

## Finnish views on policies shaping immersive and virtual worlds, metaverses and Web 3.0

#### Key takeaways:

- Development and policies should lean on the foundation of EU data policies and the Digital Decade programme
- In virtual worlds, an individual's assets (including tokenised assets) should be protected just as data is protected through the current data policies
- Strong focus is needed on developing the industrial metaverse and cutting-edge technologies
- The EU should facilitate (legislation and policies) innovation to support early application and development

### **Background and context**

Virtual worlds, such as metaverses<sup>1</sup>, are a new way to conceptualise and shape digital environments into a "real" world. The discussion about virtual worlds is linked to the ongoing regulatory shift towards data-driven societies. The European Union's approach to new virtual worlds emerges as a triangle the three sides being people, technologies and infrastructure.2 We must make sure Europe is fit for future while being at the forefront of early application and development of new innovations. In order to utilise virtual worlds, including in tackling global challenges, we must position the EU as an enabler.

Companies and citizens need an efficient and well-functioning digital internal market to take advantage of the opportunities which new technologies and digital environments can offer. The EU can best ensure goals set by European Digital Decade policy program and competiviness of the European data economy<sup>3</sup> and embrace the new types of innovations and market opportunities by leading the development and building on its key competencies towards the 2030 goals4.

One of the starting points for policy development can be seen to be the EU's digital compass. Finland puts on emphasis on the EU's digital compass as well as the national level work on the digital compass together with the systematic approach to tackling new phenomena such as virtual worlds, also as a means towards achieving a sustainable, resilient future<sup>5</sup>. The shift towards virtual worlds requires

<sup>&</sup>lt;sup>1</sup> The metaverse can be described as an immersive and constant virtual 3D world where people interact (by means of an avatar) to carry out a wide range of activities. Madiega - Car - Niestadt - Van de Pol, European Parliamentary Research Service, Metaverse: Opportunities, risks and policy implications: https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/733557/EPRS\_BRI(2022)733557\_EN.pdf

<sup>&</sup>lt;sup>2</sup> Breton, People, technologies & infrastructure – Europe's plan to thrive in the metaverse: https://www.linkedin.com/pulse/people-technologies-infrastructure-europes-plan-thrive-thierry-breton/

<sup>&</sup>lt;sup>3</sup> Data Strategy: European data strategy (europa.eu)

<sup>&</sup>lt;sup>4</sup> Digital Decade Policy Programme: European data strategy (europa.eu)

<sup>&</sup>lt;sup>5</sup> Government report on the digital compass sets the course for Finland's digital transformation: Government report: Digital Compass - Valto (valtioneuvosto.fi)

innovation, core technological excellence and competence<sup>6</sup>, digital skills, goal-oriented thinking, enabling legislation, incentives, and resilient physical and digital infrastructures.

### Putting strong emphasis on an individual's perspective on virtual worlds

At the heart of these new virtual worlds must be people and our common European values<sup>7</sup>, such as democracy, fundamental rights and transparency. To build trust in new digital opportunities and to ensure competition and interoperability, it is essential to empower individuals to control and utilize their data irrespective of the service, platform or gadget. Privacy, data protection, data security by design and confidentiality of communications are at the crux of this trust. In addition, interoperability will help to create a more inclusive, diverse and participatory ecosystem.

We are consistently advocating human-centric approach with data rights, not only as abstract rights but as concrete tools serving people in their everyday life. A key element in this approach is portability of data and virtual assets. A data flow between services and systems combined with digital identities and personal information management allows people to control their data and act in trusted data networks. The exchange and flow of data creates value chains, ecosystems and competition as well as competitiveness and innovation.

In virtual worlds, all assets (including tokenised) should be protected just as data is protected through the current data policies. It is crucial to take into an account that common EU's framework concerning financial services is needed to be suitable for the digital era, so that possible innovative technologies could be used.<sup>8</sup> Individuals should be able to exchange and transfer these assets between different platforms and services. This would also support a decentralised approach to virtual worlds. Empowered people and communities form a solid foundation for European digital sovereignty. Securing people's trust and keeping their digital skills up to date play a key role in making them willing and capable to participate in the creation and utilisation of virtual worlds.

In practice, personal data accounts - or wallets - and services are already emerging. It is therefore crucial to implement the EU's Data Governance Act to establish and strengthen the role of data intermediation services and to finalise the work on the Data Act. As part of the implementation, we must also prepare for decentralized automated organisations to take over tasks of intermediation services. In addition, the development of the EU's digital identity (eIDAS) is taking us towards data wallets, trust networks and electronic identity solutions, which individuals can take advantage of when managing and using their personal data and digital assets. In future, we can also see "personal data roaming" just as with mobile networks or financial transfers today. This will create possibilities for individuals to connect different virtual worlds on their terms and under their control.

