**Follow up to the European Parliament non-legislative resolution on virtual worlds: opportunities, risks and policy implications for the Single Market**

1. **Rapporteur:** Pablo ARIAS ECHEVERRÍA (EP / ES)
2. **Reference numbers:** 2022/2198 (INI) */* T9-0032/2024/ A9-0397/2023
3. **Date of adoption of the resolution:** 17 January 2024
4. **Competent Parliamentary Committee**: Committee on Internal Market and Consumer Protection (IMCO)
5. **Brief analysis and assessment of the resolution and requests made in it:**

This resolution summarises the main opportunities, risks and policy implications of Web 4.0 and virtual worlds, in the context of the internal market. It highlights the wealth of opportunities in fields such as medicine, culture, education, the economy, security and law enforcement and the potential to contribute to solving global problems related to poverty and inequality. It also stresses that virtual worlds can pose significant risks in various domains, such as mental health, competition, data protection, and consumer protection, including for vulnerable groups such as minors, the elderly, and people with disabilities, intellectual property rights, cybersecurity measures and fundamental human rights.

The resolution 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’ (COM(2023)442) and underlines that any EU strategy must be sustainable and human-centric, while protecting the values of the European Union.

It stresses the importance of making a careful assessment of all the issues relating to the development of virtual worlds and their effective coverage by existing legislation, such as the Digital Services Act (DSA), the Digital Markets Act (DMA), and the Data Act. It also calls on the Commission to further analyse questions such as digital identity in virtual worlds, the skills gap, protecting user’s personal data and privacy, children’s rights, health concerns, the need for high-performing infrastructures and environmental concerns.

1. **Response to the requests and overview of the action taken, or intended to be taken, by the Commission:**

(**Paragraph 4**) The Commission agrees on the importance of **a true digital single market to contribute decisively to the development of virtual worlds and strengthen the EU’s ability to compete globally**. Over the last few years, the instruments for a well-functioning digital single market have been considerably reinforced with legislative initiatives such as the Artificial Intelligence (AI) Act, the Data Act, the Digital Services Act, the Digital Markets Act and Cybersecurity legislation. In relation to the competition elements, calls for contribution on Virtual Worlds and on Generative Artificial Intelligence have been launched with a forward-looking analysis of technology and market trends[[1]](#footnote-1).

(**Paragraph 5**) The Commission considers that the EU already has a strong regulatory framework in place, the provisions of which also cover virtual worlds. At the same time, it is important to follow future developments of the very fast evolving technological landscape. The Commission agrees regarding the importance of regular evaluations to ensure that legislation remains fit for purpose in the digital environment, in line with the Better Regulation guidelines. For example, the ongoing Fitness Check of EU consumer law on digital fairness, as a first step, will examine the adequacy of the existing horizontal consumer protection rules in light of technological developments.

(**Paragraph 6**) The Commission acknowledges the need to monitor the development of virtual worlds, initiated through monitoring mechanisms (such as through a future observatory for virtual worlds) detailed within Commission communication COM(2023) 442, and intends to report two years after the adoption of the initiative.

(**Paragraph 7**) The Commission acknowledges the potential of generative AI for creating and enriching virtual environments. The Commission is setting-up a European Artificial Intelligence Office (‘AI Office’) to build capacity and expertise on AI at Union level. To that end, it has adopted an establishing decision on 24 January 2024 (C(2024) 390 final). Among other tasks, such as the implementation of the forthcoming Artificial Intelligence Act and international cooperation on AI, the AI Office will be tasked to monitor the evolution of AI markets and technologies. It will collaborate and share these findings with the relevant Union bodies and Commission services responsible for virtual worlds policy development.

(**Paragraph 10**) The Commission strongly supports the need for the EU to take the lead in shaping virtual worlds as ecosystems that respect and promote EU values, fundamental rights, and the highest level of consumer protection. Europe has a strong industrial potential in the field of virtual worlds and Web 4.0. The forthcoming co-programmed Virtual Worlds Partnership will shape the next frontier of virtual worlds, based on common European values, principles and strategic interests. The focus will also be on creating business opportunities for companies of all sizes.

