



Resolution 2578 (2024)¹

Risks and opportunities of the metaverse

Parliamentary Assembly

1. The metaverse represents a new frontier for digital technology and a step change in the way that people can interact with information, one another and society. Immersive technologies, such as fully immersive virtual reality and wearable augmented reality, are experienced as an all-surrounding, realistic, simulative environment, in which people can interact with one another as embodied avatars in a compelling blend of digital and physical experience.
2. The Parliamentary Assembly notes that immersive technologies are already being used to great positive effect in multiple sectors, including education, healthcare, art, culture, sport, design, engineering, media and communication and, increasingly, in participatory democracy. Persistent, interconnected and inherently social metaverse environments may lead to social and societal benefits, for example the opportunity for meeting with like- and unlike-minded communities without the need for physical travel. Enhanced remote and virtual work meetings and social gatherings offer new opportunities to those who are currently isolated by their location or lack of mobility, health or financial means.
3. However, the Assembly is concerned that governance and legislation are struggling to keep pace with technological innovation while questions of accountability for person-to-person criminal behaviour in metaverse environments persist, such as harassment, violence, abuse, fraud, theft and other serious human rights violations. The metaverse can also be exploited to fuel hatred and manipulate public opinion, thus biasing democratic processes, or it may help authoritarian regimes establish Orwellian State control over the opinions and social behaviour of the population. Moreover, without corrective measures, unequal access to the metaverse – because of its costs – may generate new forms of discrimination and increase social inequality.
4. Decision makers should carefully consider, understand and assess threats to democracy, human rights and the rule of law, but also the many opportunities for breakthrough advances which the metaverse offers, and they should take informed and responsible measures to maximise its benefits while avoiding potential misuses which would undermine societies.
5. Self-regulation might not be enough, and the Assembly stresses the need to address the rights and obligations of private companies providing metaverse services and infrastructure, including approaches to data management, integration of artificial intelligence (AI), enforcement of terms of use and the reporting of criminal behaviour. Businesses, including manufacturers of hardware, publishing platforms and content developers, should have clear safeguarding responsibilities and be held accountable when tools and technologies are repeatedly used for illegal and abusive activities.
6. At the same time, public authorities must commit to upholding democratic principles and fundamental freedoms, and they should foster a culture of responsibility and accountability in this emerging socio-technical space. Core principles such as equality and non-discrimination, transparency, privacy and safety of all users should be embedded in the design and development of the metaverse architecture and of AI systems operating therein.

1. *Assembly debate* on 4 October 2024 (32nd sitting) (see [Doc. 16031](#), report of the Committee on Culture, Science, Education and Media, rapporteur: Mr Andi-Lucian Cristea). *Text adopted by the Assembly* on 4 October 2024 (32nd sitting).



7. Responsible governance may encourage creativity, innovation and entrepreneurialism, while upholding democracy, human rights and the rule of law within and through metaverse environments. To achieve these results and remain in control of their future, European countries should not confine themselves to the role of regulators, while others create the technologies that will shape the world. They should spur the innovation processes, driving them in the right direction and ensuring that societies benefit from technological developments.

8. Lessons learned from the desktop and mobile era of computing demonstrate that targeted investment and sound incentives can pave the way for alternatives to the formation of large monopolies, exclusionary design, corrosive cultures and unsustainable production practices. In this respect, the legislative and regulatory framework should consider competition and markets, particularly in relation to monopoly interests spanning hardware, software, content production, publishing, data management, research, advertising and user safety markets.

9. Therefore, the Assembly calls on Council of Europe member States to ensure that the legislative and regulatory frameworks applicable to the metaverse uphold democracy, human rights and the rule of law, and respond to law infringements with adequate measures concerning policing, jurisdiction, evidence gathering and deterrent sanctions, and in particular that they:

9.1. counteract harassment, violence, abuse – with particular attention to sexual abuse and child abuse – and manipulative and exploitative behaviour, bearing in mind that interpersonal contact in metaverse environments is more realistic than other screen-based media, and that legislation should properly address this new psychosocial dynamic;

9.2. safeguard freedom of expression and tackle new forms of social and political manipulation, including disinformation, deepfake avatars, radical ideology and propaganda which could find ground in metaverse environments;

9.3. actively promote Recommendation CM/Rec(2018)7 of the Committee of Ministers to member States on Guidelines to respect, protect and fulfil the rights of the child in the digital environment, among individuals, public authorities and business enterprises, and take specific measures regarding its implementation in order to enable all children to fully exercise their human rights and fundamental freedoms in the context of the metaverse;

