ADAN

Government Task Letter on Metavers

Adan's response

May 2022

Context of the mission

Ms Roselyne Bachelot, Minister of Culture, Mr Bruno Le Maire, Minister of the Economy and Mr Cédric O, State Secretary for Digital Transition and Electronic Communications, have drafted a task force letter with the objective of informing the government about the opportunities and challenges linked to the emergence of the metaverse.

This agglomeration of technologies carries the potential for a revolution in our daily activities, the full implications of which are still difficult to imagine. However, we must be able to anticipate it in order to support its development in accordance with the European vision and standards. This means taking full advantage of the opportunities offered by this innovation but also limiting the pitfalls as much as possible. This approach implies identifying all the impacts and interrelations of the problems linked to the metaverse in order to extract from these reflections the substance of what will constitute a major economic challenge.

It is in this respect that the Association for the development of crypto-assets (Adan) will explain in this document how the innovation of the metaverse is linked to the fact of being able to exchange value digitally, suggesting a great economic potential but also many questions that remain unanswered to date.

I.   Metaverse market opportunities

A.   How Metavers work

1.   First generation metavers: an ecosystem prior to Web 3.0 and blockchain networks

Definition. Metavers are fully virtual worlds adopted by communities of users represented as avatars who can move, interact and exchange digital objects.

The appearance of the metaverse predates the advent of the first crypto-assets. As early as 1992, Neal Stephenson's science fiction novel Snow Crash introduced two delivery drivers who travel through the metaverse to save themselves from a capitalist dystopia. Since then, the construction of this virtual universe has been subject to several attempts, and has been conceptualised by the developers of various successful video games: SecondLife, Roblox, Minecraft, Fortnite, Grand Theft Auto IV and V, Animal Crossing, etc.

They engage users in a closed network community, where the programmer imposes the goals of the metaverse, sets the rules of operation and can decide whether or not to evolve them.

Association pour le Développement des Actifs Numériques
44 rue de Cléry, Paris 75002
www.adan.eu • contact@adan.eu

2

2. Second generation metavers: the advent of Web 3.0 in the metaverse

Although the emergence of the metaverse did not coincide with Web 3.0, crypto-assets have enabled the emergence of a new, decentralised and lucrative form of the metaverse.

The development of the Web 3.0 metaverse offers a more immersive virtual experience and helps developers build communities based on the creation of digital value through crypto-assets.
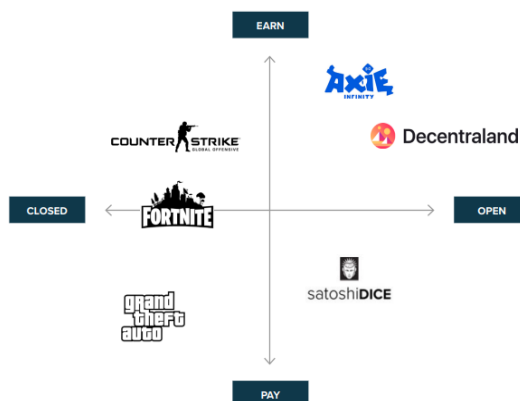
a) Web 3.0 fundamentally reorganises the functioning of the metaverse
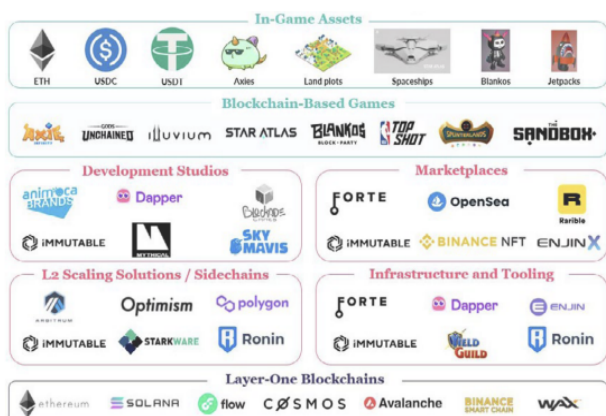
Decentralised organisation through its infrastructure. The governance of many Web 3.0 metaverse projects is based on Decentralised autonomous organisations (DAOs). On the metaverse, DAOs enable the various policies that govern the virtual world to be set and to evolve. In the Decentraland metaverse, for example, the DAO - run democratically by the holders of governance tokens - makes it possible to determine which objects are authorised or forbidden after its launch, the moderation of content, the policy, the organisation of auctions, etc.

