Digital Future Society

Immersive Realities at the Frontier of Digital Human Rights

A programme of

GOBIERNO DE ESPAÑA
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MINISTERIO DE ASUNTOS ECONÓMICOS Y TRANSFORMACIÓN DIGITAL
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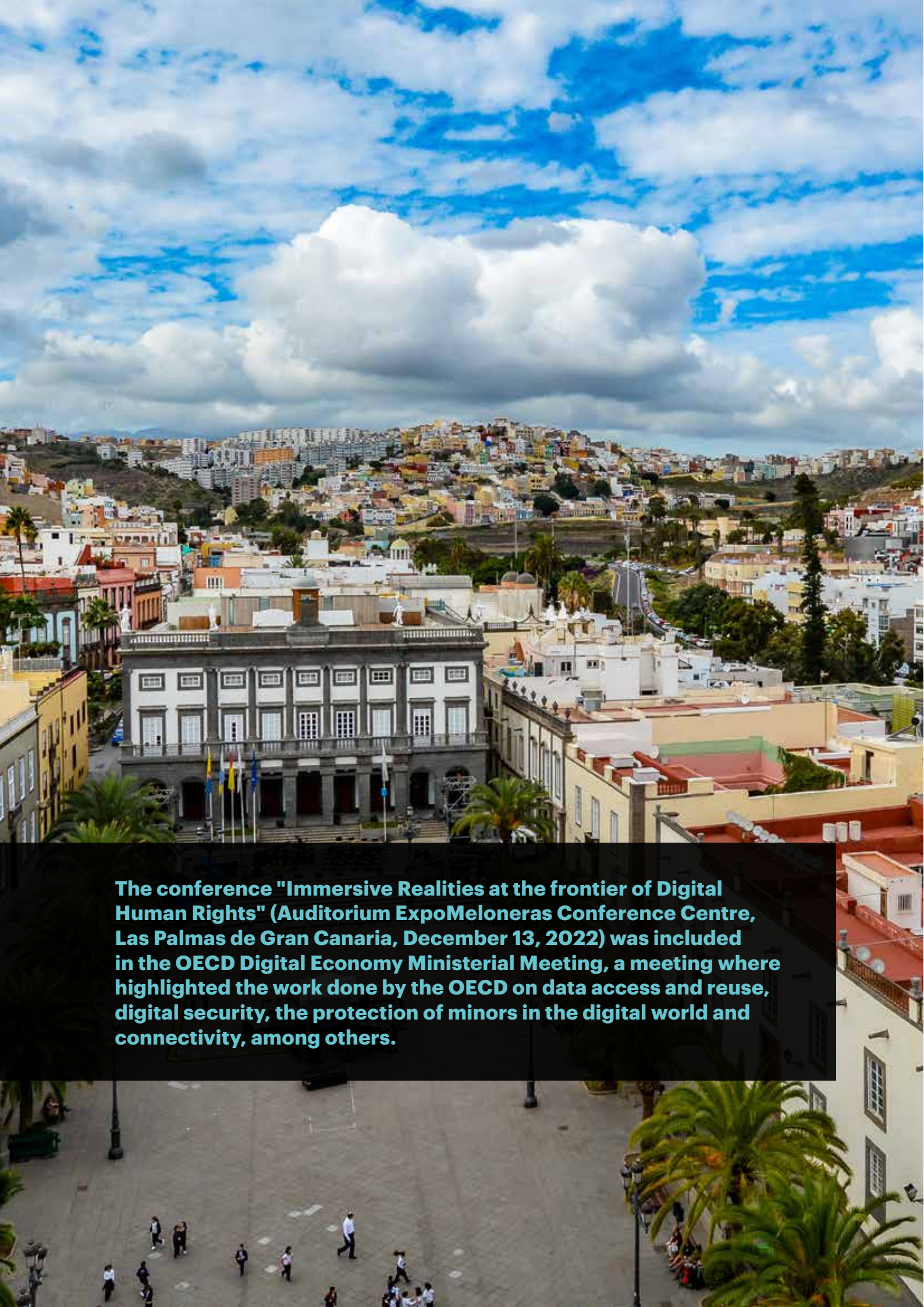

The conference "Immersive Realities at the frontier of Digital Human Rights" (Auditorium ExpoMeloneras Conference Centre, Las Palmas de Gran Canaria, December 13, 2022) was included in the OECD Digital Economy Ministerial Meeting, a meeting where highlighted the work done by the OECD on data access and reuse, digital security, the protection of minors in the digital world and connectivity, among others.

