

The Danish government's response to the Commission's call for evidence regarding virtual worlds

The Danish government welcomes the European Commission's ambitions of fostering a common vision and approach to virtual worlds and Web 4.0. In general, the EU should strive to provide the necessary framework to establish a true digital single market in the EU where new digital solutions and business models – including virtual worlds - can thrive while respecting European values and our citizens' fundamental rights. European digital solutions developed in an ethical, responsible, and secure manner should be a strong competitive advantage for the EU - also in the context of virtual worlds. Innovation and ethics must go hand in hand, fully respecting the Declaration of Digital Rights and Principles as agreed between the European co-legislators.

In dealing with the development and use of a new technology, we support a step-by-step approach based on learning and evidence. In this respect, we support the Commission's plan to introduce a non-legislative initiative as outlined in the call for evidence, as legislative initiatives regulating virtual worlds do not seem needed at this point. However, as the technology develops, there could be a need for a common understanding of how to apply the existing rules in this new context.

In laying out a common vision and approach on virtual worlds, we find that inspiration could be taken from the EU's common approach to AI and the process in this regard. This was a good example of how a learning and evidence-based approach can play out in practice, starting out by creating a framework for stakeholders and experts to collaborate for example in terms of discussing legal and ethical issues. Furthermore, the approach encompassed the development of a coordinated plan between the Commission and the Member States, laying out a common vision as well as common initiatives to foster the development, use and uptake of a new technology. Such initiatives would similarly be valuable first steps in the context of establishing a common vision and approach towards virtual worlds, thereby maximising efforts and synergies in the EU.

In this respect, the Danish government looks forward to contributing to fostering a common vision and approach, with a view to ensuring that we enable an environment that promotes innovation and competitiveness, while addressing potential risks to individuals and society.

Realising potential through an enabling environment for innovation – addressing barriers and coordinating action:

Virtual worlds and the related technologies are very much in their infancy and further assessment of the technologies' possible appliances and impacts is still needed. However, the potential could be tremendous, as they can strengthen people's opportunities to interact and socialize across borders and can serve to strengthen the democratic dialogue based on increased opportunities to gather information, convey opinions and be exposure to various/differing positions. It can gen-



erate new ways for the public administration to engage with citizens while enabling new solutions for example in the health and education sector. Furthermore, it is potentially a promising environment for businesses, allowing for the innovation of communication, entertainment, training, and business experimentation etc. Finally, the full utilization of for example digital twins in virtual worlds will allow for optimization of resource allocation and contribute to the green transition.

The development and deployment of virtual worlds, however, also tie into well-known barriers within the digital sphere, for example the risk of centralization as seen in the first wave of the internet. If European consumers, citizens, and businesses are to enjoy a smooth experience when engaging in virtual worlds, **interoperability** is key. Therefore, it should be possible to **seamlessly transfer data between different systems and virtual worlds, which should include the possibility** for actors from different virtual worlds to interact with each other, as it is possible today across mobile networks for example. **Standardization** of formats as well as open and interoperable data exchange solutions will be key in this regard.

With a view to addressing these barriers, we would like to remind the Commission of the "**eDelivery Network**"-principles, which include well-established notions of interoperability, ensure that solutions are vendor and platform agnostic, and provide a concrete, cost-effective technical solution to data-sharing, including for SMEs. As these principles are already followed by several companies and EU bodies, they should serve as the baseline when establishing interoperability in virtual worlds.

Furthermore, the Commission should take into account the Data Governance Act, which lays out the foundation for secure, trustworthy, and open/collaborative data sharing, and the Data Act, which will ensure data portability, increase access to data from connected objects and ensure interoperability between common European data spaces. The framework regarding data currently in the making will be fundamental for the development of a competitive environment for virtual worlds in the EU.

Another barrier to realising the full potential for virtual worlds is **digital skills**. In this context, we support the Commission's focus on the development of digital skills, as these are key to harnessing new technologies such as virtual worlds, ensuring that the digital transition leads to a competitive edge rather than a threat to the European workforce as well as enabling citizens to take advantage of the digital transition rather than being threatened or marginalized by it. We note that the Commission has recently unveiled two recommendations about digital education and skills. With these in mind, we encourage the Commission to integrate skills-based initiatives regarding virtual worlds into the existing efforts on the digital skills-agenda. Also, it is important that any initiatives from the Commission respect national competencies within education and other policy areas and the autonomy of tertiary education institutions.

With a horizontal technology, such as virtual worlds, where multiple applications could be potentially realized and significant **investments** are needed, a **coordinated plan** between the Commission and the Member States could be beneficial in order to provide an overview of common initiatives and maximise the impact of initiatives to strengthen research, development and deployment of virtual worlds. Such a plan should address the different aspects needed to realize the potential of the technology such as development of digital skills, standards, interoperability, and initiatives to protect rights and values, investment opportunities (with a sound impact analysis if the support for these technologies is to be found in existing programmes) and facilitate the exchange of best practices. Finally, it will be important to showcase the **different potential applications of the technology** in virtual worlds potentially through these projects. This can further be enabled by awareness raising activities towards industry and intended users of virtual worlds.