Interoperability with other platforms. Ultimately, it is possible for a virtual object initially created on a metaverse platform to be transferred to another virtual world represented by another metaverse.

A new game mode based on crypto-assets: play-to-earn. An important part of Web 3.0 metaverse allows users to earn rewards in crypto-assets as they play and develop their avatars in the virtual world. On Axie Infinity - one of the largest play-to-earn metaverse projects - users can earn SLP tokens by completing their daily quests, by competing against other players in the arena or by playing in adventure mode, i.e. against the machine.

Association pour le Développement des Actifs Numériques
44 rue de Cléry, Paris 75002
www.adan.eu • contact@adan.eu

3

b) Une expérience utilisateur inédite basée sur de nouvelles formes d'interaction

● **A new form of ownership through non-fungible tokens (NFTs)**: an NFT can be defined as a unique token, certifying to its holder the ownership of an asset - either tangible (artwork, real estate and the like) or digital (collectibles, digital avatars, digital artworks and the like) - on the public registry of the blockchain. The NFT is usually accompanied by information about the author of the work, the previous owner and other more technical descriptions inherent in the underlying asset. On the metaverse The Sandbox, created by two French entrepreneurs, the LAND token is an NFT that is considered a property asset within the platform.

● **New means of digital exchange through fungible application tokens**: many metaverse projects have issued a fully fungible application token, used as a means of exchange between users of this virtual space. On The Sandbox, the fungible SAND token - an ERC-20 and consensus proof-of-stake token - allows players to :
- buy and sell the various assets available in the game.
- benefit from a backup of the token held thanks to the staking of this token;
- participate in the governance of the game via the DAO;
- acquire plots of land in the game and thus expand their domains.

● **Transferability of ownership and externalisation of tokens on marketplaces**: in contrast to first-generation metaverse - on which it is impossible to export one's avatars or other virtual objects (for example, in the game Minecraft, it is impossible to export one's creations on a marketplace since each creation remains blocked in the game) - metaverse from Web 3. 0 metaverse allow you to transfer your creations certified by non-fungible tokens (on the Ethereum network, this is an ERC-721 token, a token with a technical standard guaranteeing its uniqueness and indivisibility) to other NFT market platforms such as Opensea or Rarible.

Thanks to the protocol's native crypto-assets (SAND, MANA, AXIE, etc.) - used as a medium of exchange within metaverse - and the non-fungible tokens held in these virtual worlds, users can therefore buy and sell entirely digitised goods and services, opening up the field of possibilities of the digital economy.

Association pour le Développement des Actifs Numériques
44 rue de Cléry, Paris 75002
www.adan.eu • contact@adan.eu

4

B. Value of the metaverse

1. Use cases and perspectives

By creating more direct bridges between reality and the virtual world, the metaverse helps to overcome the obstacles of the real world but also those of the Internet as we know it today. These include the constraints of space and the finitude of resources in the terrestrial world, as well as the notion of ownership and the difficulties of exchanging value in the digital world.

The metaverse therefore proposes to create a new economy, in addition to that of the physical world. It is a question of replicating our daily activities in the digital sphere by implementing new uses and improving our experience, but also of creating new interactions, new economic models whose contours are still difficult to define.

For several months now, it is the use cases of the metaverse for events that have been in the news. From plays to sports competitions, via visits to monuments or museums, this innovation offers the possibility of freeing oneself from the constraints linked to reception capacity and physical distance. Facilitating access to cultural goods, metaverse are therefore part of a policy of democratising culture and offer major economic prospects for all of the related sectors. Encouraging this innovation on the territory would favour the export of Francophone culture, in the French-speaking world and beyond.

Ultimately, the theoretical limit of the metaverse is based on two elements: what it is possible to encode electronically and what arouses the interest of users. Indeed, on this last point, the industry will only develop if there is massive adoption by the population.

