



2022/2198(INI)

4.8.2023

DRAFT REPORT

Virtual worlds – opportunities, risks and policy implications for the single market
(2022/2198(INI))

Committee on the Internal Market and Consumer Protection

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MOTION FOR A EUROPEAN PARLIAMENT RESOLUTION

on virtual worlds – opportunities, risks and policy implications for the single market (2022/2198(INI))

The European Parliament,

- having regard to Rule 54 of its Rules of Procedure,
 - having regard to the opinion of the Committee on Culture and Education,
 - having regard to the report of the Committee on the Internal Market and Consumer Protection (A9-0000/2023),
- A. whereas the world is undergoing an unprecedented transformation marked by digitalisation, which is imprinting profound changes in all spheres of our economic, political and social life;
- B. whereas digitalisation brings with it a wealth of opportunities in fields such as medicine, security, education and law enforcement, and has enormous potential to solve global problems related to poverty and inequality; whereas it also offers new possibilities to advance the transition process towards more sustainable and just societies;
- C. whereas the digital transformation also entails significant challenges that will force us to review many of the concepts and norms that have hitherto underpinned our growth and social progress;
- D. whereas in the EU, awareness of the challenges posed by the accumulation of power by foreign digital giants and of the EU lagging behind in the global digital race have been translated into political and legislative will; whereas the EU institutions have made the digital transition one of their priority areas of action and policy formulation, establishing rules in line with European values and principles and moving away from the path followed by other geographical areas such as the United States and China, among others;
- E. whereas the transition to Web 4.0 and the development of virtual worlds are an indispensable part of the future of digitisation and a key building block for the completion of the digital single market;
- F. whereas virtual worlds also entail significant risks affecting consumer protection and issues related to competition law, privacy and personal data protection, and cybersecurity;

General principles

1. Welcomes the Commission communication of 11 July 2023 entitled ‘An EU initiative on Web 4.0 and virtual worlds: a head start in the next technological transition’;

2. Points to the lack of a universally recognised or agreed definition of virtual worlds and considers that further work is needed in order to rectify this;

Internal market and consumer protection

3. Underlines that a true digital single market can contribute decisively to the development of virtual worlds; considers that a clear and comprehensive regulatory framework is of vital importance; highlights and stresses the need to monitor potential fragmentation issues within the digital single market;
4. Welcomes the latest regulatory developments in this regard, such as the Digital Services Act (Regulation (EU) 2022/2065¹) and the Digital Markets Act (Regulation (EU) 2022/1925²); notes also the proposal for an artificial intelligence act and the ongoing negotiations thereon; considers that the Commission should conduct regular regulatory fitness checks of the digital single market and, where necessary, put forward legislative proposals; believes that the outcome of such checks should be made public;
5. Welcomes the Commission's commitment to monitor the development of virtual worlds; invites the Commission to draft a report on this subject every two years and to transmit it to Parliament and the Council; asks the Commission to 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 fake news, infringement of intellectual property rights, cyberterrorism, sexual abuse of minors and cyberbullying, among others;
6. Points to the great economic growth potential of virtual worlds, and the growing levels of investment in the necessary infrastructure and in related research, innovation and new technologies; highlights the role of virtual reality (VR), augmented reality (AR) and mixed reality (XR) as crucial technologies for the development and growth of virtual worlds, providing users with immersive and interactive experiences;
7. Signals also the positive impact that these developments will have on employment, including the creation of new jobs in domains such as virtual world architecture or content creation; highlights the importance of 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 keep EU talent, attract foreign talent and promote entrepreneurship and innovation in the territory of the EU;
8. Recalls that most companies leading the development of virtual worlds are established outside the EU; considers that the EU should take the lead in shaping virtual worlds as ecosystems in which European values and principles are respected and promoted, with users at their centre; signals the importance of fostering the creation of a level playing

¹ [Regulation \(EU\) 2022/2065 of the European Parliament and of the Council of 19 October 2022 on a Single Market For Digital Services and amending Directive 2000/31/EC \(Digital Services Act\), OJ L 277, 27.10.2022, p. 1.](#)

² [Regulation \(EU\) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives \(EU\) 2019/1937 and \(EU\) 2020/1828 \(Digital Markets Act\), OJ L 265, 12.10.2022, p. 1.](#)

field that promotes the expansion of European small and medium-sized enterprises, innovation and growth;

