**NFT Key Points**

1. NFTs are different from ERC-20 tokens, such as DAI or LINK, in that each individual token is completely unique and is not divisible.
2. NFTs give the ability to assign or claim ownership of any unique piece of digital data, trackable by using Ethereum's blockchain as a public ledger. An NFT is minted from digital objects as a representation of digital or non-digital assets
3. NFTs are minted through smart contracts that assign ownership and manage the transferability of the NFT's. When someone creates or mints an NFT, they execute code stored in smart contracts that conform to different standards, such as ERC-721. This information is added to the blockchain where the NFT is being managed.

**NFT Use Cases**

**Art**

Without a doubt the recent surge of interest in NFT’s during early 2021, has largely been driven by digital art NFT’s.

In 2014, New York artist [Kevin McCoy’s *Quantum*](https://www.mccoyspace.com/project/125/) *is widely recognised* as the first piece of art created as an NFT. However it was only during early 2021 that art NFT’s started to gain significant attention and by the end of 2021, nearly [£31b had been spent](https://www.paymentscardsandmobile.com/state-of-the-blockchain-nfts-explode-onto-scene-in-2021/) on NFT purchases, a considerable and exponential growth given [2020 sales of ~£71m](https://raritysniper.com/news/nfts-exploded-in-2021-with-25-billion-in-sales/)

High profile digital artists such as *Beeple* whose [recent recording break sale](https://www.forbes.com/sites/abrambrown/2021/03/11/beeple-art-sells-for-693-million-becoming-most-expensive-nft-ever/?sh=3f237d1c2448) of his NFT *“The first 5000 days”* at Christies (a long established British auction house, specialising in high profile precious work of art) for £52.9m helped bring NFT’s into the public spotlight and wider give them global attention.

Art as NFT’s offer the following advantages:

* 1. **Proof of ownership/creation:** At its most basic level, once a work of art is ‘minted’ (publishing the art work as a unique token on the blockhain) this function as a proof of ownership and by extension proof of creation.
  2. **Secure Digital Provenance** Tracking ownership and reselling of art; [Provenance](https://en.wikipedia.org/wiki/Provenance) (or the chain of custody) now no longer becomes a *detectives game* or open to fraud or misinterpretation, since provenance can increase the value of a piece of art (benefiting both the creator and collector) the use of the blockchain as an open, secure ledger is a far more trustworthy system than traditional methods of artistic provenance that were cobbled together (often consisting of documents spanning private & public sale receipts, art/museum gallery exhibitions and private record keeping). Digital provenance provided when an artist mints a piece of art into an NFT allows artists and collectors to
  3. **Decentralised automated royalty payments**: If a work of art is minted into an NFT and artist’s royalty payments can be predetermined and automated in perpetuity via smart contracts. Once the royalty payment rate is set by the artist/creator, future royalties of all sales can be paid directly to the artist/creator account (via a digital wallet) without the need of a third party (traditionally a gallery/agent etc..). The first sale of a piece of art would often (but not always) benefit (financially/critically) the artist, however secondary and subsequent sales would historically only ever financially benefit the collector; the original artist would rarely benefit. However the use of smart contracts NFT smart contracts means that even if piece of art is resold 5, 10 or even a 100,000 times moving through 5, 10 or even a 100,000 different collectors; a pre-determined royalty payment rate set by the creator would still guarantee the artist/creator is paid directly from each and every future sale. If one considers that historically provenance for works of art can spans generations, then NFT smart contracts hold an incredibly potential i.e and artists descendants financially benefit directly from the resale of a piece of work long after the artist/museum’s/gallery have turned to dust as long as the original creator’s digital wallet is accessible, *the blockhain becomes an everlasting digital patron .*

**Computer & Video Games**

Computer & Video games are a huge global business. As the industry has matured, secondary markets have emerged, most notably the ‘second hand’ games resale market. The rise of ‘retro’ gaming, has demonstrated .Despite the move to non-physical digital only’ games, the demand remains incredibly high however publisher/developers/retailers aren’t able to directly benefit from the emerging market. The potential of *video games as NFT’s* presents a huge opportunity for publishers, developers and players alike.

1. Royalty Sales on Pre-owned Games ; A predetermined proportion of any reasale of a used game can automated in perpetuity via smart contracts; once these are set by the publisher, future royalties of all sales can be paid directly to the publishers/developers wallets (a digital account) without the need of a third party (traditionally a retail entity). Traditionally only the initial first sale of a game would financially benefit the publisher/developer/retailer, secondary and subsequent sales would only ever financially benefit the purchaser, with many developers/publishers arguing this is hurting the wider industry through the loss of significant income generated by the secondary and subsequent sales, sometimes over the course of decades. However the use of NFT’s smart contracts means that if a game is sold/resold through 10,000 collectors; a pre-determined royalty payment rate set by the publisher would still guarantee the publisher (and or developer/retailer) takes a proportion of any future sales.
2. **Monetisation of User Generated Content:** Games as a NFT’s offer ability to monetise UGS: User generated content User generated states (i.e save games, user can invest hundrends/thousands of hours on a particular game). Games like Nintendo’s Pokemon, Bungie’s Destiny or Genshin Impact demonstrate that players invest significant amounts of time collecting in game digital assets; often used by players as mark of distinction/status symbol.

However traditionally there has been no real utility or value that went beyond sharing a *digital badge* (i.e triumph/achievement) often ona on social media/gamer’s platform profile. NFT’s offer the ideal system for developers/publishers/players to monetise user generated/customised content/data (such as a players unique save game data), simultaneously developing an additional monetised ecosystem to meet player demands (i.e certain players willing to monetise and ‘sell’ their invested time in a particular product/service to other players with little time but willing to pay other players for ‘grinding’ (progressing laborious in game tasks)

The potential to provide publishers/developers with an additional long-term income stream, providing a better ROI on computer & video game development, which in many instances can cost hundrends of millions in development costs spanning 5/10 years, is undeniable.

1. Play to earn revenue models.
2. Monetizing In game collectibles: customisable in game assets (vanity items such as cosmetic character skins/clothing or collectible items that offer player advantages(new weapons/vehicles/mods etc,..)