Work, which is one of the pillars of modern societies, plays a decisive role in this respect. The dynamics of digitisation have increased since 2020 and teleworking is becoming an integral part of our lifestyles, forcing us to rethink the social links in the business world. In this respect, several metaverse projects seek to recreate meeting spaces between augmented telework and a physical presence in the company. But beyond that, the metaverse proposes an economy of virtual creation based on incentives, where each contribution and/or online activity can be rewarded, leading to new remuneration models. It is therefore a new conception of work that is emerging with the metaverse: play more to earn more.

With more than 2.7 billion gamers worldwide, video games are a natural laboratory for metaverse innovation. This industry was already networking players around the world to collectively participate in a predefined activity. The metaverse allows it to go beyond and free itself from these limits. Users are now actors in the creation of a virtual world in which they can have relational exchanges, but also transactional ones. For example, where the purchase of equipment within the game was previously entirely centralised for the benefit of a production studio, in the metaverse, players can exchange them and make their own profit. A

Association pour le Développement des Actifs Numériques
44 rue de Cléry, Paris 75002
www.adan.eu • contact@adan.eu

5

new market is thus created around purely digital objects, which nevertheless retain an interest in the physical world in that the profits from the resale of an online good can be used in the real economy.

A metaverse based on a blockchain also provides new solutions to the question of remuneration of creations from the physical world. Staying in the field of culture, the advent of the Internet - allowing everyone to access a given content - has threatened the preservation of intellectual property and undermined the activity of many artistic professions. The emergence of streaming platforms has subsequently provided some answers to the digital transition of artists, but artists continue to denounce the inequitable distribution of income generated by the consumption of their work. This is the case for music listening, for example. The metaverse makes it possible to reverse this trend and give artists back control over their creation or, failing that, the producer or tour operator. Indeed, the blockchain registers on which crypto-assets such as NFTs circulate are unforgeable. They, therefore, prevent the duplication of the same transaction and, as such, guarantee the authenticity of a value and therefore the uniqueness of an asset. They, therefore, solve the problem of piracy of works in the digital sphere, thus making it possible to avoid certain frauds (SACEM, CNC, etc.) and to better identify authors in the event of a dispute. At the same time, they offer the possibility of exchanging ownership within this virtual universe. Moreover, the programmable nature of digital assets allows for the centralisation of royalties, and thus for artists to be better remunerated throughout the life of their work since the payment of a financial reward can be set for each new sale of the same asset.

Logically, the use of digital assets in the metaverse will also address the counterfeiting issues faced by brands, particularly in the luxury goods sector. The European Union Intellectual Property Office (EUIPO) estimates that counterfeiting costs France €6.8 billion and Europe €56 billion each year. Combined - via an NFT - with a secure and unforgeable unique digital identifier such as an AuthentikOne tag, luxury goods will be able to be traded with confidence by consumers, especially in the second-hand market. The innovation of crypto-assets also allows brands to track their products throughout their life cycle, whether they are purchased in the physical world or in the enhanced e-commerce of the metaverse. This is a significant asset for brands in a space where anyone can theoretically create without constraints.

Apart from goods, crypto-assets can be associated with a service or a right. This opens up many opportunities in a digital world, for example for governance in this virtual community, but also for access to certain benefits both in the metaverse and in the physical world. From then on, a significant improvement in the marketing communications of brands can be envisaged. They will now be able to study the behaviour of avatars, strengthen the proximity with their online customers and improve their interactions by rewarding, for example, users with tokens giving access to advantages in the real world.

Association pour le Développement des Actifs Numériques
44 rue de Cléry, Paris 75002
www.adan.eu • contact@adan.eu

6

Between economic opportunities and the emergence of a new form of competition, many industries will be forced to review their business model. This will be especially true as blockchain allows users to exchange value without traditional intermediaries. Real estate purchases within the metaverse are a good example. Users could technically become owners of a digital asset without the intervention of a notary and if it becomes necessary in the physical world to go through a blockchain, the transaction via metaverse of real estate assets would be facilitated. In addition, users could take out loans from other participants using decentralised finance platforms rather than a bank. It should also be noted here that a majority of metaverse based on blockchain networks propose that the unit of exchange circulating in their virtual economy should be a native crypto-asset, thus providing an entirely alternative payment system to those we know today.

