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# The Metaverse

## Accounting Considerations Related to Nonfungible Tokens

### Background

The metaverse has recently drawn a lot of excitement and headlines, but what is it really? The concept has actually existed for decades — it is an immersive digital environment that allows users to interact with their surroundings and one another in a shared space. Early metaverses were primarily related to online gaming activities in which users had limited rights on platforms. Enabled by other maturing and converging technologies, the next evolution of metaverses holds the promise of a transformational shift that unlocks value for users and platforms alike.

This future state will be empowered by digital economies that offer enhanced and immutable rights for users while providing new opportunities for companies to engage with their customers and generate new revenue streams. Users may have true ownership over their in-game items and the ability to monetize their property and transfer value off platform. For example, if a user owns a plot of virtual land with a right of use on platform, he or she could allow another party to hold a virtual concert or sell the rights to the virtual land in exchange for digital assets or fiat currency.

Such an enhanced user experience could shift demand for digital goods and services from traditional companies. For example, a retail shoe company could enter an entirely new market and sell its branded digital shoes in a metaverse. In a manner similar to how they try on clothes in the physical world, people may dress their digital “selves” (i.e., their avatars) as a means of self-expression and functionality in a metaverse as they explore and interact. Perhaps the shoes are especially fashionable and exclusive, or offer additional utility by allowing the avatar to run faster or jump higher. The prospect of making high-margin digital

sales while expanding brand presence may be enticing for companies facing saturated and competitive physical markets.

The metaverse does not have to be an entirely separate space. Indeed, it can potentially link physical and digital worlds. The endless scrolling of current online shopping could be replaced with an immersive and engaging experience. Imagine strolling into a digital store where the trendy ambience and music match the brand's style. You select a shirt to try on and watch your avatar wear it down the runway toward you. The avatar matches your exact dimensions and looks just like you. You decide that the shirt looks a little large and adjust one size smaller to see whether it fits better. It looks great — and after a couple of clicks, the real-world version of the shirt is on its way to your home.

There are numerous ways in which companies could use the metaverse as a part of their business strategy. The future state of the metaverse that holds this vast potential will take time to evolve and mature, but we are already seeing early adopters forge ahead. One day, we could see interoperable metaverses that use Web3 applications and leverage augmented reality (AR) and virtual reality (VR) technologies to blur the lines between the physical and digital worlds.

While we are just beginning this journey, these new digital economies are already raising some interesting accounting questions, particularly for blockchain-enabled metaverses. One effective medium for transacting in a digital world is nonfungible tokens (NFTs), units of data stored and transferred on a digital ledger (i.e., a blockchain) that each represent a unique digital item and therefore are not interchangeable. They can represent rights associated with digital files such as art, audio, videos, items in video games, and other forms of creative work. NFTs can also provide other rights, such as ownership of virtual land or even real-world assets and services. NFTs give users true ownership over their entitlements and enable them to monetize and transfer value.

Because NFTs are becoming an increasingly important aspect of users' experiences in a blockchain-enabled metaverse, they are the focus of the accounting considerations discussed below.

## Accounting Considerations

The first step to grasping the accounting implications of transactions that involve NFTs is fully understanding the rights represented and what has actually been transferred. This is critical to determining the appropriate accounting treatment, including the applicable accounting guidance.

### Issuer's or Developer's Accounting for NFTs

Some of the accounting considerations for issuers or developers of NFTs in a metaverse are similar to those for traditional gaming companies (e.g., sales of virtual items that are consumable or durable) and hardware manufacturers (e.g., sales of headsets or glasses for AR/VR experiences). However, the nature of NFTs sold in a metaverse poses unique accounting challenges. The discussions below highlight common accounting considerations for companies that issue or develop NFTs.

### Revenue Recognition

Companies that issue or develop NFTs for a metaverse may conclude that their arrangements to sell NFTs are subject to the revenue guidance in ASC 606.<sup>1</sup> A company's arrangement to sell an NFT will generally be within the scope of ASC 606 if it represents a contract with a counterparty that obtains an NFT in exchange for consideration and the NFT is an output of

<sup>1</sup> For titles of FASB Accounting Standards Codification (ASC) references, see Deloitte's ["Titles of Topics and Subtopics in the FASB Accounting Standards Codification."](#)

the company's ordinary activities. In addition, if the arrangement is within the scope of ASC 606, the company will need to make a determination of when a contract exists by assessing various criteria, such as whether there are enforceable rights and obligations and whether the consideration is collectible. For further guidance, see [Chapters 3 and 4](#) of Deloitte's Roadmap *Revenue Recognition*.