**(Paragraph 13)** The Commission is equally convinced of the utmost importance for virtual worlds to be interoperable. The Commission will ask for an analysis and recommendations on standards for “Secure, interoperable virtual and augmented reality ecosystem and virtual economy”, as part of the relevant action in the 2024 annual Union work programme for European standardisation (C(2024)541). The Digital Markets Act, which contains interoperability obligations, will prevent gatekeepers from imposing unfair conditions on businesses and end users and at ensuring the openness of important digital services.

(**Paragraph 14**) The Commission adheres fully to the idea of making virtual worlds accessible for all. Therefore, it aims for a Web 4.0 and virtual worlds where sustainability, inclusion and accessibility are at the core of technological developments (design for all), in line with the Strategy for the Rights of Persons with Disabilities 2021-2030[[2]](#footnote-2). This principle is also an outcome of the Citizens’ Panel in its Recommendation 20. Regarding **the need to recognise the specific needs and rights of children**, the Commission is in favour of putting a special focus on children as an important user group. The Commission will make resources on virtual environments available to empower young people and their parents under the Better Internet for Kids strategy.

(**Paragraph 15**) The Commission welcomes the idea of assessing the potential use of the **European Digital Identity (eID) and wallet in virtual worlds**, which is also echoed by the Citizens Panel’ Recommendation 19 “Develop regulations on digital identity and on when to allow and secure citizens’ right to be anonymous”. It will allow people and businesses to identify themselves in virtual worlds in a secure, convenient and uniform way across the EU.

**(Paragraphs 16 and 17)** The General Data Protection Regulation (GDPR) is technology-neutral and principles-based and takes a risk-based approach. These features are key for the application of GDPR to various technological developments. As the Commission stated in its Communication, the GDPR fully applies in virtual worlds, including specific rules on processing of sensitive personal data (e.g. biometric data for purpose of unique identification). The GDPR also provides for right to be forgotten/erasure of personal data. The compliance with the GDPR is supervised by the data protection authorities.

As outlined in its Communication, the Commission will set-up specific measures to monitor the developments in virtual worlds, including on their impact for the right to the protection of personal data. Finally, it is to note that the Commission reports on the application of the GDPR every four years. The second report is due this year.

(**Paragraph 18**) The Commission agrees on the need for research on **potential health issues** that may arise from interacting with virtual worlds, and the need for **research on the impact of technologies that imply direct and permanent modifications to the body**. To this effect, a study has been launched entitled “Virtual worlds: how do they affect our health and well-being?”, the outcome of which can be an important starting point in understanding the various health implications of this technology.

(**Paragraph 20**) The Commission is committed to addressing **the skills gaps.** Dedicated calls will be launched under the Digital Europe Programme to support the education and training of Virtual worlds specialists and audiovisual professionals. The Commission is also committed to pay special attention **to the specific needs, vulnerabilities and the rights of children in virtual worlds**. Dedicated resources will be available to empower children and their parents under the BIK strategy.

(**Paragraph 22**) The Commission acknowledges the need for highly performing **infrastructure** to support the development and functioning of Web 4.0 and virtual worlds. The development of smarter, flexible, and innovative services depends on the availability of ultra-fast and reliable connectivity. The Digital Decade connectivity goals aim at high-speed internet coverage by 2025 and gigabit connectivity by 2030, striving for making Europe the most connected continent by 2030. A Commission white paper on the future of telecommunications adopted on 21 February 2024, addressing the relevant issues.

(**Paragraph 25**) The Commission recognises the importance of increasing the efficiency and raising consumer awareness on the environmental impact and sustainability of new technologies. According to latest figures, energy consumption of data centres will account for 3.2% of EU energy demand by 2030 unless action is taken. As data centres workload grows, their adverse environmental effects on resource consumption must be mitigated. The Commission aims to make data centres climate-neutral, highly energy-efficient, and sustainable by 2030. Measures to achieve this objective include the revision of the Energy Efficiency Directive, the Code of Conduct for energy efficient data centres, the Taxonomy Regulation, among others. At the same time, the Commission underlines that virtual worlds can contribute to combat climate change. Destination Earth, a flagship initiative of the Commission, will develop a highly accurate digital model of the Earth on a global scale. It will monitor, simulate and predict the interaction between natural phenomena and human activities. It will contribute to achieving the objectives of the twin transition, green and digital.

1. <https://ec.europa.eu/commission/presscorner/detail/en/IP_24_85> [↑](#footnote-ref-1)
2. COM(2021) 101 final [↑](#footnote-ref-2)