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HELSINKI XR CENTER

Extended Reality &

The Opportunities of New Technology

ICMA Conference, 13.5.2022

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www.helsinkixrcenter.com

Helsinki XR Center is a **leading XR hub** in Europe.

We connect startups, industries, innovators, students, professionals and investors for co-creation, new business, and talent building.

Founded in 2019.

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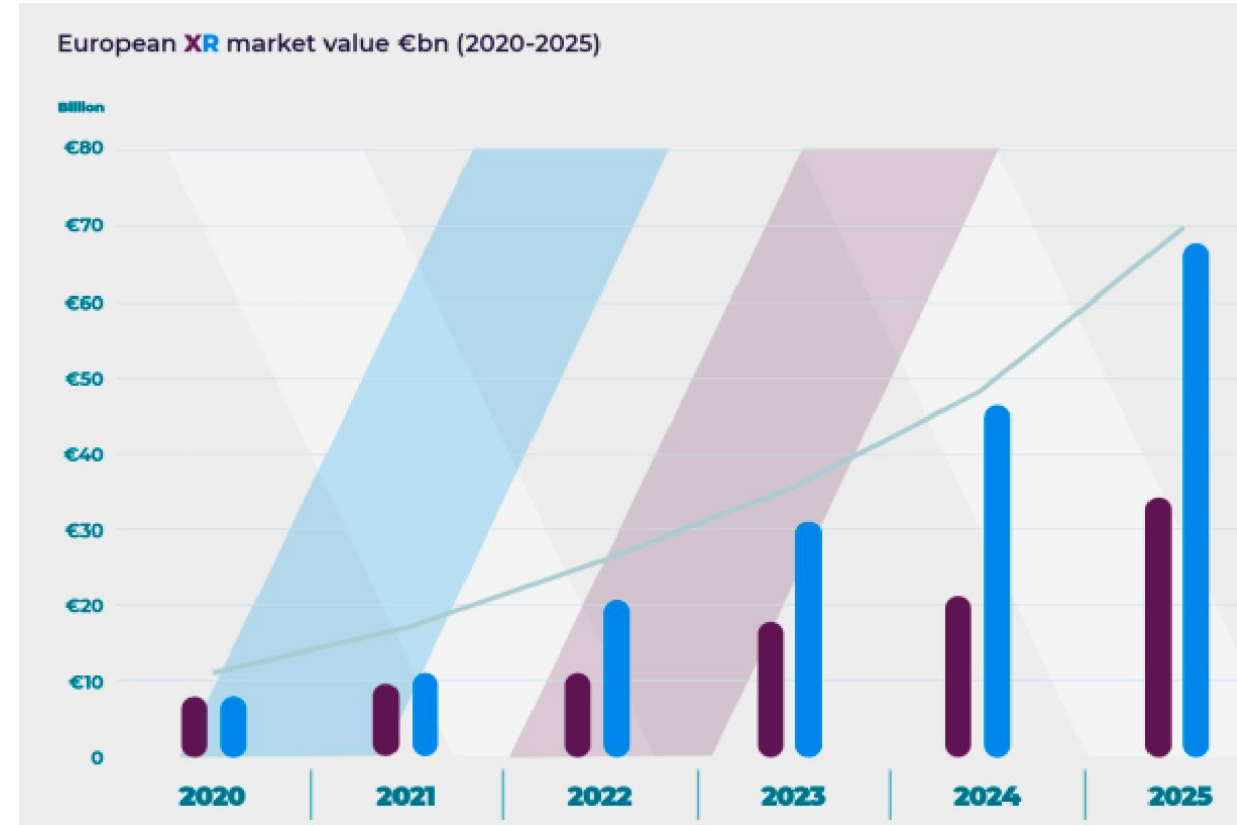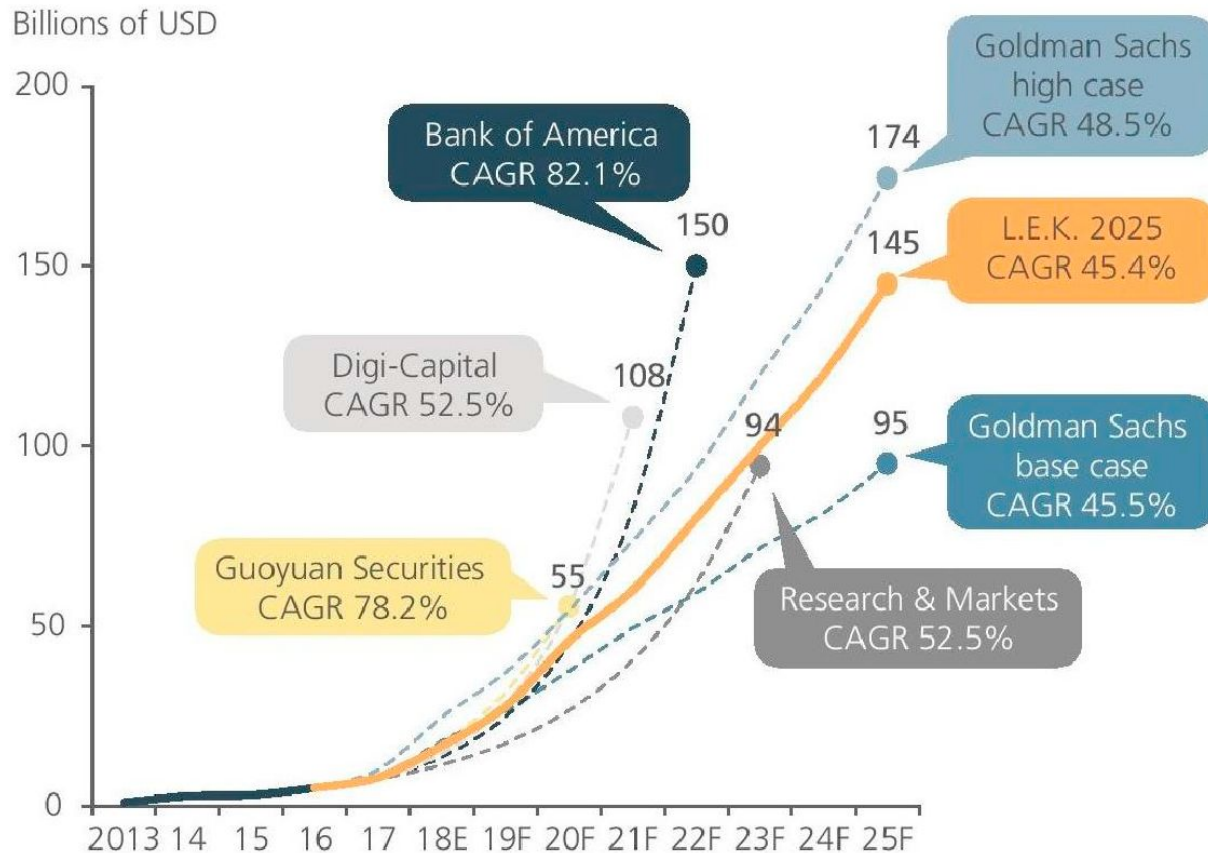HELSINKI XR CENTER