To date, several metaverses are developing with models that are more or less different from each other. However, it seems unlikely that in the future everyone will be able to connect to a hundred different platforms to carry out their day's activities, making sure to use the corresponding crypto-asset each time. It is therefore reasonable to think that the metaverse capable of aggregating a maximum number of uses - by allowing applications to be grafted onto them but also by being interoperable - will be more likely to attract users and be adopted on a massive scale. This critical mass achieved by a few metaverses will further amplify the network effects that we know on the Internet. The metaverse project developed by Meta Platforms (formerly Facebook) should have a clear advantage in this respect, as the group's platforms already have 2.82 billion users every day. In the presentation of the Connect metaverse project, Mark Zuckerberg suggests a wide range of activities that will be offered: our avatars will be able to interact by reflecting on our expressions and emotions in real-time; work; play sports; have a social version of their habitat; learn a subject such as a history in an immersive way, etc.

2. Why are companies moving to the metaverse?

- Develop a new consumer experience adapted to the digital age;
- Create events by issuing new exclusive products that only metaverse users can benefit from;
- Have the possibility to collect targeted personal data on its users;
- Market digital products that give access to rights or advantages in the real world;
- Opening up to an international and potentially more liquid market;
- Create engagement with its community, including direct or indirect participation.

Association pour le Développement des Actifs Numériques
44 rue de Cléry, Paris 75002
www.adan.eu • contact@adan.eu

7

C. Current state of the metaverse market

1. Un marché naissant mais en pleine expansion

### a) La croissance des utilisateurs sur le métavers

The formalisation of Meta and Google's work in this area has led to a surge in the number of users on Web 3.0 metavers. According to a report by Grayscale, the rate of active metaverse users increased tenfold between the beginning of 2020 and June 2021.

For example, The Sandbox recently reached the 2 million registered user mark in the middle of its Season 2 Alpha launch.

b) Growth of native metaverse tokens

NFTs related to metavers:
The growing adoption of NFTs since 202 has also fuelled the recent growth of the metaverse "market.
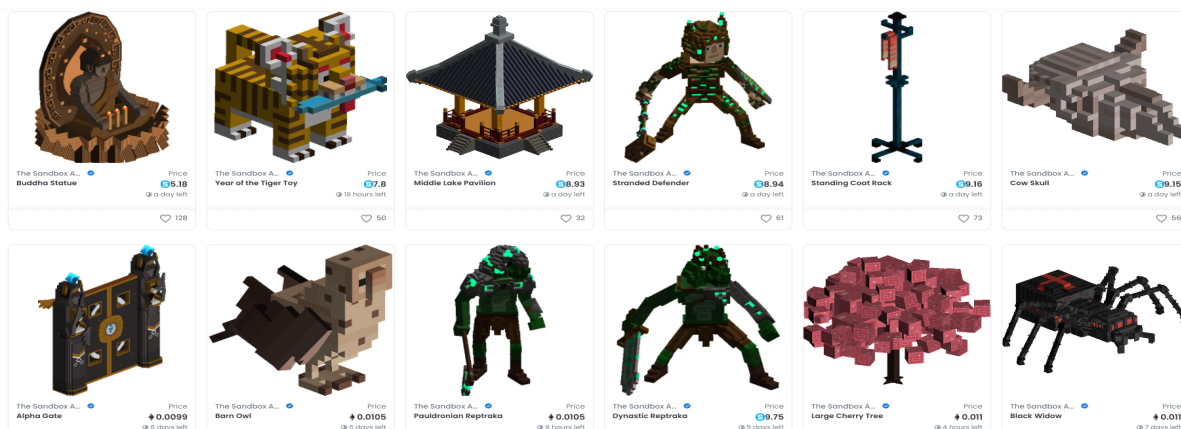
By 2022, the NFT market is already estimated to be worth $41 billion, with assets representing a variety of assets (art, collectibles, domain names, luxury, etc.). But the rise of NFTs within the crypto-asset ecosystem opens a much larger window of opportunity for metavers. Indeed, platforms allow their users to develop new objects exclusive to this digital world, and NFTs offer the possibility to value and then monetise these creations. This is precisely what The Sandbox offers to its users thanks to VoxEdit, a software that allows them to create three-dimensional images that can be directly marketed in the game. In the future, it could also be a question of revitalising editorial styles in existing industries by, for example, bringing together foreign artists and producers who would have found it more difficult to meet in the physical world. The market potential linked to these creations is enormous in this respect and

