadly speaking, most discovery systems can be classified as either **inbound** (the person is actively seeking information about an experience) or **outbound** (marketing that was not specifically requested by the person, even if they opted in).

Layer 3: Creator Economy

Not only are the experiences of the metaverse becoming increasingly immersive, social, and real-time, but **the number of creators who craft them is increasing exponentially**. This layer contains all of the technology that creators use daily to craft the experiences that people enjoy.

Creator-driven experiences in the metaverse are oriented around centrally managed platforms such as **Roblox, Rec Room, and Manticore** — where a full suite of integrated tooling, discovery, social networking, and monetization functions has **empowered an unprecedented number of people to craft experiences** for others.

Layer 4: Spatial Computing

Spatial computing has exploded into a large category of technology that enables us to enter into and manipulate 3D spaces, and to augment the real world with more information and experience. **The key aspects of the software include**:

- 3D engines to display geometry and animation (**Unity and Unreal**)

- Mapping and interpreting the inside and outside world — geospatial mapping (**Niantic Planet-Scale AR and Cesium**) and object recognition.

- Voice and gesture recognition.

- Data integration from devices (**Internet of Things**) and biometrics from people (for identification purposes as well as quantified self applications in health/fitness)

- Next-generation user interfaces to support concurrent information streams and analysis.

Layer 5: Decentralization

Blockchain technology frees financial assets from centralized control and custody — and within **DeFi**, we already see examples of connecting financial legos to form novel applications.

With the advent of **NFTs** and blockchains optimized for the sort of microtransactions required by games and metaverse experiences, we'll see **a wave of innovation around decentralized markets** and applications for game assets as well.

Layer 6: Human Interface

Beyond smart glasses, there is a growing industry experimenting with new ways to bring us closer to our machines:

- **3D-printed wearables integrated into fashion and clothing**
- **Miniaturized biosensors, some even printed on the skin**
- **Maybe even consumer neural interfaces?**

Layer 7: Infrastructure

Enabling the untethered functionality, high performance, and miniaturization required by the next generation of mobile devices, smartglasses, and wearables will require **increasingly powerful and tinier hardware**: semiconductors that are imminently dropping to **3nm processes** and beyond; MEMS that **enable tiny sensors; and compact, long-lasting batteries**.