

Market Analysis Prompt

Context:

2021 was a monumental year for NFTs. OpenSea, the leading NFT market, is valued at \$13bn in a recent investment round. Providing data products for NFTs will be crucial for Chainlink to be the leading blockchain-agnostic data provider, and continue to serve Web3 protocols as they innovate different use cases for NFTs.

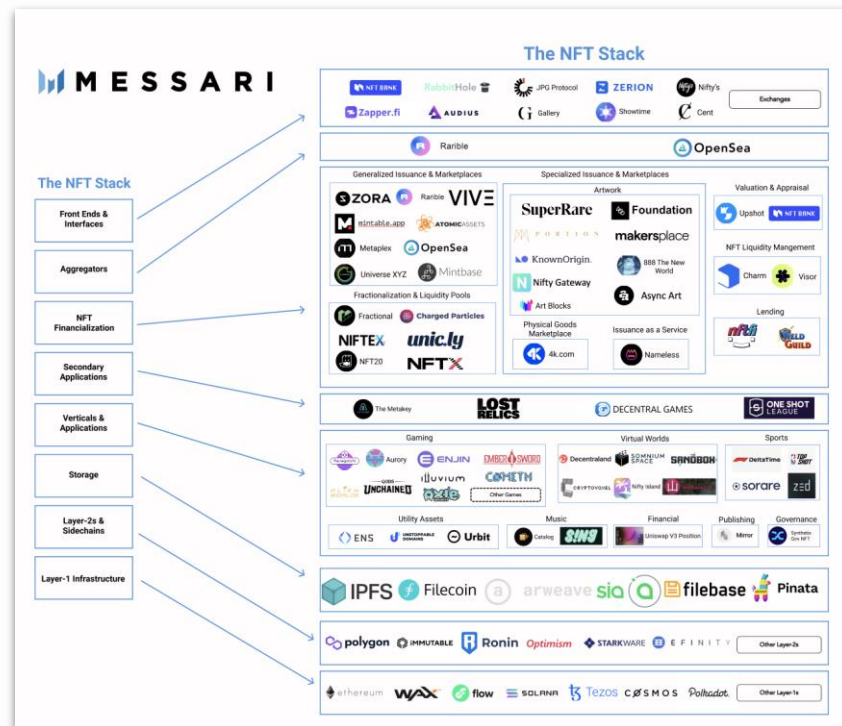
Task:

Assess the market opportunities of NFTs for Chainlink, including the following:

1. Logical segmentation of the NFT market
2. Directional sizing of addressable market by segment
3. Types of data products that Chainlink should provide
4. Data sources for the proposed data products in #2; challenges of using these data sources
5. Existing web3 protocols/dapps that Chainlink's sales team can pitch into with #2
6. Potential use cases of #2 not yet captured by existing web3/dapps

In 2021, the NFT market consisted of 23+ billion in USD sales,¹ 28+ million transactions and 2.7+ million unique active wallets²

- NFTs are the equivalent of a serial number that can be used by smart contracts to verify the provenance and ownership of an asset (be it real world or digital)
- Smart contracts have enabled new ways of structuring and managing ownership rights with NFTs
- The majority of the NFT market today is made up of digital assets such as art, collectibles and gaming items but the potential use cases are much more expansive³
- Ethereum is the dominant NFT blockchain but better scaling alternatives like Solana, Polygon and Ronin are rapidly gaining market share²



Source: <https://messari.io/article/the-nft-stack-exploring-the-nft-ecosystem>

To identify new growth opportunities, Chainlink should segment the market by developers and their jobs-to-be-done (JTBD)

The need for off-chain data to use in smart contracts defines Chainlink's addressable market opportunities

Chainlink's customers are developers, but segmenting the NFT market by asset type is a consumer-centric approach

Jobs-to-be-done puts the focus back on developers and their data needs

NFT Minting

- JTBD: Randomly assigning NFT attributes
- These developers are already using Chainlinks VRF⁴ to randomly assign attributes to NFTs in generative art, collectibles

NFT Financial Services

- JTBD: Valuing NFTs (i.e. mark-to-market)
- These developers are providing investors with financial services such as fractional ownership, lending and collateralization, and portfolio management

NFT Commercial Use

- JTBD: Calculating royalties for the commercial use of NFTs
- These developers are trying to disintermediate royalty payments with NFTs for music, videos and other forms of digital content