9. Acknowledges that multiple virtual worlds have been developed by different undertakings in the absence of open standards and interoperable platforms; considers that interoperability and open standards can contribute to the prevention of quasi-monopolies or abuses of dominant position to the detriment of consumers; welcomes the Commission's commitment to engage with existing multi-stakeholder internet governance institutions to develop common governance standards; supports the establishment of a technical multi-stakeholder forum for the development of technical standards to ensure interoperable virtual worlds;
10. Stresses the need to ensure that virtual worlds are open and accessible, contributing to the greater participation of people with disabilities in the digital transition; signals the potential of virtual worlds to increase the participation of people with disabilities in different activities such as virtual tourism, which offer the possibility of visiting virtual places without having to overcome the mobility barriers that traditional tourism requires; warns of the potential challenges that users with disabilities may face in interacting with virtual worlds, arising from inadequate accessibility features or designs that do not cater to their specific needs;
11. Believes that the debate over the need for the identification of users in virtual worlds should be a priority area in the development process of virtual worlds and that there should be a profound reflection on the possible configuration of this digital reality, bearing in mind that, in some cases, anonymity may be preferable; points out that anonymity in the digital world is always possible under a username (alias), behind which there must always be an individual identifiable only by the competent authorities in case of need;
12. Reiterates the importance of protecting users' personal data and privacy; points out that the General Data Protection Regulation³ might not be enough to address the challenges posed to data protection in virtual worlds; calls for greater attention to be paid to the data protection implications of user-generated content;
13. Warns about the potential health problems that may arise from accessing virtual worlds, such as addiction, cybersickness or disturbances in sleep patterns, especially among minors and young people;
14. Recalls the potential of virtual worlds to offer unique experiences that can help minors develop their appetite for learning through, for example, learning through play, which can help them to develop skills in collaboration, communication, critical thinking, innovation and confidence; underlines the importance of protecting minors in virtual worlds, especially against abuse, harassment and bullying;
15. Notes that virtual worlds will generate high-resolution images, graphics and video to ensure immersive user experiences, further requiring high-performing infrastructure;

³ [Regulation \(EU\) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC \(General Data Protection Regulation\), OJ L 119, 4.5.2016, p. 1.](#)

notes that, in particular 5G and 6G networks with low latency and high bandwidth will be key, as will technologies such as edge computing;

16. Calls on the Commission to conduct an assessment of how to ensure that the infrastructure needed is delivered to consumers; highlights that a true single market for telecoms is key in this regard;

Sustainability

17. Points out that the production of the devices needed to access virtual worlds requires resources such as rare earths and other mineral raw materials; welcomes in this sense the presentation of the Commission proposal for a regulation establishing a framework for ensuring a secure and sustainable supply of critical raw materials (COM(2023)0160);
18. Is convinced that virtual worlds can 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;
19. Recalls the need to take advantage of 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 energies;
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20. Instructs its President to forward this resolution to the Commission, the Council, and to the parliaments and governments of the Member States.

EXPLANATORY STATEMENT

Introductory remarks

The Rapporteur welcomes the Commission's Communication 0442(2023). The development of web 4.0 is an already ongoing phenomenon globally and it entails an enormous economic potential; by 2024, the market size of the metaverse could reach \$800 billion¹, and by 2032 it could account for 2.8 % of global GDP². The European Union must be ready to embrace its development as soon as possible to ensure that it does not lag behind in the **global digital race** again.

European Way

The Rapporteur believes that the European Union must set the basis to guarantee a smooth **transition to the Web 4.0** digital era and avoid committing the same mistakes made in the previous technological transition. The transition towards Web 4.0 must be based on the European Way, respecting the **European principles and values** such as data protection, privacy and security, and putting citizens in the centre, especially **minors**. This way of addressing the digital transition has positioned the European Union at the forefront of digital regulation, and most regions of the world look at the European Union as an example to follow. A clear example of this was the GDPR. Nonetheless, the European way of regulating the digital world comes with a lot of bureaucracy and tedious legislative processes, which may hamper **innovation and technological development**. The Rapporteur calls for the European Union institutions to seek therefore the right balance between a strong legislation that guarantees fundamental rights with a flexible ecosystem that promotes the development of Web 4.0.

Interoperability

The Rapporteur believes that there is a need for virtual world to be based on the principle of **interoperability**, allowing the interconnection between platforms, systems and devices, so that frictionless exchanges of information and interaction can take place. Interoperability will contribute to create a **level playing field** for the development of virtual worlds in the European Union. Currently, large tech companies, especially in the United States and in East and Southeast Asia, are leading the development of virtual worlds. **Open standards** and interoperability of devices and platforms will facilitate access to virtual worlds to all players.

Network capacity

The Rapporteur points out that virtual worlds are going to be very **data intensive**, and the technologies needed, such as augmented reality, virtual reality and mixed reality require high definition. Data usage is expected to increase twenty-fold during this decade and data traffic is also expected to increase very significantly. Significant investments will therefore be needed to adapt and upgrade **telecommunications networks**. New technologies will also be needed

¹ Bloomberg Intelligence, 2021

² Analysis Group, 2022

to enable the new applications that will emerge with virtual worlds. The rapporteur stresses that the European Union will have to find the way to ensure powerful 6G networks that enable virtual worlds.

Accessibility and inclusion

For the Rapporteur, it is important that virtual worlds are an open ecosystem accessible to everyone on equal terms. However, in practice, virtual worlds can pose **accessibility** and **inclusion** challenges. Some aspects can determine the access of citizens to virtual worlds, such as their geographical location, socio-economic status, digital skills, or physical condition (people with disabilities may have difficulty accessing virtual worlds if they are not adapted to their needs). The rapporteur calls for these elements to be addressed both, by developers of virtual worlds and by regulators.

Final remarks

The rapporteur believes that the European Union is sufficiently endowed, with legislation such as the Digital Services Act, the Digital Markets Act or the Data Act, to ensure consumer protection and internal market standards in the development of virtual worlds. There is no need for ex novo regulation of virtual worlds for now. He calls the European Commission to monitor the developments around virtual worlds and to conduct regulatory fitness checks regularly of the digital single market and, where necessary, put forward legislative proposals.