What we do

- › Run a **Developer Hub**, which offers free facilities and support for startup teams

- › Carry out **Research & Development**
  - › Coordinate and participate in projects
  - › Collect XR research databases

- › Provide **services for organizations**
  - › XR workshops, excursions and visits
  - › Operate an **XR Showroom**
  - › Part of the European Digital Innovation Hub network (eDIH)

- › Support the Finnish XR ecosystem
  - › Provide a virtual venue, the **VR Pavilion Finland**
  - › Organize networking events

Partners:

Why should you care about XR?

What is Extended Reality (XR)?

Virtual Continuum

Mixed Reality (MR)

Reality   Augmented Reality (AR)   Augmented Virtuality (AV)   Virtual Reality (VR)

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Augmented Reality (AR)

> Digital information added to an image or video feed.

> Used with mobile devices.

> Marked-, location- or surface-based.

> Interactions with virtual objects.

> Example use cases:
>> On-location data access
>> Virtual try-on applications
>> Navigation
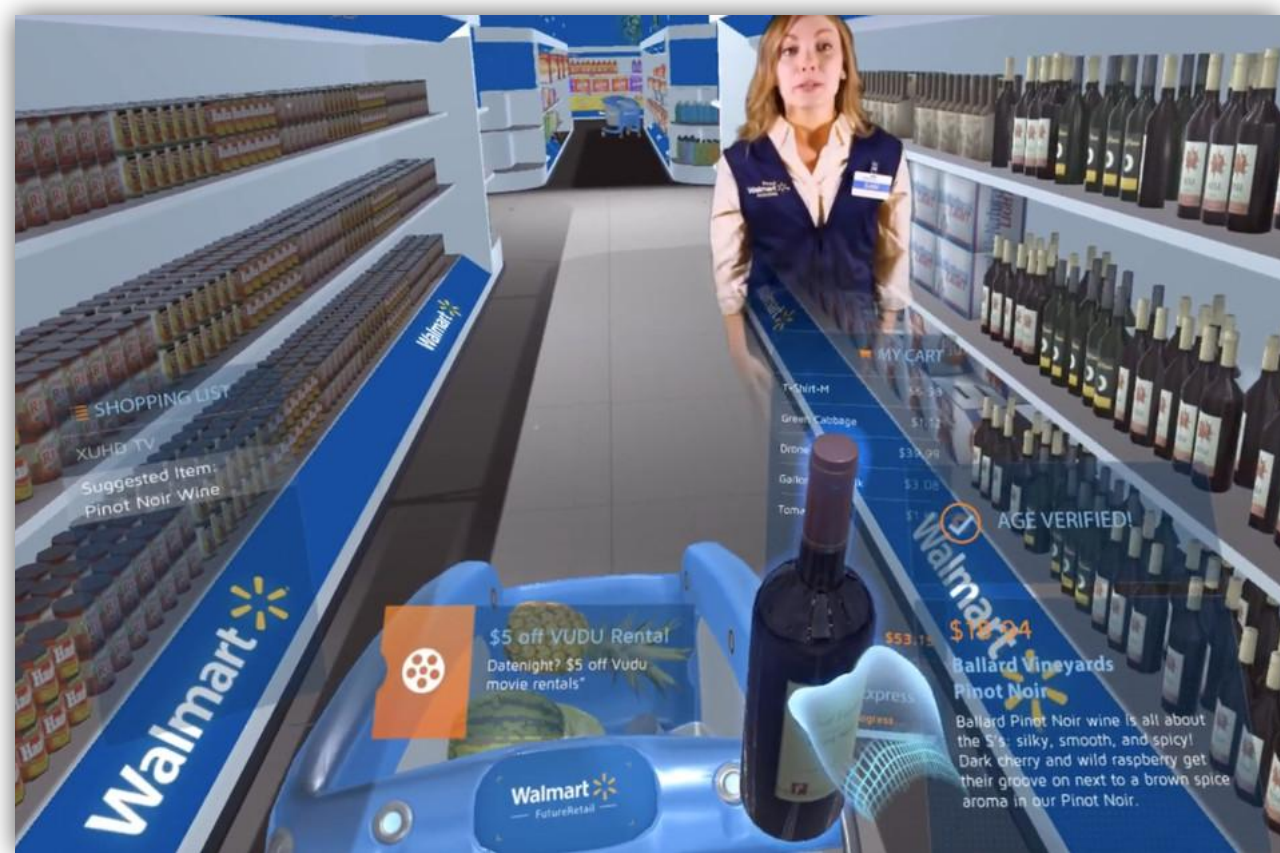>> Extra services on a product

FlyAR

3DBear

Arilyn

Virtual Reality (VR)

> Fully virtual environment.