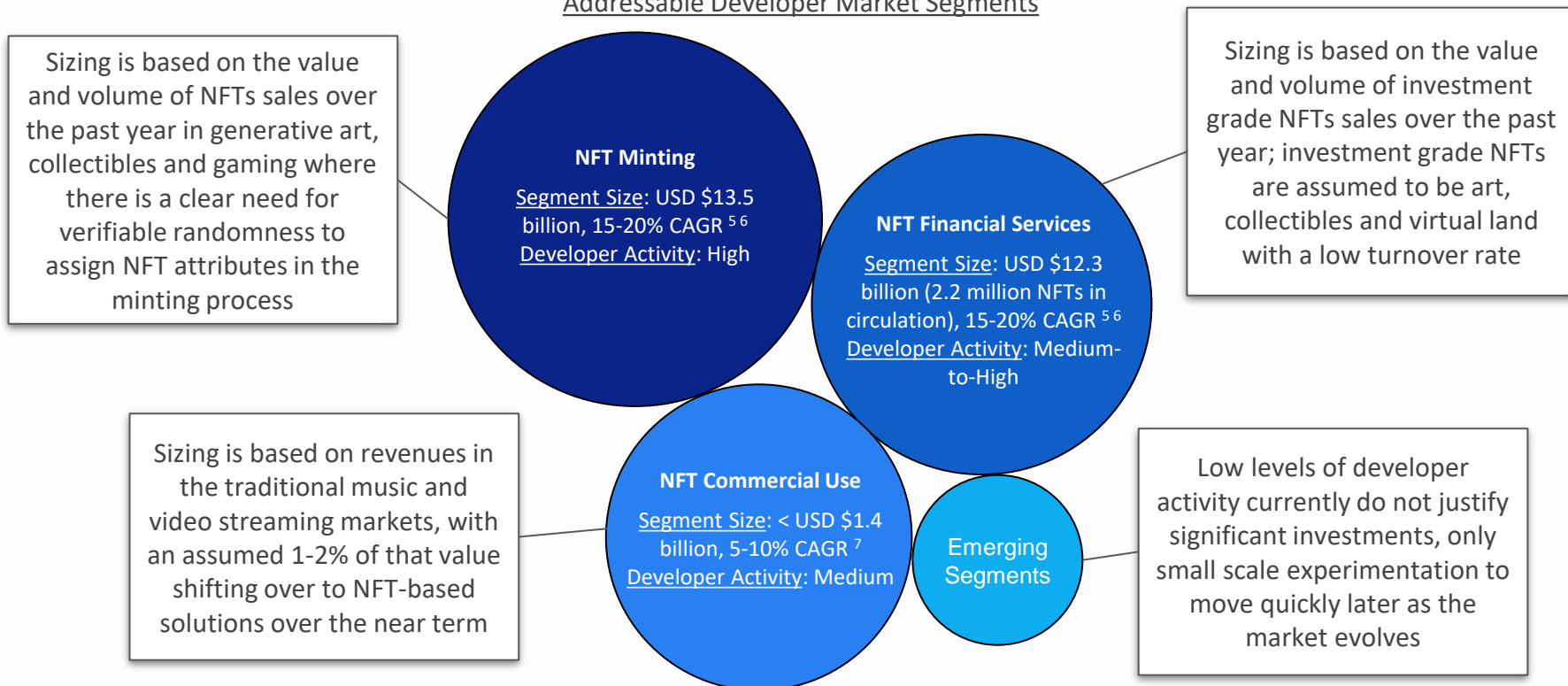
Emerging Segments

- Real Asset Tokenization
- Betting & Prediction Markets
- Identity Management
- Proof-of-Completion (e.g. Licensing & Certifications)
- Ticketing & Access*

* Ticketing may not actually be an addressable market segment for Chainlink because the need for off-chain data from oracles remains unclear

The current level of developer activity varies across segments, influencing the size of each opportunity for Chainlink

