

A BRIEF INTRODUCTION TO NFTS

Why should this project utilize an NFT?

NFTs are exciting and it's tempting to use them to solve as many problems as possible. We believe that NFTs function best when they solve a problem that web2 and centralized systems fail to adequately address. What about your campaign calls for the inclusion of an NFT? To answer this question best, please consider the following unique attributes of NFTS:

- Permanent
 - With some notable caveats, it is likely that the NFTs you create will exist on the block chain forever provided that the underlying infrastructures that support them continue to exist. By utilizing an NFT you are making an immutable entry in a decentralized ledger. What are the implications of permanence on your project?
- Decentralized
 - NFTs exist on decentralized ledgers also known as blockchains. This means that their price, history and patterns of circulation are visible to anyone with basic knowledge of this system. It also means that this information is immutable. Once an NFT is transferred or a contract deployed, there is no option to 'undo' what you have done. You can always transfer an NFT back or abandon your contract and deploy a new one, but the record of your actions is as permanent as the blockchain. There is no centralized authority to help you if you make a mistake.
- Exclusive
 - NFTs remain a niche commodity for a variety of good reasons. For starters, owning an NFT requires basic literacy around a few core concepts. At the very least, users must have a wallet that they are comfortable transacting with. As of this August, Open Sea reported 14,000 unique wallet addresses involved in transactions over a 30 day period. This is obviously not representative of everyone active with NFTs but I think it provides context for how small the user base of this technology really is.
- Expensive
 - While it is true that there are alternatives to the Ethereum blockchain, as well as solutions built on top of Ethereum that help reduce gas costs, the vast majority of NFT action is currently taking place directly on Ethereum. Due to the recent growth of Ethereum and the massive amount of energy required for a proof-of-work system, the cost of utilizing NFTs in their most popular ecosystem remains extremely high. The cost of deploying a custom contract on this network is usually around \$1500.

I sincerely hope that, after taking the above into account, NFTs still feel like a useful and appropriate addition to your project! If they do, there are some basic questions you will need to consider.

1. Is the Ethereum Mainnet the correct home for this NFT?
 - a. If secondary trading and marketplace dynamics are important to your project, it might be! Most NFTs exist on Ethereum, so this is where the action is.
 - b. If you are airdropping many units and have concerns about gas fees, you might want to look at a layer two solution like Polygon or a different layer one chain like Solana. These solutions provide low cost and low carbon emission alternatives to Ethereum.
2. Ethereum Token Standards
 - a. ERC-20 tokens are fungible and do not point to media (\$FWB is an ERC-20 token)
 - b. ERC-721 the most common NFT 1/1 token standard, non-fungible and points to media
 - c. ERC-1155 fungible but points to media, great for editions
3. Platforms or Custom Contracts?
 - a. If possible, working through an existing protocol or platform is a much lighter lift than working with a solidity developer to deploy a custom contract.
 - b. It is not uncommon for developers to be given 20-40% of a project's equity in exchange for their involvement.
 - c. Small collections and 1/1 NFTs are well suited to platforms. Large series' of NFTs, especially those bought unseen with attributes populated at mint, are best suited for custom contracts.
4. Platforms
 - a. Zora is a highly versatile protocol that does not have proprietary fees for minting, selling or transacting (gas fees still apply). Zora hosts collections and 1/1 pieces however it only supports the ERC-721 standard. FWB has a strong working relationship with Zora.
 - b. Manifold Studio currently allows creators to utilize their highly customizable contracts for minting. Please note that Manifold is not a marketplace so you will need a custom front end (like Artiva) if you want your NFT to be available for purchase outside of Open Sea.
 - c. Foundation is a curated platform suited to 1/1 ERC-721 pieces. Its collector base makes it a compelling option for NFTs with high price tags. Foundation takes 15% of all sales processed through its platform. It has recently started supporting collections which allow for groups of work to be minted on the same unique contract.
 - d. Mirror provides the best environment for text based work and has a variety of formats to support crowd funds and ERC-20 token distribution.
 - e. Catalog is a music marketplace built on the Zora protocol that is currently invite only. It does not take fees but is only formatted to host audio files with a static image to serve as a 'cover'.

- f. Chainsaw is a highly curated marketplace that offers developmental support to artists so they can take their contracts in new and exciting directions.
 - g. Super Rare, Rareible, Unknown Origin, Makers Place, Nifty Gateway and countless other marketplaces could also be good options for 1/1 ERC-721 tokens.
 - h. Don't mint on Open Sea!
- 5. Custom Contracts
 - a. If you are looking to make a large collection, especially a PFP (nobody knows what that stands for but think BAYC) collection, a custom contract may be necessary for a few reasons;
 - i. The cost of minting each unit can be passed along to the consumer saving you and your team some upfront costs on gas. If you have a ten thousand piece collection, these costs could be significant.
 - ii. These projects are often bought unseen with certain attributes being worth more than others. The best way to execute the random distribution of these attributes in an accountable way is through a custom contract.
 - b. If you are looking to integrate layers of unprecedented functionality into your NFT, you may want to consider utilizing a custom contract.
 - c. Custom contracts are dangerous! One wrong character and this contract could easily result in security vulnerabilities for you and your users. Always audit a custom contract before deployment.
 - d. Custom contracts do not necessarily come with a front end. Once this contract is deployed you will probably need a full stack developer to create a homepage where users can mint NFTs from your contract. An alternative would be allowing users to mint from Etherscan, the de facto interface for transacting with the Ethereum Mainnet. This process, known as minting from contract, is perfectly fine for experienced users but not well suited to the casual NFT enthusiast. This is because users manually enter multiple fields and must have a basic working knowledge of Etherscan.

I hope this has been helpful! Hopefully you can now answer the following questions:

1. Why should we associate an NFT with this project?
2. Should we mint on Ethereum?
3. Which token standard should we use?
4. Do we need a custom contract or should we use a platform?
5. Which platform should we use?
6. Why would we need a custom contract?

If you'd like to discuss this project further, please email your answers to these questions to yuri@FWB.help and I'd be happy to provide feedback.