> Used with wearable headsets.

> Immersive experience.

> Interactions with virtual objects.

> Example use cases:
>> Training and education
>> Virtual visits
>> Virtual meetings and events
>> Virtual product presentations.
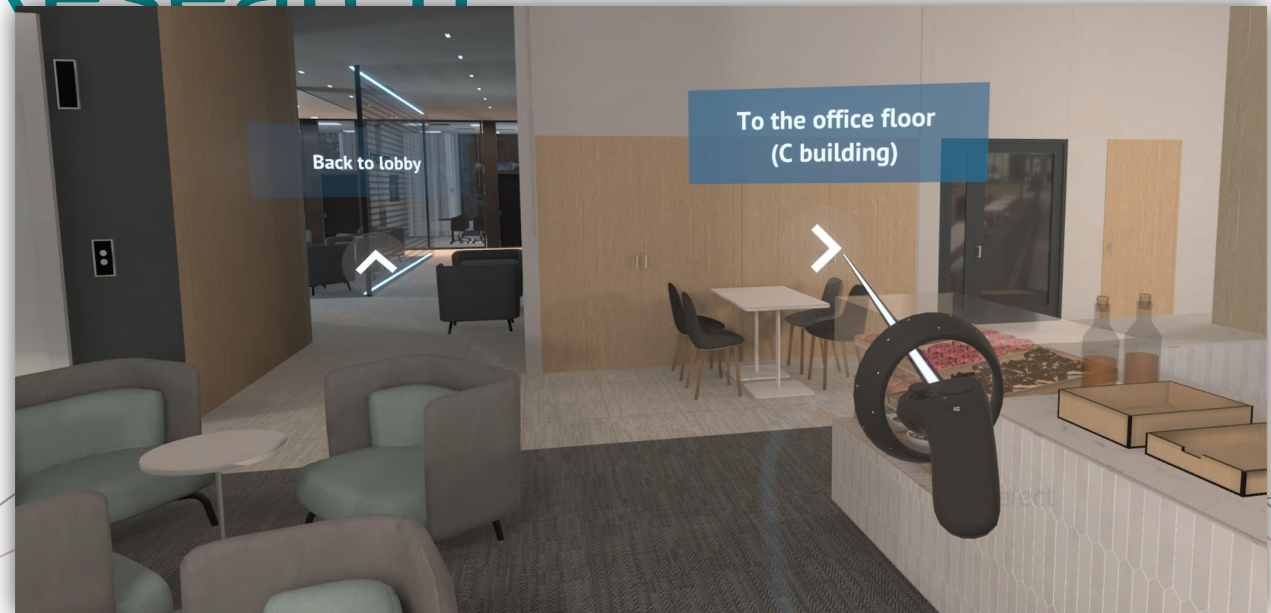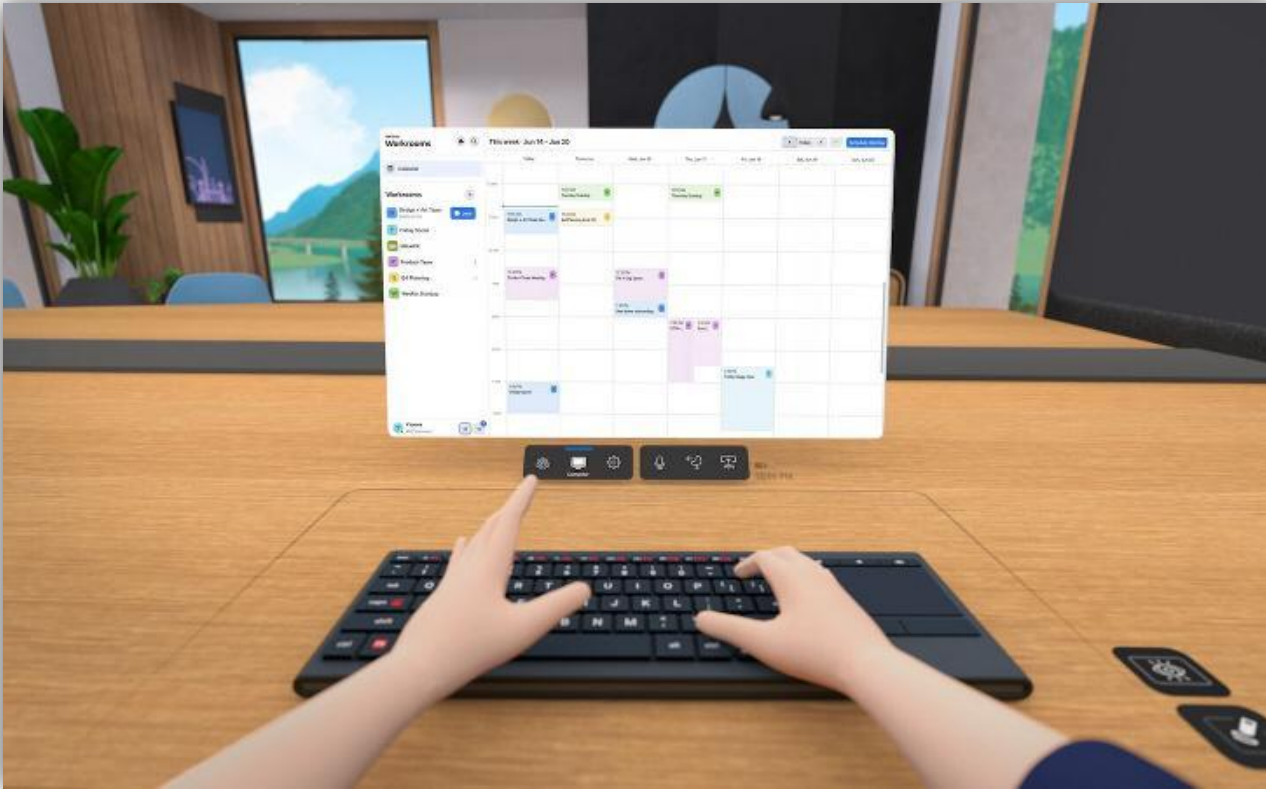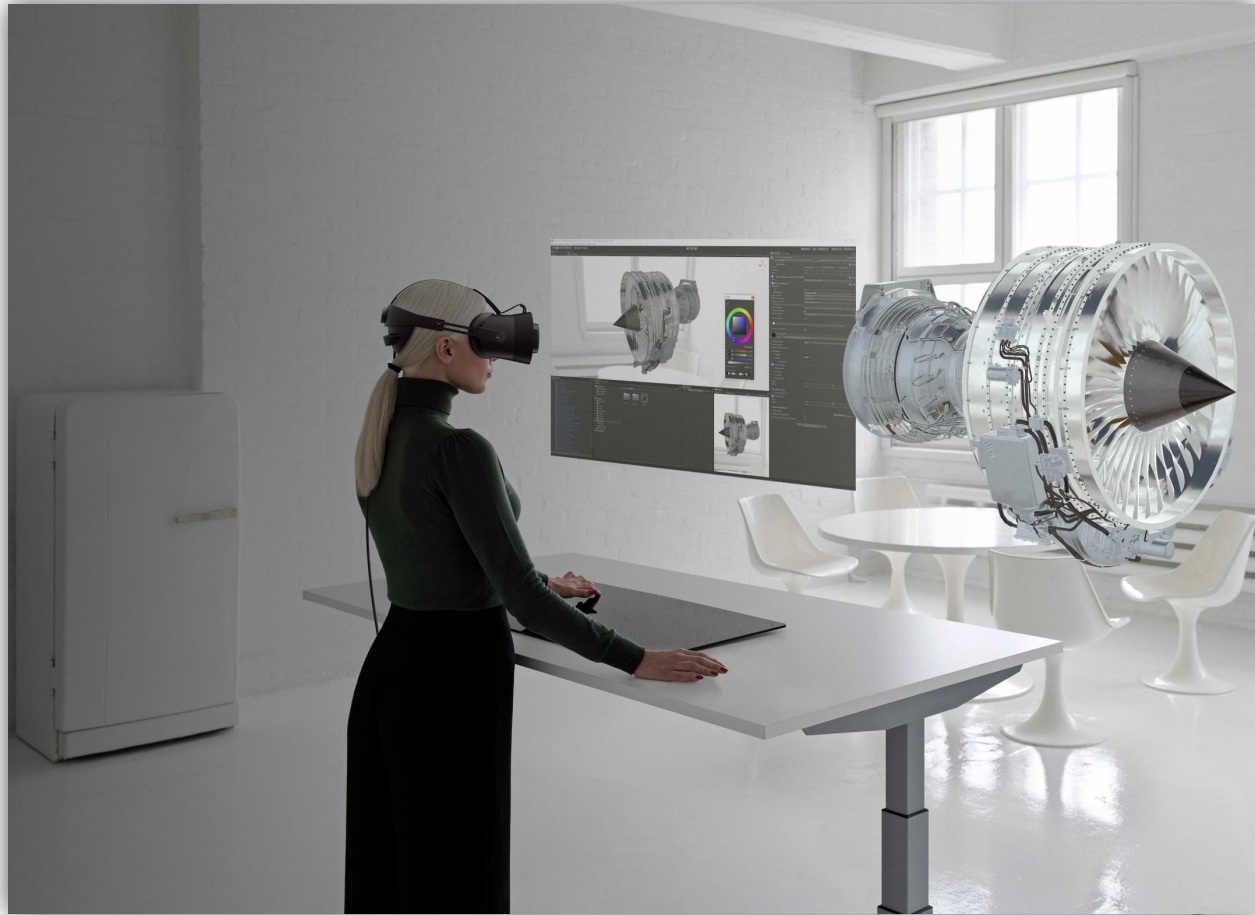
Virtual
Dawn