Some rights associated with NFTs may not be subject to the guidance in ASC 606. For example, a company may sell an NFT that does not provide the purchaser with any ownership or license rights to the underlying intellectual property (IP). Rather, the company may retain all rights to the IP and only sell to the purchaser a right to future revenue streams associated with the IP. For instance, the company may own music rights and sell an NFT that provides the purchaser with a percentage of the royalties that the company earns on those music rights. In this circumstance, the company must carefully evaluate whether the transaction represents the sale of future revenue that is subject to the guidance in ASC 470.<sup>2</sup>

## Performance Obligations

The rights attached to NFTs may include multiple promised goods and services. Companies that sell NFTs will need to evaluate whether those promised goods and services are separate performance obligations. Identifying performance obligations is critical because a performance obligation is the unit of account for which revenue is recognized, which could affect the timing of revenue recognition.

For example, a company may sell an NFT in a metaverse that represents the user's digital rendering of its avatar. That NFT may provide the user with various digital rights, including free digital collectibles, loyalty rewards, enhanced gaming experiences, and VIP access to events in the metaverse (e.g., virtual concerts). Some NFTs may also convey a right to a tangible good, such as a luxury bag or pair of sneakers. Because there are multiple promised goods and services, the company must determine whether each promised good or service is distinct and therefore a separate performance obligation.

If multiple performance obligations are identified, the company will generally need to determine their respective stand-alone selling prices (SSPs) and allocate the transaction price on the basis of those SSPs. Determining SSPs can be challenging, particularly when selling NFTs in a metaverse is a new business model for the company. The company will also have to assess how control of each performance obligation is transferred to the customer (i.e., at a point in time or over time) to determine the appropriate timing and pattern of revenue recognition. For example, revenue related to a performance obligation that represents a license to functional IP may be recognized at a point in time, whereas revenue related to a performance obligation that represents a hosting service or gaming experience may be recognized over time.<sup>3</sup>

For further guidance, see [Chapters 5, 7, and 8](#) of Deloitte's Roadmap *Revenue Recognition*.

## Transaction Price

A company that sells an NFT to a customer may charge a fixed fee for that NFT. However, the customer may also be required to pay variable consideration (e.g., usage-based fees). In addition, if the customer has the right to sell the NFT (whether on or off platform), the company that originally issued or developed the NFT may be due a royalty upon each sale. Therefore, the total transaction price for an NFT may include various payment streams. Variable consideration is generally estimated up front and is subject to a "constraint" to ensure

<sup>2</sup> Further, digital assets vary in complexity and may contain features that are not subject to the guidance in ASC 606. For example, certain digital assets may represent or include financial instruments that are subject to the guidance in ASC 815 or ASC 860. This publication does not address all features that may exist in an NFT and therefore does not discuss all accounting guidance that may apply.

<sup>3</sup> If a company provides storage or custodial services for its customers' NFTs, it should also consider the applicability of the guidance in [SEC Staff Accounting Bulletin No. 121](#).

that it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur. However, there are certain exceptions in ASC 606 that would not require the company to estimate variable consideration at contract inception. Further, the company may receive crypto-assets or other digital assets in exchange for the NFT rather than fiat currency. In those circumstances, the company would be required to measure any noncash consideration at its estimated fair value at contract inception. For further guidance, see [Chapter 6](#) of Deloitte's Roadmap *Revenue Recognition*.

## License of IP

Many NFTs do not transfer control or ownership of the underlying IP but grant the purchaser a license to it. For example, a company may retain ownership of digital art and grant a purchaser of an NFT an exclusive license to use and display such digital art. In this circumstance, the company should consider the supplemental guidance in ASC 606 that addresses the licensing of IP. For further guidance, see [Chapter 12](#) of Deloitte's Roadmap *Revenue Recognition*.

## Principal-Versus-Agent Considerations

Sometimes an intermediary is involved in the sale of NFTs. For example, NFTs that are collectibles may be sold by companies in off-platform marketplaces. When more than one party is involved in providing an NFT to an end customer, the parties must determine which party controls the NFT before it is transferred to the end customer.

If the company that issues or develops the NFT controls the NFT before it is transferred to the end customer, the issuer or developer is the principal in the transaction with the end customer, recognizes revenue on the basis of the gross amount paid by the end customer, and separately recognizes the cost of the amount paid to the marketplace for facilitating the transaction. Because the marketplace does not obtain control of the NFT before the NFT is transferred to the end customer, it is an agent in the transaction and recognizes revenue on the basis of the net amount retained.