# Building excellence and coherence for industrial virtual worlds within and beyond the EU

It is also possible to understand virtual worlds simply as a new way to conceptualise existing technologies. Therefore, our agility in shaping new virtual worlds also depends on the EU's ability to utilise, develop further and, where needed, regulate the cutting-edge technologies that are vital

<sup>&</sup>lt;sup>6</sup> By 2035, Finland aims to be the global leading architect and enabler for Immersive Digital Life, which penetrates all aspects of human existence (2022) Business Finland. https://www.businessfinland.fi/en/whatsnew/blogs/2022/what-is-the-metaverse--humanitys-digital-future

<sup>&</sup>lt;sup>7</sup> European Declaration on Digital Rights and Principles at https://digitalstrategy.ec.europa.eu/en/library/european-declaration-digital-rights-and-principles.

<sup>&</sup>lt;sup>8</sup> European Parliament legislative resolution of 20 April 2023 on the proposal for a regulation of the European Parliament and of the Council on Markets in Crypto-assets and amending Directive (EU) 2019/1937 Texts adopted - Markets in Crypto-assets (MiCa) - Thursday, 20 April 2023 (europa.eu)

for virtual worlds. This also includes looking at what (legal) instruments and other tools are already in place without overregulating something which is still developing.

Finland considers it important that the goals set in the Digital Decade Policy Programme are implemented into their fullest and that the integral role of generally applicable core technologies, such as 5G/6G, advanced chips, super and quantum computing, cloud and edge computing technologies and general purpose AI, are recognised in the realisation of virtual worlds. In this regard, the EU should develop a shared vision to promote international standardisation.

Virtual worlds create new kinds of needs and demands with regard to our data infrastructure. Interoperability of platforms has the potential of enabling cross-sectoral innovations and economically scalable solutions. In addition to technological capacities, specific effort should be put in realising infrastructure for common European data spaces, especially for mobility, built environment and IoT, as this would facilitate the creation of digital twins. Alongside the hard and soft infrastructures, we must scale up people's competencies and skills to create virtual and immersive content, especially for industrial applications, to support projects already on the way.9

Finland also seeks to put strong focus on ensuring that virtual worlds and various technologies are developed on a basis of international multilateral cooperation and towards interoperability and open standards such as the current internet protocols and open internet. In order to ensure a fair operating environment, competition and innovation, we must make sure that the development and solutions are accessible for all, regardless of their physical abilities, socio-economic background or technical skills. Hence, the collaboration is needed between companies, developers, and users in the design, development, and governance of virtual worlds.

No single actor should be in a dominant position to set the rules in virtual environments. The metaverse and Web 3.0 will be most impactful if different platforms and systems can interact seamlessly. Research in open protocols, APIs, and data standards will foster collaboration and ensure a more inclusive ecosystem.

The EU should facilitate innovation to support early application and development also through enabling regulative environment. This should be reflected horizontally in the better regulation initiative. We also must make sure that the "Big 5"10 – globally oriented EU regulations which are either coming into force or under negotiation - are implemented uniformly and, if needed, strengthened to support interoperability and level playing field for virtual worlds, metaverses and decentralised Web 3.0 platforms.

#### Questions left to be answered

Virtual worlds and immersive technologies can have both positive and negative effects on the society and users. In addition to new opportunities, virtual worlds may create new risks. To tackle them, we must ensure data protection, cybersecurity and data security and also recognise new forms of vulnerabilities and criminal acts. Research on the psychological impact of virtual worlds, as well as tools to promote mental well-being is needed. This comes with the question of how we should address responsibilities and accountability in established virtual organisations (such as decentralised autonomous organisations or DAOs) that can have millions of co-owners. How the new forms of employment and entrepreneurship could be supported in the metaverses? How it could be enabled

<sup>9</sup> A Human-Driven Industrial Metaverse: https://www.vttresearch.com/sites/default/files/2022-11/Human-Driven%20Industrial%20Metaverse%20A4%20(1).pdf

<sup>10</sup> The EU's new data regulations will bring benefits to companies and society - four recommendations for seizing the opportunities https://www.sitra.fi/en/news/the-eus-new-data-regulations-will-bring-benefits-tocompanies-and-society-four-recommendations-for-seizing-the-opportunities/

metaverses as learning environments? Will individuals be able to benefit from the value they co-create within virtual spaces? And which public services could be brought to the metaverses?

This calls for legal stability of virtual assets and means to protect the value and ownership of tokenised assets and commodities. Finally, how will we create an enabling and risk-based framework for virtual worlds that encourages recreational, commercial, industrial and public applications?

#### Other supporting material

- 6+1 recommendations for Finland How can regulation improve the conditions for Web 3.0 business? https://www.sitra.fi/en/publications/61-recommendations-for-finland/
- Study by the Technical Research Centre of Finland (VTT), Can industrial metaverse solve the labour shortage challenge? https://www.vttresearch.com/en/news-and-ideas/can-industrialmetaverse-solve-labour-shortage-challenge
- Virtual Reality Finland ry association, current initiatives: https://www.vrfinland.fi/initiatives-1
- 3D modelling and virtual worlds, National Land Survey of Finland (Maanmittauslaitos): https://www.maanmittauslaitos.fi/en/research/3d-modelling-and-virtual-worlds
- Examples of other uses cases: https://finnishmetagallery.fi/en/#about
- HomeOpera project: https://esignals.fi/en/category-en/service/the-worlds-best-metaversecomes-from-finland/#d7b02f24

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