Zoan

Teatime
Research

Augmented Virtuality (AV)

> Edge-case of virtual reality.

> Virtual environment + Elements from reality.

> Wearable headsets with tracking devices.

> Interactions with virtual environment and limited real objects.

> Example use cases:
>> Typing in virtual reality
>> Interactions with real tools
>> Tracking multiple users in a space

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Mixed Reality (MR)

> Combining reality with virtual elements

> Used with wearable headsets.

> Interactions with both real and virtual objects.

> Example use cases:
>> Real/Virtual workspaces
>> Collaborative virtual design
>> Simulator training
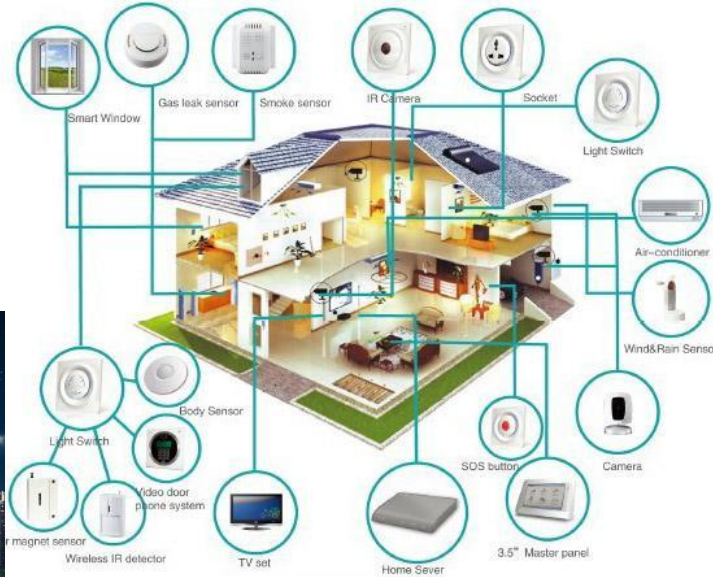
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Geotrim