By contrast, if the marketplace obtains control of the NFT before the NFT is transferred to the end customer, it is the principal in the transaction with the end customer, recognizes revenue on the basis of the gross amount paid by the end customer, and separately recognizes the cost of the amount paid to the issuer or developer for the NFT. In this case, the issuer or developer is the principal in the transaction with the marketplace (i.e., the customer of the issuer or developer is the marketplace rather than the end customer) and recognizes revenue on the basis of the amount received from the marketplace (not the gross amount paid by the end customer).

A company that develops and operates a metaverse may also offer third-party creators (who may also be users in the metaverse) the ability to develop and sell their own NFTs. The same principal-versus-agent considerations described above would apply to the company that offers a creator economy.

For further guidance, see [Chapter 10](#) of Deloitte's Roadmap *Revenue Recognition*.

## Development Costs

In addition to determining the appropriate accounting for the sale of NFTs, companies that develop NFTs must determine the appropriate accounting treatment for development costs incurred, including which accounting guidance to apply. Depending on the applicable accounting guidance, those costs may be (1) capitalized or deferred on the balance sheet or (2) expensed as incurred. Therefore, a company that develops NFTs in a metaverse will need to understand the underlying IP being developed, the rights that will be conveyed to the purchaser, and the nature of the costs incurred. Because an NFT typically conveys digital rights rather than tangible property, the development costs will most likely not be subject to the

inventory guidance in ASC 330. Instead, much of the development costs may be associated with developing software.

If development costs are software costs and the purchaser of the NFT will obtain possession of the software, the software development costs are subject to the guidance in ASC 985-20. Under ASC 985-20, most software development costs are expensed as incurred because such costs are considered research and development expenses until technological feasibility is established. Because technological feasibility is typically established late in the development cycle, often very little is capitalized.

On the other hand, it is possible that the purchaser lacks the ability to take possession of the software and that the developer of the NFT will host the software on its own platform. For example, an NFT may give the purchaser the right to virtual items in a metaverse that are only accessible online and hosted by the developer. In that circumstance, the software development costs for those virtual items are subject to the guidance in ASC 350-40. Under ASC 350-40, certain software development costs incurred during the application development stage are capitalized. Because the application development stage typically occurs before technological feasibility is established, more software development costs tend to be capitalized under ASC 350-40 than under ASC 985-20. For further guidance on scope considerations related to the accounting for software and software-related costs, see Deloitte's June 2020 [\*Technology Spotlight\*](#).

## **Investor's or Purchaser's Accounting for NFTs**

Today, most investors in NFTs are individuals. However, companies have begun exploring investments in NFTs, including ownership of virtual land in metaverses. Like an NFT issuer or developer, an NFT investor or purchaser must determine the nature of the rights the NFT conveys to determine the appropriate accounting treatment. For example, the NFT may convey the right to a plot of virtual land in the metaverse that, like other digital assets, would generally be subject to the guidance in ASC 350 rather than ASC 360.<sup>4</sup> Because of the unique nature of the NFT, it may be difficult for the investor or purchaser to determine (1) whether the asset should be amortized and, if so, over what estimated life; and (2) whether the asset is impaired and, if so, by how much. In addition, the investor or purchaser may receive a bundle of rights with the purchase of the NFT, such as a right to physical goods (e.g., branded clothing or physical artwork), entrance to a virtual concert, lifetime membership to an elite club, and other items that could include services to be received in the future. The transaction price paid by the investor or purchaser would typically need to be allocated to the multiple elements acquired on the basis of their fair values, which, like the SSPs that an NFT issuer or developer uses to allocate the transaction price to multiple performance obligations, may be challenging to determine. Further, the investor or purchaser would have to evaluate the nature of the underlying rights acquired to determine which accounting guidance to apply to each right. For example, if the investor or purchaser pays up front and will receive services in the future (e.g., hosting of virtual items associated with the NFT, gaming experiences), the allocated cost may represent a prepaid asset.

## **Looking Ahead**

As the metaverse evolves, the accounting issues may likewise change. The accounting considerations for transactions in the metaverse can be complex, and the appropriate treatment will depend on the specific facts and circumstances.

<sup>4</sup> This publication does not address accounting considerations for companies that apply specialized industry guidance, such as that in ASC 940 or ASC 946.

## Where to Find Additional Information

For more information about NFTs, see Deloitte's *Corporates Using NFTs: How NFTs Might Fit Your Business and What to Watch For*.

If you have questions about accounting issues related to the metaverse, please contact any of the following Deloitte professionals:

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