Association pour le Développement des Actifs Numériques   8
44 rue de Cléry, Paris 75002
www.adan.eu • contact@adan.eu

will eventually require the deployment of a stable and codified legal framework for multimedia works.

Utility tokens linked to the metaverse:

Application tokens used as a means of exchange on the metaverse have also experienced remarkable growth. The value proposition of these tokens for everyday transactions in these virtual worlds has led to an increase in their valuation in the cryptoasset market in the last half of 2021.

Unit price of SAND, the application token of The Sandbox metaverse

Unit price of MANA, the application token of the metaverse Decentraland

Association pour le Développement des Actifs Numériques
44 rue de Cléry, Paris 75002
www.adan.eu • contact@adan.eu

9

2. Major 'traditional' companies are attracted to the metaverse

The bank explained that the plot purchased on The Sandbox will be developed to interact and connect with sports, e-sports and video game fans.

Manchester City has partnered with The Sandbox metaverse to create digital links between the club's fans around the world.

Eager to offer its talent the opportunity to come together in this new virtual world and explore its uses, AXA has secured a plot on The Sandbox metaverse.

Following the publication of its metaverse report, JP Morgan Bank unveiled its new parcel in the Decentraland metaverse.

Casino Group recently announced that it has purchased plots in The Sandbox metaverse for the purpose of offering promotions and vouchers for use in the real world.

Ubisoft announced that it has purchased several parcels in The Sandbox metaverse in order to bring its intellectual property into the virtual world and offer new gaming experiences to its users.

Gucci announced that it has purchased a parcel of land on The Sandbox metaverse to offer its customers new experiences in a digital format.

Carrefour has also orchestrated its transition to the metaverse by purchasing the equivalent of 30 supermarkets on The Sandbox.

While it is still unclear how brands plan to embrace metaverse innovation beyond diversified modes of engagement, they all seem determined to seize the opportunity to explore new use cases related to this emerging digital world for consumers.

Association pour le Développement des Actifs Numériques
44 rue de Cléry, Paris 75002
www.adan.eu • contact@adan.eu

10

II. Key issues of the metaverse

A. Risks related to the metaverse

Metavers have a range of risks to consider.

Technological risks

Interoperability issues are already appearing on the metaverse. Beyond the internal connections to a given universe, specialists are wondering how it will be possible to interact from one platform to another. At present, the different technological bricks on which these virtual universes are based are not interoperable, yet connections between two metavers would provide a higher level of user experience. These developments are therefore to be expected in the years to come and will require both the coordination of teams of developers from different platforms and the adoption of common standards.

Risk to monetary sovereignty

The question of payments in metavers will be decisive. In the context of monetary exchanges, it will be necessary to study the possibility of integrating wallets into the platforms to manage crypto-assets. From then on, the question of the type of crypto-assets allowed in circulation will arise.

Also, as decentralised metavers are not tied to a jurisdiction, they cannot be constrained by a central bank. Some could then limit the number of currencies that can be used in their universe. The possibility of using FIAT currencies or crypto assets should therefore vary according to the rules established by each platform. This would change the relationship between FIAT currencies and cryptocurrencies.

Cybersecurity risks

The cybersecurity risks linked to the connection between different platforms and social networks present critical issues (password theft, espionage, taking control of automated data processing systems, access to bank accounts, etc.). A technical flaw would potentially give access to a large amount of data, including the most sensitive data, shared by users via their evolution on the platform.