Immersive realities represent a convergence of new technologies such as Web 3, Extended Reality (XR), and more. However, the metaverse, which is the term most commonly used to describe where these new virtual worlds can and will be found, is still shrouded in mystery. Misconceived ideas centre on highly rendered and completely immersive virtual worlds where individuals and groups can go to interact with anybody from anywhere, yet there are complications that render these types of over-simplifications problematic.

To begin with, while some can don the latest virtual reality headsets and fully immerse themselves in these types of worlds today, many more people are excluded from these kinds of exclusive digital experiences for many reasons. These exclusions go beyond access to high-end equipment too, with many if not most people in the world unable to meaningfully connect to the internet. However, contrasting this is the fact that immersive realities only present a very narrow view of what the metaverse actually is. In many ways, multiple versions of the metaverse are already available across various mediums including the likes of Fortnite and Roblox that see incredible engagement from young and old users alike.

It is important then, standing on the cusp of increasing engagement with what are essentially new worlds and new realities being built from scratch, to wrestle with the types of questions that are rooted in the reality of today. In Las Palmas, Spain on 13 December 2022, the OECD Digital Economy Ministerial Meeting convened a conference to explore what these questions are, as well as discuss possible solutions and answers, framed around how new and developing understandings of human rights in the digital age will intersect with immersive realities. The panel speaking at the conference included:

- **Carme Artigas,** Spain's Secretary of State for Digitalisation and Artificial Intelligence, Ministry of Economic Affairs and Digital Transformation[1]
- **Pablo de Carvajal**, Telefonica's General Counsel and Regulatory Affairs[2]
- **Clara Neppel,** IEEE's Senior Director of European Business Operations[3]
- **Sonia Jorge,** Founder and Executive Director of the Global Digital Inclusion Partnership and an International Digital Policy Expert[4]
- **Poonacha Machaiah,** Chief Executive Officer at The Chopra Foundation[5] and Co-Founder and Chief Metaverse Officer at Seva.Love[6]
- **Montse Guardia,** Chief Strategy Officer at Mobile World Capital Barcelona[7]

This short report on the OECD Digital Economy Ministerial Meeting conference on Immersive Realities at the frontier of Digital Human Rights will discuss the main points raised by the speakers at the event.

[1] See: avancedigital.mineco.gob.es/en-us/paginas/

[2] See: www.telefonica.com/en/

[3] See: www.ieee.org/

[4] See: globaldigitalinclusion.org/

[5] See: choprafoundation.org/

[6] See: www.seva.love/

[7] See: mobileworldcapital.com/en/

Introductions and key questions and issues

The metaverse is already happening, as children today are playing games like Roblox and Fortnite. It has three attributes: at least some iteration of immersive reality, real-time experiences, and user agency. The metaverse, therefore, offers the opportunity to change our reality, sensations, images, feelings, and thoughts. Furthermore, these digital environments are increasingly transforming how humans interact with technology. They, and the technologies that make them possible, such as Web 3 and XR, offer new and exciting opportunities. Not only do these technologies offer us new tools for dealing with huge problems and challenges facing the world, such as global suicide rates, they essentially offer a chance to build new worlds that will have new rules. Therefore, the metaverse and the digital environments it represents offer an unprecedented opportunity to create better worlds.

