

Basic information	
2022/2198(INI)	Procedure completed
INI - Own-initiative procedure	
Virtual worlds: opportunities, risks and policy implications for the Single Market	
Subject	
2 Internal market, single market	
3.30.06 Information and communication technologies, digital technologies	

Key players			
European Parliament	Committee responsible	Rapporteur	Appointed
	IMCO Internal Market and Consumer Protection	ARIAS ECHEVERRÍA Pablo (EPP)	03/05/2023
		Shadow rapporteur LEITÃO-MARQUES Maria-Manuel (S&D) BOTOŞ Vlad-Marius (Renew) GUERREIRO Francisco (Greens/EFA) FIDANZA Carlo (ECR) JORON Virginie (ID) PELLETIER Anne-Sophie (The Left)	
European Commission	Committee for opinion	Rapporteur for opinion	Appointed
	CULT Culture and Education	FARRENG Laurence (Renew)	24/01/2023
European Commission	JURI Legal Affairs	The committee decided not to give an opinion.	
	Commission DG	Commissioner	
	Internal Market, Industry, Entrepreneurship and SMEs	BRETON Thierry	

Key events			

Date	Event	Reference	Summary
19/01/2023	Committee referral announced in Parliament		
28/11/2023	Vote in committee		
05/12/2023	Committee report tabled for plenary	A9-0397/2023	Summary
17/01/2024	Decision by Parliament	T9-0032/2024	Summary
17/01/2024	Results of vote in Parliament		

Technical information	
Procedure reference	2022/2198(INI)
Procedure type	INI - Own-initiative procedure
Procedure subtype	Initiative
Legal basis	Rules of Procedure EP 55
Other legal basis	Rules of Procedure EP 165
Stage reached in procedure	Procedure completed
Committee dossier	IMCO/9/10917

Documentation gateway				
European Parliament				
Document type	Committee	Reference	Date	Summary
Committee opinion	CULT	PE746.918	18/07/2023	
Committee draft report		PE751.902	05/09/2023	
Amendments tabled in committee		PE753.642	26/09/2023	
Committee report tabled for plenary, single reading		A9-0397/2023	05/12/2023	Summary
Text adopted by Parliament, single reading		T9-0032/2024	17/01/2024	Summary
European Commission				
Document type	Reference	Date	Summary	
Commission response to text adopted in plenary	SP(2024)299	16/07/2024		

Meetings with interest representatives published in line with the Rules of Procedure

Rapporteurs, Shadow Rapporteurs and Committee Chairs

Transparency				
Name	Role	Committee	Date	Interest representatives
ARIAS ECHEVERRÍA Pablo	Rapporteur	IMCO	26/10/2023	Video Games Europe