As soon as crypto-assets are used as a unit of exchange, the question of the conservation and security of the assets held in the users' wallets would also arise. The potential hacking of a platform that manages the storage or exchange of crypto-assets would have relatively serious consequences. The recent attack on the Ronin network is evidence of this. The potential exchange of NFTs adds a level of complexity that raises the fear that, in addition to classic usurpation and the sale of fake tokens, bots could be used to manipulate market prices.

To answer these questions, it will be necessary to take into account the level of centralisation of the platforms, which is a determining factor in most of the problems mentioned here. Developers of metavers will need to surround themselves with specialists in cryptoasset security, as a fallible system would represent a prime target for malicious attackers. An

Association pour le Développement des Actifs Numériques
44 rue de Cléry, Paris 75002
www.adan.eu • contact@adan.eu

11

exchange of skills within institutions will also be necessary, for example by associating the French National Agency for Information Systems Security (ANSSI) for better consideration of these issues. Users will also have to be trained in securing their assets, which is a corollary of eliminating intermediaries.

Competitive risks

On the Internet, the hegemony of certain players now allows them to set the rules of the economic, geopolitical and even socio-cultural game. The effects of networks lead to the emergence of "winner takes all" phenomena, i.e. the dependence of the entire economic fabric on the said "gatekeepers". Without these players, it becomes difficult, if not impossible, to operate, and they sometimes exert unfair competition. The host countries of these giants are the receptacles of economic spin-offs that allow them to shine globally by asserting their political influence.

In addition, there is the issue of information exchange, particularly in the context of selling products and services in the metaverse and/or in the real world, raising fears of anti-competitive practices such as cartels.

These issues, as well as all the competition issues encountered in the mobile application ecosystems, will be transposed to the metaverse. The possibility of applying the Digital Services Act and the Digital Market Act in these virtual worlds will therefore have to be studied and the advisability of extending these European regulations assessed.

Risk for the protection of personal data

Metavers appear to be universes that facilitate the collection of multiple data. By consuming on the metaverse, individuals will be led to transmit more and new types of personal data to sellers. This virtual world helps to bring together information from disparate activities and thus to draw up a precise profile of the user, based on concrete behaviours, making it possible to send him or her increasingly targeted advertising.

This information can also be combined with information collected without the user's knowledge in the real world, using sensors and microphones. The detection of facial expressions, the creation of avatars that reproduce human features, and real-time monitoring of consumer movements in the image of Chinese cameras in shopping malls to anticipate the customer's journey are particularly worrying examples of what could happen.

A fortiori, if Meta or other metavers intend to develop a headset combining augmented reality, eye-tracking and facial recognition, this could involve large-scale processing of biometric data considered sensitive within the meaning of Article 9 of the GDPR. This is a major risk.

As such, the question of the number and type of data that can be collected, but also that of their archiving and retention must be raised. Systems will have to be designed so that personal information can be owned and transmitted without disclosing all of it, and a decentralised digital identity through the blockchain may prove useful for users and the ownership of their data. It is worth noting that companies are emerging to enable them to monetise their data themselves on this basis. This is likely to challenge the GAFAM business model.

Association pour le Développement des Actifs Numériques
44 rue de Cléry, Paris 75002
www.adan.eu • contact@adan.eu

12

However, the importance of educating users, and in particular the youngest, seems imperative. They must be aware of the concrete impact and footprint that their actions will leave in this virtual world.

Risk of addiction

Most metaverse are presented as virtual universes in permanent evolution. The user can disconnect, but the ecosystem of the metaverse will continue to evolve in his absence: we speak of a persistent world. We can therefore fear the development of certain forms of dependency, particularly among the youngest users. A difficulty in getting out of the game, interwoven with many biases affecting human beings.

B. Legal issues related to metavers

1. Protection of personal data

As mentioned above, the question of the protection of users' personal data will be a major issue in the metaverse. An adaptation of the RGPD should be necessary to be able to integrate the specificities of the digital worlds.

From the point of view of data processing, it will be necessary to define whether the metaverse operator is acting as a data controller or as a data processor. Guidelines may be issued to clarify this issue. As regards cybersecurity, it could be envisaged that operators be subject to an obligation of means - for example, to set up an Operational Security Centre, to have a team of moderators, etc. - while retaining the principle of liability. - while retaining the principle of individual responsibility.