Creating better worlds, however, requires answering some very serious questions, not least of which relate to the roles humans will play in those worlds. Equality and inclusivity also represent core challenges at the heart of these new realities, meaning digital inclusion and human rights must be key considerations. Currently, utopian visions of better virtual worlds exclude the majority of the world, which is currently living beyond meaningful access to the technologies required to participate in them. Also, it is worrying that while such powerful narratives and ideas for the future are being crafted, they are being done so in the absence of so many. The fact that the global majority remains without affordable, meaningful access, and without the skills to even communicate online is a concern. This trend must change, and it is a communal responsibility to ensure it does so.

How can this trend be changed? How can collective work on policies, regulations, projects, and programming be facilitated, that will shift it and make these new opportunities to participate accessible to everyone? These questions represent significant challenges, particularly when considering the investment required in the next-generation telecommunications networks that will power the immersive realities.

To help, technologists can begin by studying and understanding the manifestations of the metaverse that already exist today, also helping to wrestle with the questions already outlined above as well as more technical questions relating to the metaverse such as whether there will only be one or several. Also, if there are to be multiple metaverses, will they be interoperable?

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Digital Inclusion and the Digital Divides

According to the Digital Future Society report, Measuring the margins: a global framework for digital inclusion,[8] which is a direct response to the call put out by the United Nations in The Age of Digital Interdependence,[9] there are four key dimensions to digital inclusion, which must be regularly collected and segmented. These are:

1. Access to electricity, the internet, devices and quality of that access.
2. Traditional and digital skills including critical thinking, literacy and entrepreneurship.
3. Use of technology, public and private digital services, digital products and content, various types of work, social and civic engagement activities, as well as places of access to measure actual value creation and digital inclusion of marginalised communities.
4. A supportive environment, particularly in terms of affordability, legally valid identification, financial inclusion, trust and security.

Unless international organisations, governments, statistical agencies, and policymakers at all levels of government can successfully measure and track reliable data across these four tracks, monitoring progress towards digital inclusion will falter and digital divides will prevail.

[8] Digital Future Society 2019, Measuring the margins: a global framework for digital inclusion. Accessed online here.

[9] United Nations. 2019. The Age of Digital Interdependence, Report of the UN High-Level Panel on Digital Cooperation. Accessed online here.

OECD Digital Economy
Ministerial Meeting
Gran Canaria, Spain, 2022

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Standards and governance

When discussing standards for governance there is a need to understand that the impact virtual worlds can have is very real. This means that fundamental human rights must guide the governance of these new digital worlds, informing standards and ensuring safety from the earliest stages of design. However, it is also key to understand that there are new and evolved challenges born out of the move into these new digital spaces that will necessitate the development of new digitally tailored rights. For example, the unprecedented tracking of data raises questions about privacy and the use of personal insights, with headsets able to grab increasingly sensitive data such as tracking eye movements and offering deeper insights into the sub-conscience of a user. Also, in the metaverse, the idea of creating a virtual clone, which could be used in a variety of capacities, raises questions about the right to identity.

The complexity of the issue covers a broad range of aspects from the technical to the ethical, all with unprecedented layers of complexity. This complexity means multistakeholder cooperation is essential, which sits at the heart of the need to define a common standards and governance framework. The success of the metaverse, therefore, depends on creating a trust framework, which includes technical and moral standards, and ensures agency and responsibility. The metaverse can bring a lot of possibilities but also carries risks, such as addiction, privacy issues, and biometric data ending up in the hands of a single company. To avoid these risks, it is essential to have a common trust framework and principles agreed upon globally.

When it comes to trust, transparency is key. Systems must be open and transparent so that people know what they are getting into. Ensuring a consensus on transparency is not easy though when there are different stakeholders, both as organisations and at the individual level, all with differing interests to represent. What is needed is commitment, including political commitment, to actively negotiate these competing interests into a manageable model to ensure the transparency that will facilitate trust. Without this, many users from contexts all around the world will feel unwilling to engage with these new digital opportunities for fear of the implications.

