

Metaverse: Beyond The Hype

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Trust in Digital Life Association

Trust in Digital Life (TDL) is a membership association comprising companies, SMEs, universities and research institutes who exchange experience, share market and technology insights to make digital services in Europe and beyond trustworthy, reliable and safe.

TDL helps both protect the rights of citizens and create new business opportunities in the European Digital Single Market.

TDL is a place where members exchange ideas, about leading edge technology, services and legislation providing new insights and innovation that can lead to policy recommendations and influence.

Agenda



David Goodman
Senior Consultant,
Trust in Digital Life

Stimulating the
Market



Afonso Ferreira
Research Director,
CNRS / IRIT

The Interplay between
Governance, Technology
and Policy in Metaverses



Shukun Tokas
Research Scientist,
SINTEF Digital

Trustworthiness and
Challenges

While the idea of connecting virtually has been decades in the making, it is now increasingly real, meaning real people are using it and spending real money and companies are betting big.

*Yet this booming interest has made it **difficult to separate hype from reality.***

It's worth remembering that while the bust of the first dot-com boom resulted in the disappearance of scores of companies, the internet itself went from strength to strength, giving rise to new entrants..

Lareina Yee,
Senior partner, McKinsey & Co.

Metaverse and Virtual Worlds From Web 3.0 to 4.0

*The main features of **Web 3.0** are openness, decentralisation, and users' full empowerment enabling them to control and realise the economic value of their data, manage their online identities and participate in governing the web.*

Semantic web capabilities allow linking data across webpages, applications and files.

Decentralised technologies and digital twins enable peer-to-peer transactions, transparency, data democracy and innovation along entire value chains.

The **metaverse** literally means 'beyond universe', and is generally known to be an immersive and constant virtual 3D world where people interact through the use of avatars to do things such as enjoy entertainment, make purchases, and work without physically leaving their seat.

Virtual worlds are persistent, immersive environments, based on technologies including 3D and extended reality (XR), which make it possible to blend physical and digital worlds in realtime, for a variety of purposes such as designing, making simulations, collaborating, learning, socialising, carrying out transactions or providing entertainment.

*The anticipated **Web 4.0** uses advanced artificial and ambient intelligence, the internet of things, trusted blockchain transactions, virtual worlds and XR capabilities, digital and real objects and environments are fully integrated and communicate with each other, enabling truly intuitive, immersive experiences, seamlessly blending the physical and digital worlds.*

Communication from the Commission

An EU initiative on Web 4.0 and virtual worlds:
a head start in the next technological transition

Published 11 July 2023

The recent Communication on the long-term competitiveness of the EU identified Web 4.0 as a ground-breaking technological transition towards a world where everything is seamlessly interconnected.

- The European Council has called for the EU to stay at the forefront of Web 4.0 development
- Virtual worlds are an important part of this transition to Web 4.0 – they are already opening up a wide range of opportunities in many societal, industrial and public sectors.

The concept of virtual worlds has been around for decades, but they have now become technically and economically feasible thanks to rapid technological advances and an improved connectivity infrastructure.

- Virtual worlds will be an important aspect of Europe's Digital Decade and will impact the way people live, work, create and share content, as well as the way businesses operate, innovate, produce and interact with customers.
- This brings both opportunities and risks that need to be addressed.

What is at stake? For European society, for the economy

*The initiative is based on
four pillars:*

- *People & Skills*
- *Business*
- *Public Services*
- *Governance*

*and 23 recommendations
from the European Citizens'
Panel on Virtual Worlds*

The overall market development forecasts are promising.

For example, the size of the global market of virtual worlds is estimated to grow from **EUR 27 billion** in 2022 to over **EUR 800 billion** by 2030.

For specific sectors, such as the automotive industry, the forecasts predict a rise from **EUR 1.9 billion** in 2022 to **EUR 16.5 billion** by 2030.

XR technologies, such as virtual reality (VR) and augmented reality (AR) are key building blocks of virtual worlds.

- The development of these technologies will have significant benefits for the job market, with an estimated **860,000 new jobs** related to XR in Europe by 2025

*The initiative consists of 10
action points to support,
encourage, monitor, and
coordinate including skills
development, promoting
guiding principles,
developing a virtual worlds'
toolbox as well as an
industrial and technological
roadmap – and much
more!*

What's the matter with Meta?

*According to one estimate, as the metaverse continues to grow and expand to more regions of the world, growing consumer and business interest in virtual spaces to enhance everyday tasks is expected to fuel a **USD 1 trillion** commerce opportunity by the end of 2025.*

As we know Mark Zuckerberg and others' have a vision of the future

In 2023 Meta Platforms is expected to invest in the order of **USD 19.2 billion** in its metaverse division Reality Labs, despite having spent more than **USD 10.0 billion** annually since 2019 on its Metaverse in the hope that virtual and augmented realities become the next big computing platform.

Although Meta have indicated a shift this year to “turbocharging” the company’s work on AI tools to keep abreast of the current AI frenzy, it’s unlikely that metaverses have gone away.

In fact, Microsoft’s Hololens and the recent announcement of Apple's Vision Pro have sparked considerable enthusiasm for the mainstream adoption of mixed reality.

Not just Meta ...

The metaverse industry is currently undergoing a significant shift., with Microsoft and Meta both recently laying off a large number of employees from their metaverse divisions.

Companies are now focusing on developing crucial technologies such as VR headsets to support the vision of the metaverse in the future.

Beyond Meta's Metaverse, there is:

- Upland Metaverse – for virtual property investments
- Roblox Metaverse – immersive gameplay & social interaction
- Sandbox Metaverse – for creating & sharing unique content
- Decentraland Metaverse – virtual real estate platform
- Horizon Worlds – user-friendly & accessible platform
- Fortnite – dynamic entertainment platform
- Illuvium – platform for collecting and battling creatures
- Somnium Space – immersive VR experiences
- Nike Metaverse
- Adidas Metaverse
- Cryptovoxels
- Axie Infinity – gaming

... and finally Apple Metaverse, announced in 2023

*According to McKinsey & Co. the metaverse concept is predicted to add **USD 5 trillion** to the value of the global economy by 2030*

It shows ecommerce as the largest economic force (USD 2.6 trillion), ahead of sectors such as virtual learning (USD 270 billion), advertising (USD 206 billion), and gaming (USD 125 billion).

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Thank you!

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