9.4. guarantee users' rights to cognitive liberty and mental privacy and all rights enshrined by the Council of Europe's (modernised) Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data and its amending protocol (ETS No. 108 and CETS No. 223, "Convention 108+"), including:

9.4.1. the prohibition, for businesses or State entities, to collect, analyse, exploit or commodify user data generated in the metaverse without the free and explicit consent of the users;

9.4.2. the prohibition to use biometric information collected from subconscious actions – such as involuntarily eye movements and pupil dilation – for behavioural, social or political profiling;

9.4.3. the processing of sensitive data – such as genetic or biometric data, but also those relating to race or ethnic origin, political opinions, beliefs, health or sexual life, among others – only when this is necessary to pursue a stated legitimate aim, and with appropriate safeguards established by law;

9.4.4. reinforced information security to protect data gathered;

9.5. set up transparency requirements in the operation of AI systems requirements, according to Council of Europe standards.

10. The Assembly considers that Council of Europe member States should support inclusive access to, and informed use of, the metaverse and encourage democratic engagement therein. Thus, it calls on Council of Europe member States to:

10.1. prioritise, at different levels of governance, policy action aimed at broadening access to emerging technologies and consider targeted investments to narrow the digital divide by removing existing and potential barriers, including financial ones;

10.2. encourage metaverse literacy for elected representatives, the judiciary, law-enforcement agencies and public officials in healthcare, education, culture and other relevant policy areas, to increase professional understanding of virtual and augmented reality tools and their affordances;

10.3. undertake public awareness-raising campaigns, including via public service media and their digital platforms, to support the population in equitably accessing and leveraging the opportunities of the metaverse, while developing an understanding of the risks, especially for children;

10.4. consider hosting governmental and civil society citizenship initiatives in metaverse environments, to model best practices that prioritise inclusion and encourage participation and engagement across diverse communities, in particular youth groups, and actively enable the contribution of minority groups.

11. The Assembly is convinced that international co-operation among governments, as well as their collaboration with the private sector and researchers, are essential to address the complexities of metaverse technology, promote sound competition and incentivise the development of safe creative immersive ecosystems and ethical metaverse standards. It therefore urges member States to strengthen dialogue and collaboration with business and industry stakeholders, and civil society organisations, with the aim of:

11.1. preventing monopolies and anti-competitive practices; considering limitations to the scale of influence that a single State or a corporate entity may be entitled to accrue across metaverse ecosystems, and creating opportunities for new entrants across the metaverse technology stack;

11.2. agreeing on codes of ethics for publicly funded metaverse projects, to ensure that these projects uphold human rights and democratic values;

11.3. developing partnerships with actual and potential metaverse providers, to support research and strategic investment in immersive platforms that model positive social and community structures, mirroring public-sector approaches to town planning;

11.4. putting in place sound content regulation akin to the broadcast and cinema sectors, and applying lessons learned from social media regulation to prevent mechanisms that allow a State or private-sector parties to manipulate user behaviour from being set up in metaverse environments;

11.5. building sustainability into the supply chain and ecosystems of immersive technology, by promoting and monitoring compliance with internationally agreed climate targets and the United Nations Sustainable Development Goals; considering in this respect, for example, codes of practice or regulations on life-cycle assessment of immersive technologies, which should encourage responsible practices (repair and reuse of devices, recycling of gold and other rare earth minerals; minimising transport, etc.) and creating adequate facilities for them;

11.6. adopting a participatory and dynamic approach to policy making and legislation, by subjecting policies to regular reviews to maintain comprehensive up-to-date protection for users, as technologies continue to evolve;

11.7. strengthening international co-operation agreements, in particular to enhance cross-jurisdictional prevention and responses to criminal activities in metaverse environments, and encouraging mutual learning and exchanges of best practice at the international level, by making the best use of the potential of the Council of Europe;

11.8. signing and ratifying the Council of Europe Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law (CETS No. 225, "the Vilnius Convention"), which was opened for signature on 5 September 2024, opting to fully apply its provisions to the activities of private actors and putting in place limitations or even bans on certain uses of AI deemed incompatible with human rights, especially in relation to health and the environment.

12. For its part, the Assembly will continue to follow developments in this field and resolves to strengthen its partnership with the European Parliamentary Technology Assessment (EPTA) network, with a view to assisting policy makers in shaping technology development and ensuring democratic governance and respect for human rights and fundamental freedoms.