LEITÃO-MARQUES Maria-Manuel	Shadow rapporteur	IMCO	17/10/2023	EuroCommerce
LEITÃO-MARQUES Maria-Manuel	Shadow rapporteur	IMCO	09/10/2023	Meta Platforms Ireland Limited and its various subsidiaries
GUERREIRO Francisco	Shadow rapporteur	IMCO	04/10/2023	EuroCommerce
LEITÃO-MARQUES Maria-Manuel	Shadow rapporteur	IMCO	03/10/2023	NVIDIA Corporation
LEITÃO-MARQUES Maria-Manuel	Shadow rapporteur	IMCO	28/09/2023	Trilligent
ARIAS ECHEVERRÍA Pablo	Rapporteur	IMCO	28/09/2023	Improbable
GUERREIRO Francisco	Shadow rapporteur	IMCO	13/09/2023	European Crypto Initiative
GUERREIRO Francisco	Shadow rapporteur	IMCO	13/09/2023	Association pour le développement des actifs numériques
LEITÃO-MARQUES Maria-Manuel	Shadow rapporteur	IMCO	06/09/2023	FTI Consulting Belgium
LEITÃO-MARQUES Maria-Manuel	Shadow rapporteur	IMCO	31/08/2023	5Rights Foundation
LEITÃO-MARQUES Maria-Manuel	Shadow rapporteur	IMCO	30/08/2023	Bitkom e.V.
ARIAS ECHEVERRÍA Pablo	Rapporteur	IMCO	26/07/2023	Netflix International B.V.
GUERREIRO Francisco	Shadow rapporteur	IMCO	19/07/2023	Video Games Europe
LEITÃO-MARQUES Maria-Manuel	Shadow rapporteur	IMCO	17/07/2023	ITI - The Information Technology Industry Council
ARIAS ECHEVERRÍA Pablo	Rapporteur	IMCO	04/07/2023	Qualcomm
ARIAS ECHEVERRÍA Pablo	Rapporteur	IMCO	21/06/2023	ITI - The Information Technology Industry Council
ARIAS ECHEVERRÍA Pablo	Rapporteur	IMCO	21/06/2023	The LEGO Group
ARIAS ECHEVERRÍA Pablo	Rapporteur	IMCO	20/06/2023	DigitalES - Asociación Española para la Digitalización
ARIAS ECHEVERRÍA Pablo	Rapporteur	IMCO	19/06/2023	Meta
ARIAS ECHEVERRÍA Pablo	Rapporteur	IMCO	19/06/2023	Écija Abogados
ARIAS ECHEVERRÍA Pablo	Rapporteur	IMCO	08/06/2023	DG Connect
ARIAS ECHEVERRÍA Pablo	Rapporteur	IMCO	06/06/2023	Deutsche Telekom
ARIAS ECHEVERRÍA Pablo	Rapporteur	IMCO	01/06/2023	Metaverse.eu
LEITÃO-MARQUES Maria-Manuel	Shadow rapporteur	IMCO	31/05/2023	Improbable Worlds
GUERREIRO Francisco	Shadow rapporteur	IMCO	31/05/2023	Deutsche Telekom
GUERREIRO Francisco	Shadow rapporteur	IMCO	31/05/2023	Improbable Worlds
ARIAS ECHEVERRÍA Pablo	Rapporteur	IMCO	29/05/2023	Telefonica, S.A.
ARIAS ECHEVERRÍA Pablo	Rapporteur	IMCO	16/05/2023	NowNow

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

The Committee on the Internal Market and Consumer Protection adopted an own-initiative report by Pablo ARIAS ECHEVERRÍA (EPP, ES) on virtual worlds – opportunities, risks and policy implications for the single market.

The transition to Web 4.0 and the development of virtual worlds may be a significant part of the future of digitalisation and may be one of the significant potential building blocks for the completion of the digital single market.

The report 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' and stated that any strategy must be **sustainable and human-centric**, while protecting the values of the European Union.

Internal market and consumer protection

Although the European Commission's communication does not yet indicate the need for precise legislative action, Members stated that it is nevertheless important to make a **careful assessment** of all the issues relating to the development of virtual worlds and their effective coverage by existing legislation. They considered that a clear, comprehensive, regulatory framework is of vital importance, particularly when the technology reaches maturity.

Members also considered that the Commission should conduct **regular checks** on the adequacy and consistency of the legislative framework of the digital single market, to address new opportunities, risks or other issues that may arise with virtual worlds and where necessary, put forward legislative proposals. The outcome of such checks should be made public. The Commission should draft a report on this subject every two years and 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, infringement of intellectual property rights, cyberterrorism, misuse of personal data, manipulative behavioural or addictive design of digital services, fraud, online terrorist content, 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 closely monitor also the rapid development of AI technology and its impact in the digital ecosystem.

The report stressed the importance of investing in and promoting the acquisition of **adequate skills** to ensure the availability of skilled and talented workers to fill new jobs in areas such as the architecture of virtual worlds within the EU. It also considered it important to create attractive conditions for retaining European talent, attracting talent from abroad and encouraging entrepreneurship and innovation within the EU. Given the potential of virtual worlds in industrial and professional environments, Members stressed the need to guarantee respect for labour rights and a high level of protection for workers.

The report 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;
- guaranteeing the **openness, inclusiveness and accessibility** of virtual worlds, so as to encourage greater participation by people with disabilities in the new digital environment;
- giving careful thought to the possible configuration of the digital environment, on the understanding that in some cases anonymity may be preferable;
- 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 report 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; highlights 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.

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

2022/2198(INI) - 17/01/2024 - Text adopted by Parliament, single reading

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.

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