Pulling together, fostering collaboration

It is important to move away from the regulations of the last century and look forward to the needs of the new era that is upon us. In this regard, Spain and Europe have been taking guiding steps forward, particularly with the development of Spain's Digital Rights Charter,[10] which not only adapts fundamental rights to the new digital realm but also conceives of new digitally unique issues that need addressing. New rights must be claimed as a result of new opportunities and risks presented by digital technology. This includes rights such as the right not to be discriminated against by algorithms, the right to a second human opinion, and the right not to be technically augmented. The use of AI and technology also raises concerns about the level of manipulation possible, such as the commercialisation of personal information, or the introduction of electronic impulses that alter our decisions. To prevent these risks, it is crucial to have a discussion about the future we want.

Creating consensus on human rights requires a shared language and a multidisciplinary approach. It is important to agree on key terms such as transparency, fairness and accountability and then operationalise them with concrete criteria and processes. Principles of ethically aligned design can help here and have even been investigated in contexts of extended reality. The developers also need to understand the values of the stakeholders and incorporate them into the design of virtual worlds.

Ethically Aligned Design

Ethically Aligned Designed refers to a set of principles and practices that seek to ensure that the design and development of technology and artificial intelligence systems[11] reflect and align with human values, ethics and rights. The ongoing initiative Ethically aligned design: a vision for prioritising human well-being with artificial intelligence (AI) and autonomous systems seeks to cover as much as possible all ethical concerns that relate to AI and autonomous systems while also seeking to ultimately offer guidelines/ procedures/standards that will prioritise human wellbeing throughout what the IEEE refers to as the forthcoming evolutions on artificial intelligence and autonomous systems.

Although the initiative is ongoing, key aspects identified so far include the promotion of transparency, accountability, and responsibility when designing, developing, and implementing AI and autonomous systems as well as other technologies. Other key concerns of the initiative include privacy, security, bias, fairness, and other ethical concerns.

[10] Government of Spain 2021, Carta Derechos Digitales. Accessed online here

[11] IEEE 2017, Ethically aligned design: a vision for prioritising human well-being with artificial intelligence (AI) and autonomous systems. Accessed online here.

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What are the next steps?

The idea that metaverses offer a chance to build a better world should represent a guiding inspiration. This, however, requires learning from past mistakes in order to design a better world. This represents a major new challenge that humanity has never faced before. It is a second chance to make right on historic injustices and build on the open principles that inspired the early internet pioneers.

Web 1 was the vision of idealists who believed it would become a common platform for equal opinions. However, Web 1 failed to find a business model, overlooked the importance of content, and neglected cybersecurity and privacy, which led to Web 2. Web 2, the internet as most people experience it today, is controlled by a few big players who own our data, but there is now an opportunity to do things better with Web 3, which offers control and autonomy to users as digital citizens and owners, rather simply being consumers.

A new model for the internet that promotes autonomous control over personal data offers a solid foundation for building new immersive worlds. Working to solve the technical issues relating to the Web 3 model, therefore, as well as solving the issues relating to privacy and cybersecurity represent key next steps to take as well. The promotion and development of leaders who will prioritise privacy as well as the human consciousness that will populate these immersive virtual worlds alongside instances of artificial intelligence is also of the utmost importance.

Beyond these steps, however, the matter of digital inclusion also needs to be addressed as a matter of urgency. Although some countries have made progress, there is a need to develop broader and deeper links around the world in order to realise truly global immersive realities. One particular solution could relate to business expansion. If companies want to expand their business, they should also invest in the communities where they work. This could help address connectivity, which is an important factor. For example, in the poorest counties in Kenya, only 1% of the population has access to the internet. The majority of those who are unconnected are women and girls in marginalised rural populations. Last-mile connectivity is often the costliest and offers the lowest potential for return on investment.