Coordinated work between the National Commission for Information Technology and Civil Liberties (CNIL), the Audiovisual and Digital Communication Regulatory Authority (ARCOM), the General Directorate for Competition, Consumer Affairs and Fraud Control (DGCCRF) and the Online Gaming Regulatory Authority (ARJEL) on the subject seems relevant. An appropriate regulatory framework will be essential to protect consumers without stifling innovation.

2. The protection of intellectual property rights: copyright, of course, but also design rights and trademark rights.

Those who offer their products within the metaverse will have to obtain all the necessary rights to the goods reproduced in this new universe. Thus, the creation, exploitation or resale of NFTs inspired or derived from pre-existing intellectual creations in the real world and without the authorisation of the rights holder, will be liable to be qualified as counterfeiting.

Association pour le Développement des Actifs Numériques
44 rue de Cléry, Paris 75002
www.adan.eu • contact@adan.eu

13

Similarly, the wording of trademarks will have to incorporate the meta-verse as a new distribution medium, so that the marketing of the corresponding products can take place without legal difficulties.

Furthermore, in view of the new forms of remuneration involved, particularly for artists, it will be useful to amend the Intellectual Property Code on the procedures for collecting and distributing copyright. The links with collective management societies will thus have to be questioned. The same goes for the global licence, which should be reassessed after 15 years. Finally, the short quotation of a work in the context of a metaverse will have to be addressed.

In the case of video games, metavers using NFTs propose to solve the technical problem of selling assets acquired through social gaming. From a legal point of view, it will therefore be a matter of adding a 15th paragraph to Article L112-2 of the Intellectual Property Code relating to artefacts created on the metaverse.

Going further, it is the very qualification of the author that deserves to be clarified in the context of a purely digital creation in the metaverse. Indeed, as the artefact created is in fact limited by the platform's parameters, it is legitimate to question the originality of the work and the potential de facto co-creation between the author of the digital work and the author of the initial graphic elements.

Finally, as regards infringement, the position of the operator will again play a major role. In the event that a judgment is rendered and a seizure is made, it will be necessary to consider who is the subject of the seizure. The approach of the European DSA and DMA texts suggests that platforms would be deemed to be liable and therefore exposed to attachment. However, how to issue the summons when the operator is established abroad or, when it is decentralised, without representation by a legal entity? New channels of seizure will therefore have to be considered in parallel with jurisdictional agreements, potentially under the aegis of the World Intellectual Property Organisation (WIPO).

Furthermore, in view of the audiences in the metaverse, can we consider that a work is necessarily copied throughout the world via an irrefutable presumption?

In this global context of ownership, the blockchain alone does not constitute sufficient evidence to order the return of a property declared stolen. Eventually, it will be necessary for the blockchain to constitute legitimate and official written proof of ownership, which can be consulted by the police and/or the courts. The courts will also need to be trained to access this information.

3. Commercial law

As mentioned above, the metaverse is popular with retailers who wish to offer products and services alongside platform-native artefacts. This raises the question of the secondary market within the metaverse, and therefore of the framework for trade in this universe.

Should virtual companies be created and on what basis will they be defined? Will companies have to be registered (compulsorily) in the Trade and Companies Register in the metaverse? Will it be necessary to create a virtual commercial code specific to these universes or to refer

Association pour le Développement des Actifs Numériques
44 rue de Cléry, Paris 75002
www.adan.eu • contact@adan.eu

14

directly to the general terms and conditions of sale, service and use of each metaverse platform?

4. Real estate law and tax law

a) Real estate law

The question is how virtual real estate law will be constructed. If real estate is purely virtual, it is not appropriate to transfer the complexity of traditional real estate law to the digital world. Will the notary still be present? How will the land register materialise on the metaverse? Will it be preferable to opt for the approach taken for digital models (BIM) in construction?