Varjo

Anarky Labs

Metaverse

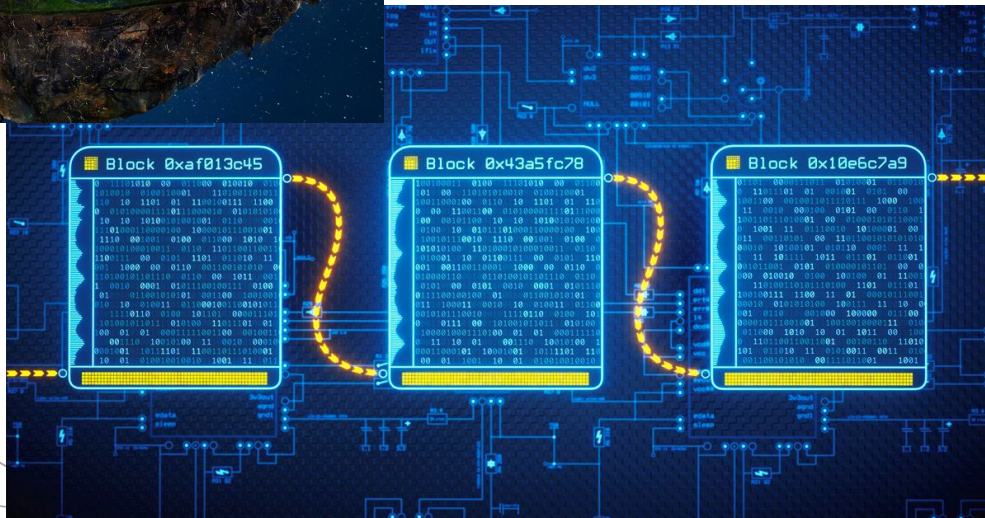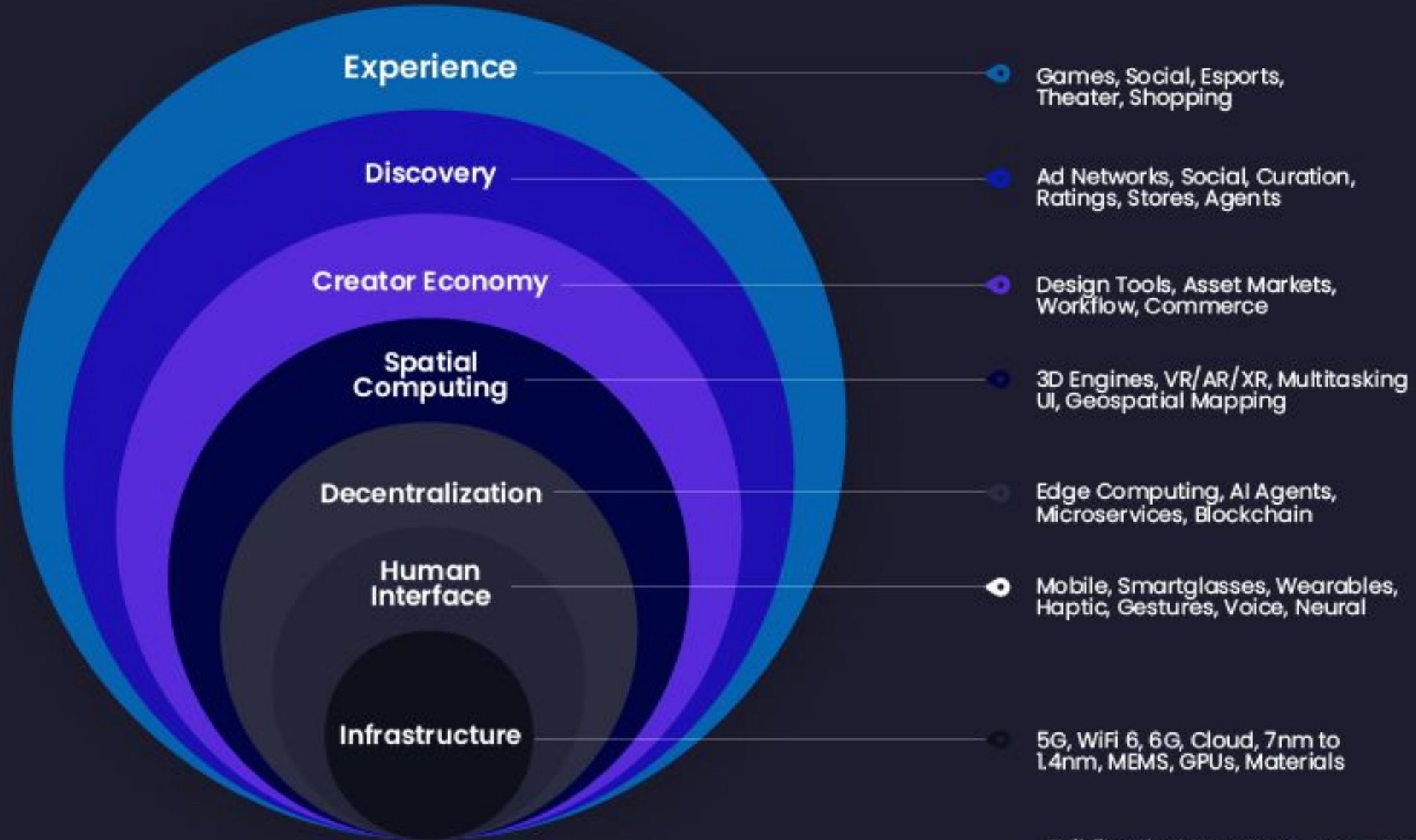

› An open, interoperable network of immersive venues where people can:
  › Interact, socialize, play, learn, work
  › Attend activities, concerts or meetups
  › Build their own spaces and organize gatherings
  › Create and use avatars expressing their creative desires
  › Create, share, and monetize content

› Regardless of geographical distance or other limitations.

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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

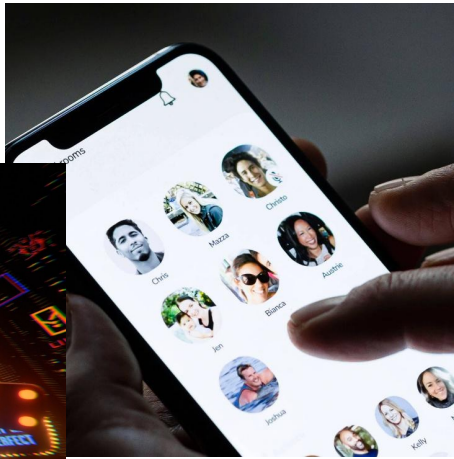**Infrastructure** — 5G, WiFi 6, 6G, Cloud, 7nm to 1.4nm, MEMS, GPUs, Materials

Building the Metaverse
Jon Radoff

Discovery in Metaverse

- Inbound vs Outbound discovery
- Traditional outbound modes of discovery are getting less effective as people are overloaded with notifications all the time and mostly ignore them.

- Customers are no longer just consumers of content, they are content-creators or content-amplifiers
- Community-driven content, cost-effective means of discovery. Content itself becomes a marketing asset, and a tradable object with both extrinsic and intrinsic value.
- Real-time presence. Focusing on what people are doing right now instead of what they like. Majority of the value comes from interacting with friends through shared experiences. A group jumps from application to application.

Takeaways

> Extended Reality is here to stay.

> First adopters are launching services NOW. Don't be late.

> AR is already everywhere, in everyone's pocket.

> VR is growing fast. B2B first, but more and more for general public.

> New technology improves at exponential rate. Services need to evolve as well.

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Thank you!

Questions?

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