However, acting from a place of privilege bestows the responsibility to think about what is possible and to invest in infrastructure and where it is needed most. Coordinated action in this regard can ensure everybody can act from a fair and even position and ensure the metaverse is built on inclusive and equitable principles. The truth, however, is that it goes beyond companies, with a clear need for multistakeholder cooperation. This means it is also about public policies and collaboration that can help to deploy the internet to reach rural areas where it may be harder to make a business case for making the necessary infrastructure investments.

Another aspect of digital inclusion relates to digital skills. It is not just infrastructure; digital skills must represent a new key aspect of education that will facilitate meaningful access to these immersive realities as well as to new sources of income. Furthermore, with digital technologies transforming how humans and machines interact, there is an argument to be made for transforming education itself, including what and how to teach learners. If something can be answered by an algorithm, it could be said that the skill required to answer that particular problem is no longer needed. This is why there is a need for leaders who will promote human consciousness alongside technological solutions by focusing on critical thinking, emotional intelligence and creativity, which are unique to human beings. Automation and robotisation can free humans from monotonous work, but they will struggle with decisions made by the heart, soul, and mind. This necessitates innovation and bravery in managing risk while once again putting human rights and new digital rights as core components of these new worlds and the new technologies that will make them possible.

What is Web 3?

Web 3 refers to the third generation of the internet. The first generation of the internet (Web 1) lasted from the 1990s into the early 2000s, was designed as an egalitarian digital space, and was characterised by a static and read-only experience for users. The second generation of the internet (Web 2), which represents most of the websites that are active today is mostly characterised by improved user interfaces and increased interactivity and collaboration possibilities. However, Web 2 is also characterised by high levels of centralisation with users experiencing much of what the internet has to offer via giant technological corporations such as Google, Meta, and Amazon. This, combined with the personalised advertising business model that defines Web 2, leaves user privacy as a secondary concern and also sees the centralised companies able to collect user data unfettered to sell or use their convenience.

In contrast to Web 2, the third generation of the internet or Web 3 as it is commonly known, adds a third element to the internet that builds on that offered by its predecessors. Web 1 offered a read-only experience and Web 2 offered a read-and-write experience, although the writing could only be done on the terms and under the ownership of the centralised websites offering the web experience. Web 3, however, offers a read/write/own web experience that gives users the ability to take an ownership stake in all that they do online.[12]

[12] Harvard Business Review 2022, What Is Web3? Your guide to (what could be) the future of the internet. Accessed online here.

Protecting the old while building the new

Although the metaverse is already real and many people are interacting within different iterations of it all the time, there is still an opportunity to define shared goals for the metaverse moving forward. However, while we must fight to preserve and protect the essence of being human, as well as most importantly, the humans themselves, it is important to preserve the real world, including the environment, in the design of the metaverse. Cultural diversity, including different dialects and languages, must also be reflected in the metaverse. Again, however, this calls back to the issues of digital inclusion that have already been discussed in this report.