Respecting European values and citizens' fundamental rights and limiting climate impact – evaluating existing legislation and guidelines:

Despite the enormous potential, virtual worlds can also risk extending existing issues within the digital single market into the three-dimensional space. This can for example relate to protection of personal data, use of data in general, ethics, exploitation of children and youth, intellectual



property and copyright, mis- and disinformation as well as the dissemination of illegal or harmful content.

As many of the issues related to the virtual worlds are extensions of current challenges, addressing the development of virtual worlds will touch upon existing legislation, for example the GDPR, the DSA, the DMA, the UCPD, the copyright directive as well as upcoming legislation such as the Data Act, AI Act, CRA, NIS2, and eID. We therefore agree with the Commission, that new legislative initiatives regulating virtual worlds do not seem needed at this point in time, however, as the technology develops, there could be a need for a common understanding of how to apply the existing rules in this new context.

Therefore, we find it pertinent to continue an **open, inclusive dialogue with different stakeholders, as well as to produce a detailed analysis of the broader implications of virtual worlds in terms of how the existing legislative framework as well as the digital rights and principles** will be applied and ensured in the virtual world, thereby flagging potential risks, and unveiling potential shortcomings. Furthermore, in order to stay ahead of the curve, the Commission should also **systematically monitor developments within the virtual worlds**.

The technology supporting virtual worlds are expected to have a significant climate impact, both in terms of resources and carbon emissions. It is therefore important to take this into account from the outset and consider measures to minimize the climate impact of the technology, its use, and the underlying infrastructure. We would urge the Commission to start reflections on this together with all relevant stakeholders in the context of an initiative regarding virtual worlds. This would be essential to achieve the twin transition of the EU.

The legal framework regarding platforms must be fit to address the metaverse

Participation in the metaverse is expected to involve the supply of unprecedented amounts and types of personal data. With users being “logged in” for extended amounts of time, businesses can monitor individuals’ physiological responses and their movements continuously allowing businesses to obtain a deeper understanding of their customers’ thought processes and behavior. This could enable online persuasive techniques in becoming even more prevalent and harder to decipher with the metaverse, causing **the lines between authenticity and promotionally altered experiences to become blurred**. This is particularly the case for children. When evaluating the UCPD the Commission should take into consideration **whether the current legal framework is equipped to take on this new type of technology**.

For the purposes of the DSA, consideration may be given to the extent to which virtual worlds are considered as intermediary services. The DSA imposes relevant requirements on intermediary services depending on the type and size of service, such as risk assessment and risk mitigation requirements, transparency in content moderation, and protection of minors. In this context, consideration should be given to whether the challenges regarding intermediary services that the DSA seeks to address are equally adequate and relevant to virtual worlds, as well as any online services provided through it.

The DMA ensures that the largest digital platforms must comply with a number of obligations in relation to the central platform services for which they are appointed as gatekeepers (e.g. social online network services respectively and control systems).

DMA is a technology-neutral regulation that can be used alongside competition rules to promote fair and open virtual worlds. If the virtual worlds are to be covered by the rules in the DMA, it needs to fall under one of the ten core platform services listed in the DMA, such as web browsers or online search engines. If so, providers of **virtual worlds will have to comply with a number of obligations**, such as interoperability requirements or prohibition of tying.

However, the virtual worlds are still in their infancy, and thus it is unclear whether it falls within the current scope of the DMA or whether such an inclusion will require a revision of the DMA. To this end, the DMA includes provisions to ensure that it is future-proof and can quickly address issues raised by new services.



In summary, we would propose the following concrete measures to be reflected in an upcoming initiative:

- The creation of a "**Virtual Worlds High Level Expert Group**" (i.e. in collaboration with the Group of Member States on AI and digitalisation) to discuss the challenges and opportunities stemming from virtual worlds. This would include the responsible and sustainable development and application of virtual worlds. Based on detailed analysis, this should result in recommendations, guidelines, or principles from the group on how existing legislation as well as the digital rights and principles will be applied and ensured in the virtual world and how we can achieve our green objectives in this context.
- Continue the **Industrial Coalition**, but ensuring **broader stakeholder inclusion**, for example also taking into consideration SMEs, in order to gather input, exchange views and develop common initiatives to encourage the development, uptake and use of virtual worlds and technologies related to virtual worlds.
- Establish a **coordinated plan** for virtual worlds between the Commission and the Member States which should provide an overview of initiatives to strengthen investments and initiatives regarding research, development, and deployment of virtual worlds..
- Continue to engage proactively in **standardization** bodies to ensure the interplay between various data formats as well as open and interoperable data exchange solutions in and between virtual worlds.
- **Systematic monitoring** of developments within the virtual worlds by the Commission with considerations on how existing and coming regulation such as the GDPR, the DSA, the DMA, the UCPD, the copyright directive, the Data Act, AI Act, CRA, NIS2, and eID – addresses the issues affiliated with virtual worlds.
- **International engagement**. As this technology will span the globe, it is important that the European Union engages its international partners to ensure that European values on virtual worlds become the global norm.