Furthermore, one of the obligations of ownership and property transfers is the obligation to pay taxes. What about virtual transfers?

b) Means of payment and taxation

Insofar as the property held in a metaverse associated with a blockchain is valued by a digital asset specific to the metaverse, how should taxation be considered? Should the regime applicable to digital assets be retained or that applicable to the underlying good or service (shoe / real estate / etc.)? More broadly, how is income generated on the metaverse and used on the metaverse to be apprehended, from the moment it is not liquidated and collected in the hands of taxpayers in fiduciary money? What difference does it make if the asset exists only on the metaverse, or if it is linked to an asset that exists in the physical world?

To date, Article 150 VH bis of the General Tax Code provides that the transfer by individuals of digital assets for other digital assets is not taxable. Therefore, can we consider that all purchases and sales in the metaverse, using digital assets, are not taxable events? If these exchanges were subject to tax, what would be the valuation used?

In addition to these questions, there are the tax consequences linked to the notion of territoriality in the metaverse. Indeed, which tax law applies to sales in the metaverse? What impact does this have on an e-commerce activity? Should VAT be added or not? The nature of the buyer also plays an important role. Is the person to whom you are selling taxable or not? How do you go about getting to know your customers? In addition, there are more practical questions such as whether or not businesses in the metaverse need to have cash register software as in the physical world.

All these questions will probably have to be the subject of international negotiations.

Association pour le Développement des Actifs Numériques
44 rue de Cléry, Paris 75002
www.adan.eu • contact@adan.eu
15

c) Legal definition of NFTs

Whether or not NFTs should be included in the definition of digital assets is a decision with major consequences in this new economy, particularly in terms of taxation.

In France, Article 552-2 of the Monetary and Financial Code defines a token as "any intangible asset representing, in digital form, one or more rights that can be issued, registered, retained or transferred by means of a shared electronic recording device enabling the owner of the asset to be identified, directly or indirectly". This definition, which makes no mention of the notions of fungibility or unit of account, seems at first sight to cover EFNs. However, such an approach is fraught with difficulties that experts are still struggling to untangle.

The current debates at European level, in the context of the review of the MiCA (Markets in Crypto-assets) Regulation, will be a crucial step in the legal approach to the sector.

d) Corporate tax

In the case where the platform is a decentralised autonomous organisation (DAO), it seems legitimate to ask whether the company is liable for corporate tax, and if so, in which jurisdiction? In the case where the goods and services sold have a physical form, the question does not pose any particular difficulty. However, if the goods and services are intangible, determining the applicable tax law is a perilous exercise.

The problem becomes even more complex if the company with a shop in the metaverse is itself a DAO.

In the event of tax fraud, how can an individual portfolio be seized without an intermediary? If we consider that the platform is responsible, the problem of tax harmonisation will not be resolved.

The notion of territoriality in the metaverse will also raise more practical questions such as whether or not to declare the exchange of goods or services, especially when the company or shop also exists in the physical world.

e) Criminal law

Criminal law is consubstantial with two major principles:

The principle of the legality of offences and penalties, which requires that no one can be punished for a crime or for an offence whose elements are not defined by law; and

Association pour le Développement des Actifs Numériques
44 rue de Cléry, Paris 75002
www.adan.eu • contact@adan.eu

16

The principle of strict interpretation of criminal law, so that if the offence is not precisely defined, it is not applicable.

Consequently, the question arises as to whether criminal law should cover real-world offences in the metaverse: rape or touching via a headset and, in the future, physical sensors. Attacks on virtual people could otherwise be dealt with by the offence of street harassment in the virtual world, with a procedure to be put in place by the owner of the metaverse. As metavers are virtual and digital worlds, it is also possible to consider linking this type of offence to Articles 323-1 and 323-3 of the Criminal Code, relating to the use of automated data processing systems.

Finally, there is the question of criminal offences that do not yet exist but that will have to be created, such as the theft of virtual assets.

In all of the above cases, the backing of the metaverse with blockchain technologies will make it easy to verify the materiality of the facts. The legal challenge therefore lies in accepting this traceability as perfect proof.

~

Association pour le Développement des Actifs Numériques
44 rue de Cléry, Paris 75002
www.adan.eu • contact@adan.eu

17