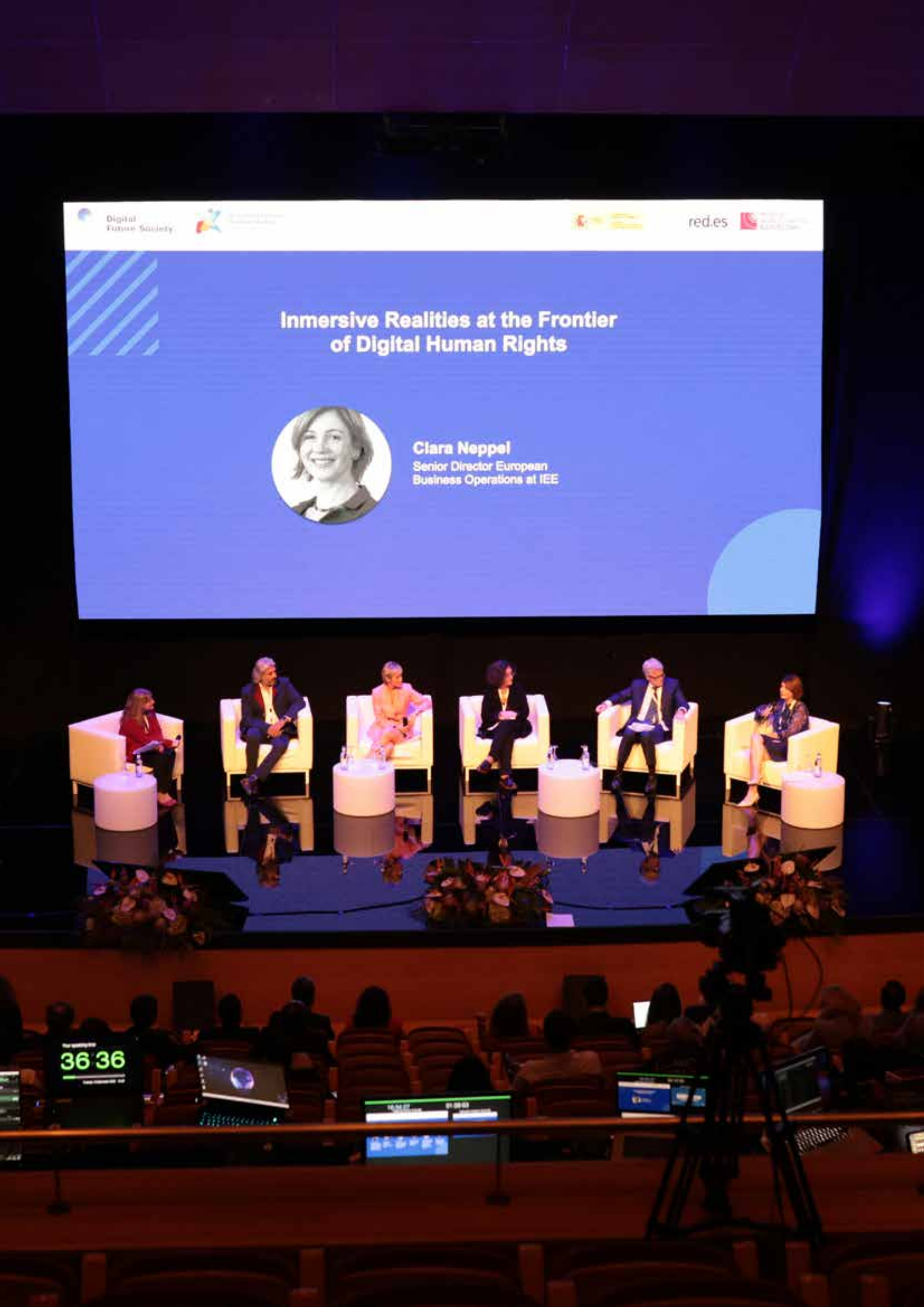
This is why Web 3, as a technology, is something that needs to be explored further, if the immersive worlds and metaverse realities are to be open and free from gatekeepers as in the way that is currently the case now on Web 2. Questions about ownership, property rights, and governance need to be addressed and a consensus must be built to define the common criteria for assessment that will help guide future advances. To make this a reality for everyone, there is a need to work together collaboratively, crossing cultural and intergenerational boundaries. The most important aspect is ensuring access to the new reality and opportunities for everyone.

Conclusions: writing a better future

The convergence of new digital technologies as well as new frameworks for digital ownership and personal representation in new immersive realities is opening up a variety of new possibilities. These include revolutionising and socialising health and social care provision, possibly to the extent that disease itself could become optional; the breakdown of historic structural inequalities; equitable representation; the augmentation of access to new forms of education and sources of income, and more.

However, the dangers of these new technologies can and should not be overlooked and must guide all efforts to build the new worlds that currently excite and tingle the minds of technologists. Ignoring these will further entrench the problems that afflict the world today and humanity will miss a historic second chance to build worlds founded on inclusive and equitable principles.

