



European
Commission

AN EU INITIATIVE ON WEB 4.0 AND VIRTUAL WORLDS: A head start in the next technological transition

11 July 2023
#DigitalEU
#VirtualWorldsEU

The Commission has adopted a strategy on Web 4.0 and virtual worlds to steer the next technological transition and ensure an open, secure, trustworthy, fair and inclusive digital environment for EU citizens and businesses and public administrations.

4 PILLARS

1

Empowering people and reinforcing skills

to foster awareness, access to trustworthy information and build a talent pool of virtual world specialists.

2

Business:
supporting a
**European Web
4.0 industrial
ecosystem** to scale up
excellence and address
fragmentation.

3

Government:
supporting societal
progress and virtual
public services
to leverage the
opportunities virtual
worlds can offer.

4

Governance:
to set up the
structures for
the EU to steer
the openness of
virtual worlds.

23 RECOMMENDATIONS

The Commission hosted a *European Citizens' Panel on Virtual Worlds*. A representative group of citizens made 23 recommendations on citizens' expectations for the future, principles and actions to ensure that virtual worlds in the EU are fair and citizen-friendly.

***Virtual worlds:** persistent, immersive environments based on 3D and extended reality (XR) technologies.
***Web 4.0:** digital and real objects and environments integrated and communicating between each other, enabling immersive experiences.



VIRTUAL WORLDS:

AN EXPONENTIAL RISE OF THE MARKET

2022

€27 BILLION

Global virtual worlds' market size

€1.9 BILLION

Virtual worlds market in the automotive industry

3700

Firms, research and government bodies in the EU in the virtual worlds subdomain

2030

€800 BILLION

Estimated growth of the global virtual worlds' market

€16.5 BILLION

Estimated rise of the market in the automotive industry

860 000

New jobs for extended reality in Europe by 2025



WHAT VIRTUAL WORLDS WILL ALLOW

Health

- Students and professionals can be trained to deal with emergency situations and surgeries simulations: less risks of surgical complications and better accuracy of diagnosis.

Green transition

- 3D models can simulate the effects of global warming: better understanding of their causes and mitigation measures.
- Faster setup times and less waste in terms of energy, materials and resources: contribution to the green transition for the entire industry.

Industry

- According to one European car manufacturer, by 2025, industrial virtual worlds will reduce vehicles delivery time by 60% and the carbon footprint of vehicle manufacturing by 50%.

Art and design

- From fashion to cultural heritage, music, visual arts or design, virtual worlds will offer new ways to create. It will give users the feeling of being in an actual museum, concerts, plays, and immersive ballets.

Education

- A more experiential learning process can help students accelerate their learning and understanding of the world.

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