Virtual worlds: opportunities, risks and policy implications for the Single Market

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The European Parliament adopted by 484 votes to 45, with 98 abstentions, a resolution on virtual worlds – opportunities, risks and policy implications for the single market.

Digitalisation brings with it a wealth of opportunities in fields such as medicine, culture, education, the economy, security and law enforcement and has the potential to contribute to solving global problems related to poverty and inequality, sustainability as well as to democratise processes and access to education and knowledge. The digital transformation also entails significant challenges that might lead to review the concepts and norms that have hitherto underpinned economic and social progress while keeping intact fundamental core principles and values.

Parliament stressed that the EU initiative on Web 4.0 and virtual worlds must be **sustainable and human-centric**, while protecting the values of the European Union. It noted the challenges associated with the absence of a universally recognised or agreed definition of virtual worlds, which also leads to a lack of policy coordination at the national level and above.

Internal market and consumer protection

Parliament considers that it is now important to carry out a thorough assessment of all the issues relating to the development of virtual worlds and their effective coverage by existing legislation.

While welcoming the latest regulatory developments in this area, Members believe that the Commission should carry out regular reviews of the **adequacy and coherence of the legislative framework** for the digital single market, to respond to new opportunities, risks or other issues that may be raised by virtual worlds, and, if necessary, bring forward legislative proposals. A clear and comprehensive regulatory framework is essential, particularly when the technology has reached maturity.

The Commission is invited to draft a report on this subject every two years and to forward it to Parliament and the Council.

The Commission should also pay attention to the potential emergence of problems in the Web 4.0 that already exist in the Web 3.0, such as the proliferation of disinformation, spread of illegal content, digital identity theft, cybercrime, cyberterrorism, sexual abuse of minors and cyberbullying.

Members pointed to the significant economic potential of virtual worlds, and the **growing needs for investment** in the necessary infrastructure and in related research, innovation, and re-and up-skilling. They stressed that the overall costs of such investments should aim to have a neutral impact on final consumer prices. They acknowledged the need to increase available resources at EU-level to fulfil these objectives.

The Commission should also closely monitor the rapid development of **AI technology** and its impact in the digital ecosystem.

The resolution stressed the need to invest in **reskilling** initiatives to educate the existing workforce in the EU. It highlighted the importance of investing in and promoting the development of **appropriate skills** to ensure the supply of talented and skilled workers fit for these jobs in the EU, as well as of creating

appealing conditions to retain EU talent, attract foreign talent, and promote entrepreneurship and innovation in the territory of the EU.

Parliament stressed the need for the **EU to become a driving force** in shaping virtual worlds into ecosystems that respect and promote EU values, fundamental rights and the highest level of consumer protection.

Members stressed the importance of:

- promoting a level playing field that favours the growth of European small and medium-sized enterprises and the emergence of competitive European businesses, as well as decentralised and interoperable ecosystems;

- creating an appropriate policy framework and engaging in **international dialogues** in particular with like-minded non-EU countries for coordinated approaches to virtual worlds;

- guaranteeing the openness, inclusiveness and accessibility of virtual worlds, so as to encourage greater participation by people with disabilities in the new digital environment;

- making the debate on the need to **identify users** in virtual worlds a priority in the development of virtual worlds;

- paying special attention to the **data protection** implications of user-generated content, as well as the processing of sensitive data such as biometric and behavioural data, emotional reactions and haptic information, while ensuring an innovation-friendly environment;

- paying particular attention to **addictive design** and manipulative behaviour in these virtual environments;

- setting up **educational programmes** to help children and young people adapt to technological change and adopt a healthy, balanced approach combining traditional social interaction with time spent in the virtual environment, also giving parents the tools they need to supervise their children's activities.

The Commission is called on to conduct an evidence-based assessment of how to ensure that the infrastructure and devices needed to support the development and functioning of virtual worlds, and the transition from Web 3.0 to Web 4.0 are delivered to consumers, including in **remote areas** and lower-income households.

Sustainability

The resolution noted the potential for virtual worlds and Web 4.0 to make a positive contribution to the fight against climate change and for environmental sustainability, for example by facilitating remote working, thereby reducing commuting and associated carbon emissions. The development and deployment of virtual worlds should take into account the impact on the environment. Parliament also highlighted the importance of raising consumers’ awareness about the environmental impact and sustainability of these new technologies, including electronic waste.

Members recalled the need to use, accelerate and incentivise technological advances to reduce the energy consumption and environmental footprint of the activities related to the production, use and development of virtual worlds, such as advanced recycling techniques and renewable energy sources.