Here then, it is important to remember that the future is not written and that in fact, it is being written every day. With radical leadership and collaborative principles, there is no reason the opportunities on offer for tomorrow cannot be maximised by actions taken today.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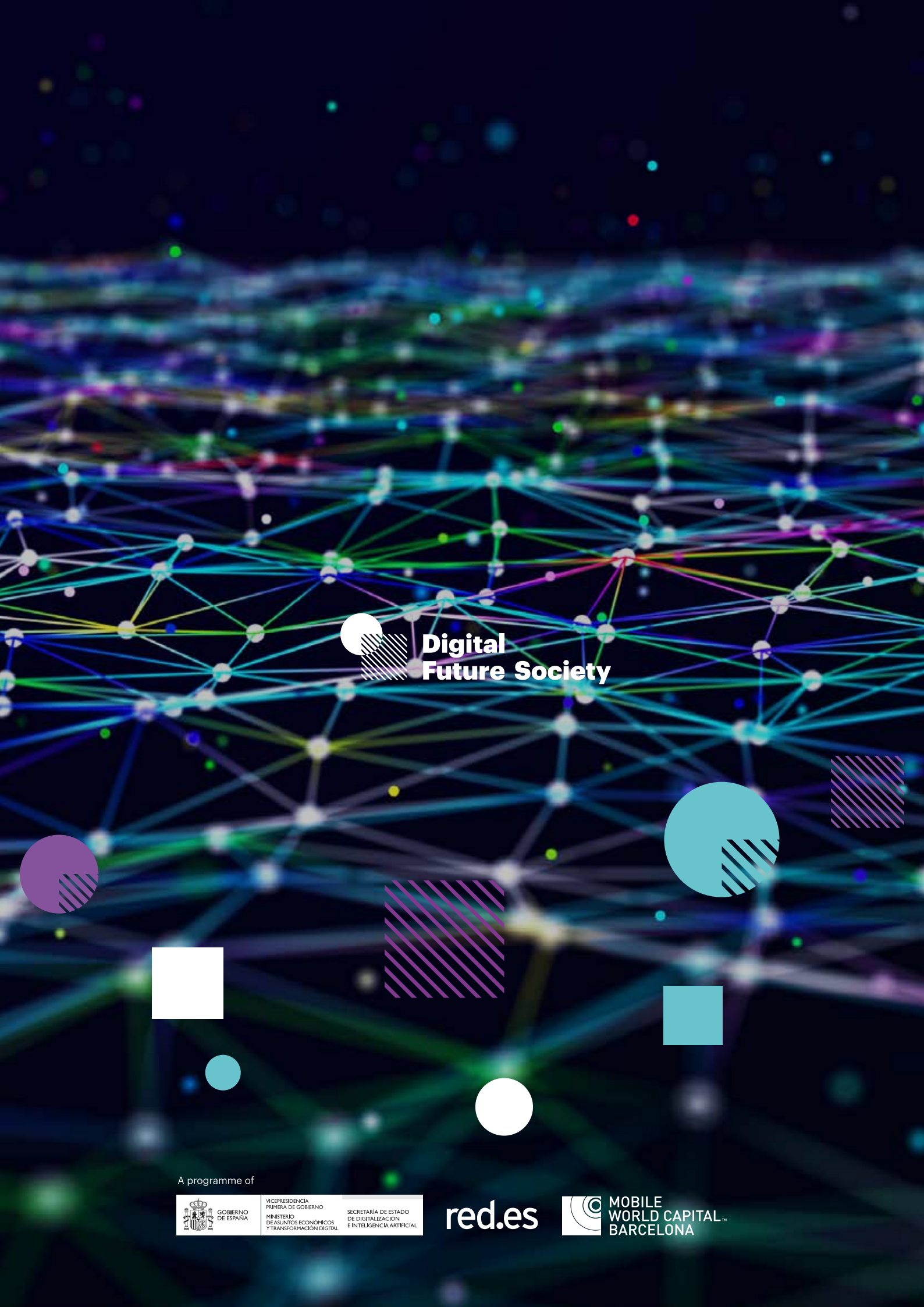

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