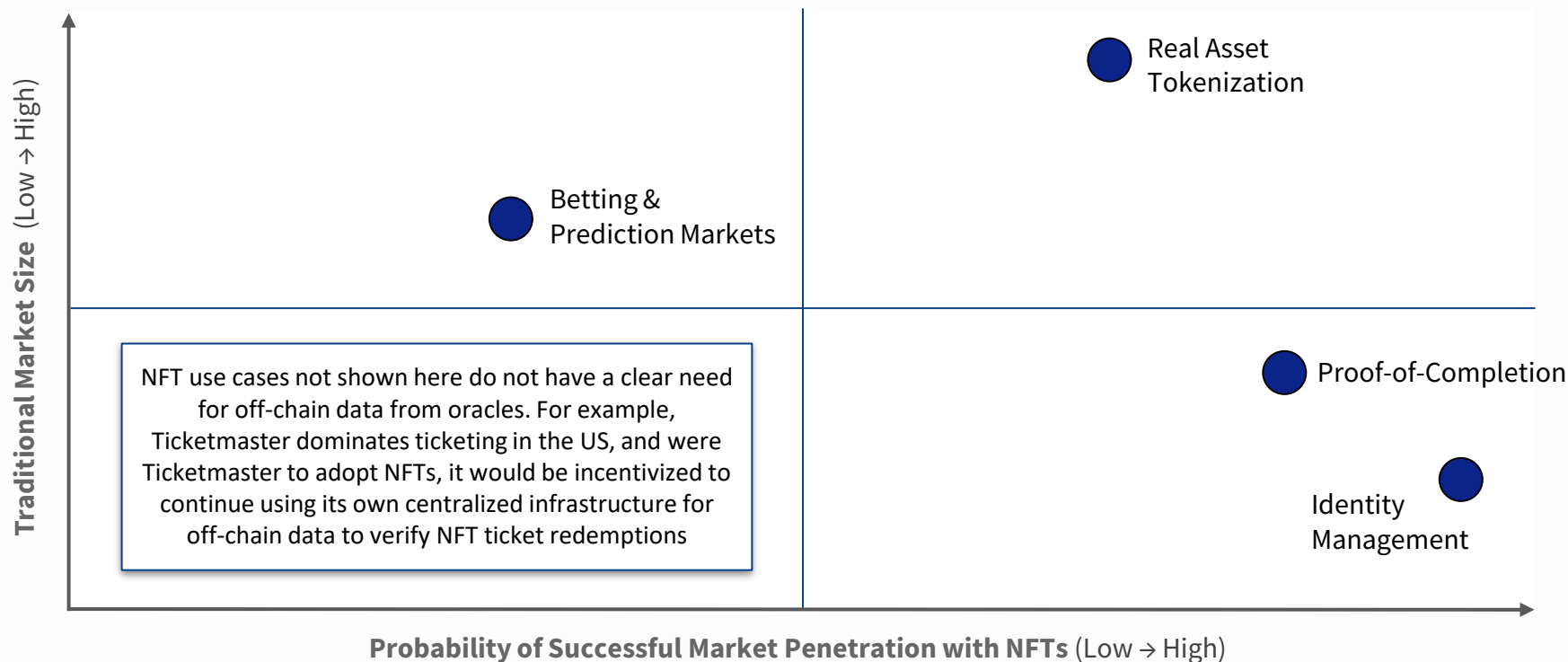
Addressable Developer Market Segments



Chainlink should prioritize products for the Financial Services and Commercial Use developer segments in the near term

	NFT Financial Services	NFT Commercial Use
Asset Segments	Art, collectibles, and metaverse land	Music, videos, and other content publishing
Proposed Data Product(s)	<ol style="list-style-type: none"> 1. Oracle data feeds with NFT prices, transactions volumes from across blockchains and asset types 2. Oracles for other data sets relevant to pricing models 3. Pricing models supported by Chainlink Keepers⁸ to predict spot prices for smart contracts 	<ol style="list-style-type: none"> 1. Oracle data feeds aggregating content consumption measures across platforms 2. Chainlink Keepers calculating the royalties due to various rights holders and triggering smart contracts for payments
Required Data	<ul style="list-style-type: none"> - Prices (last transaction and available for sale) from marketplaces and aggregators - Data on NFT attributes and macro conditions for training pricing models 	<ul style="list-style-type: none"> - Streams, impressions and clicks from content platforms and industry associations - Metadata on rights holders for calculating royalties
Potential Data Sources	Marketplaces such as Opensea, Rarible, SuperRare, LooksRare, Atomic Market, and Solanart ⁹ ; aggregators such as Genie.xyz	Content platforms such as Spotify, Apple, Vevo, YouTube, Tencent, TikTok, and Amazon ¹⁰
Target Web 3 Protocols/Dapps	NFTX, Fractional, Unic.ly, NFTFi, YieldGuild, Upshot, NFT Bank, JPEG'd	Royal, Catalog, YellowHeart, DistroToken, Audius, Sound.xyz, Mirror, Brave, Livepeer
Risks & Challenges	Heterogeneity of assets, wash sales and price manipulation, asset bubbles, and regulatory risk	Complexity of IP rights (especially in music) ¹¹ and the market power of Web 2.0 content platforms

Experimentation in other segments can be prioritized based on the traditional market size and probability of NFT adoption in coming years



Thank You

References

- 1 <https://dappradar.com/nft>
- 2 <https://nonfungible.com/market/history>
- 3 <https://blog.ether.cards/building-dynamic-nfts-on-ether-cards-using-chainlink/>
- 4 <https://chain.link/education/nfts>
- 5 <https://nonfungible.com/market/history>
- 6 <https://marketdecipher.com/report/digital-collectibles-market>
- 7 <https://www.pwc.com/gx/en/news-room/press-releases/2021/global-entertainment-media-outlook-2021.html>
- 8 <https://chain.link/keepers>
- 9 <https://cryptoslam.io/>
- 10 <https://midiaresearch.com/blog/music-subscriber-market-shares-q2-2021>
- 11 <https://www.indiemusicacademy.com/blog/music-royalties-explained>