

Fintech Bootcamp @ Sydney University

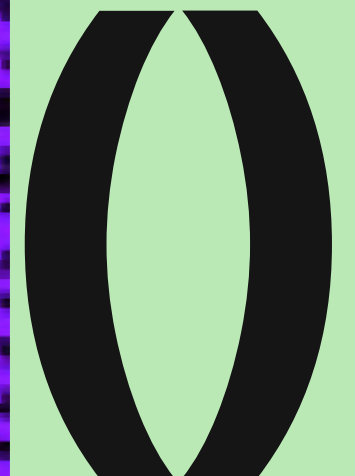
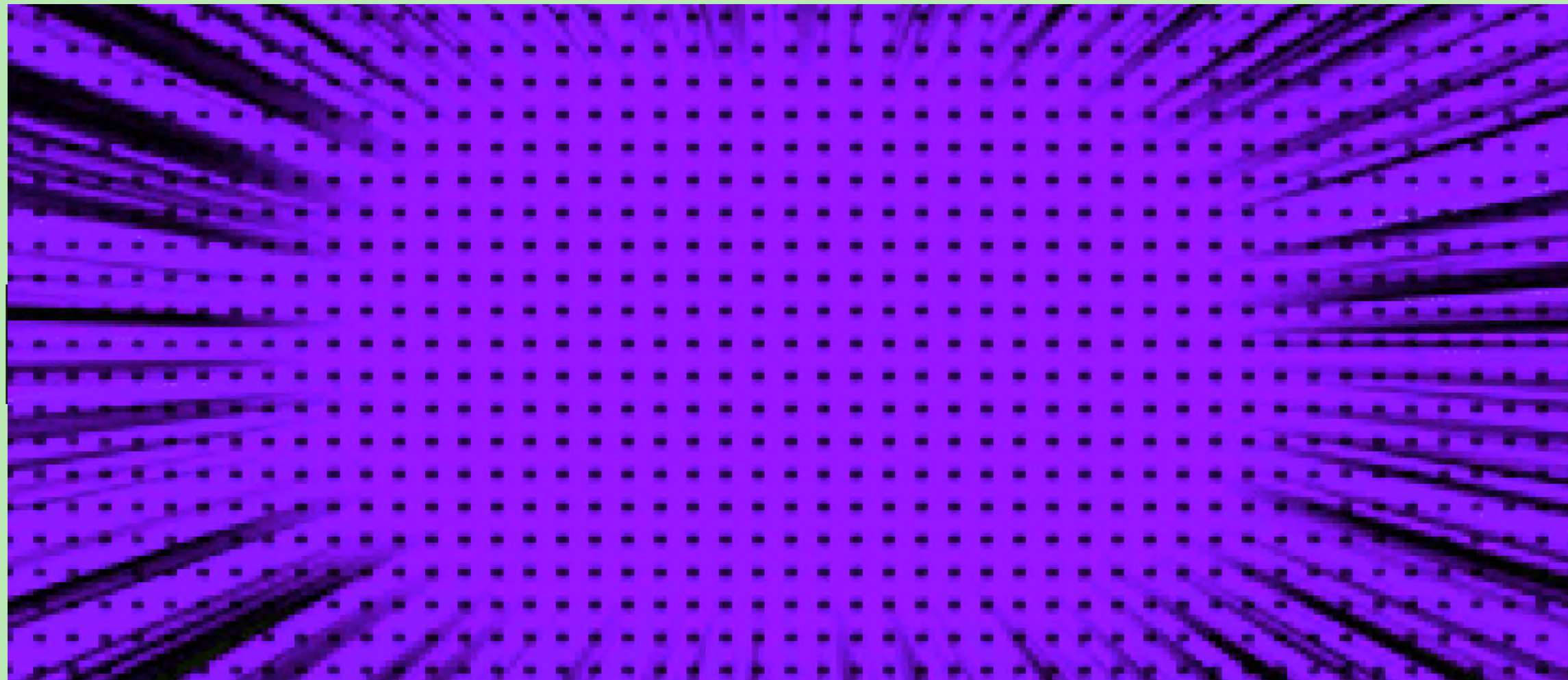
Team Members

Presentation Date

9 June 2022

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# Pepper



# Problem

- Counterfeit products.
- Sales of counterfeit products expected to reach \$2.8 trillion and cost 5.4 million jobs by 2022.
- Trafficking of counterfeit products poses a significant safety threat to consumers.

# Fraud and Crypto

- Litigation costs for small to medium sized business limits their ability to enforce their intellectual property rights.
- Creation of counterfeit products under a companies branding is frequently ignored due to the cost involved.
- Blockchain can address the worlds counterfeit problem by identifying a products proof of origin.



# Smart Tags and Non Fungible Tokens

- Radio Frequency Identification Tags (RFIT)
- Near Field Communications (NFC)
- Quick Response (QR) code



# Non Fungible Tokens

- Everyone wants to profit from NFT's.
- Many are creating NFT's.
- Only a small % comprehend the features and benefits of Non Fungible Token's.

# Adoption of the Metaverse by Major Brands



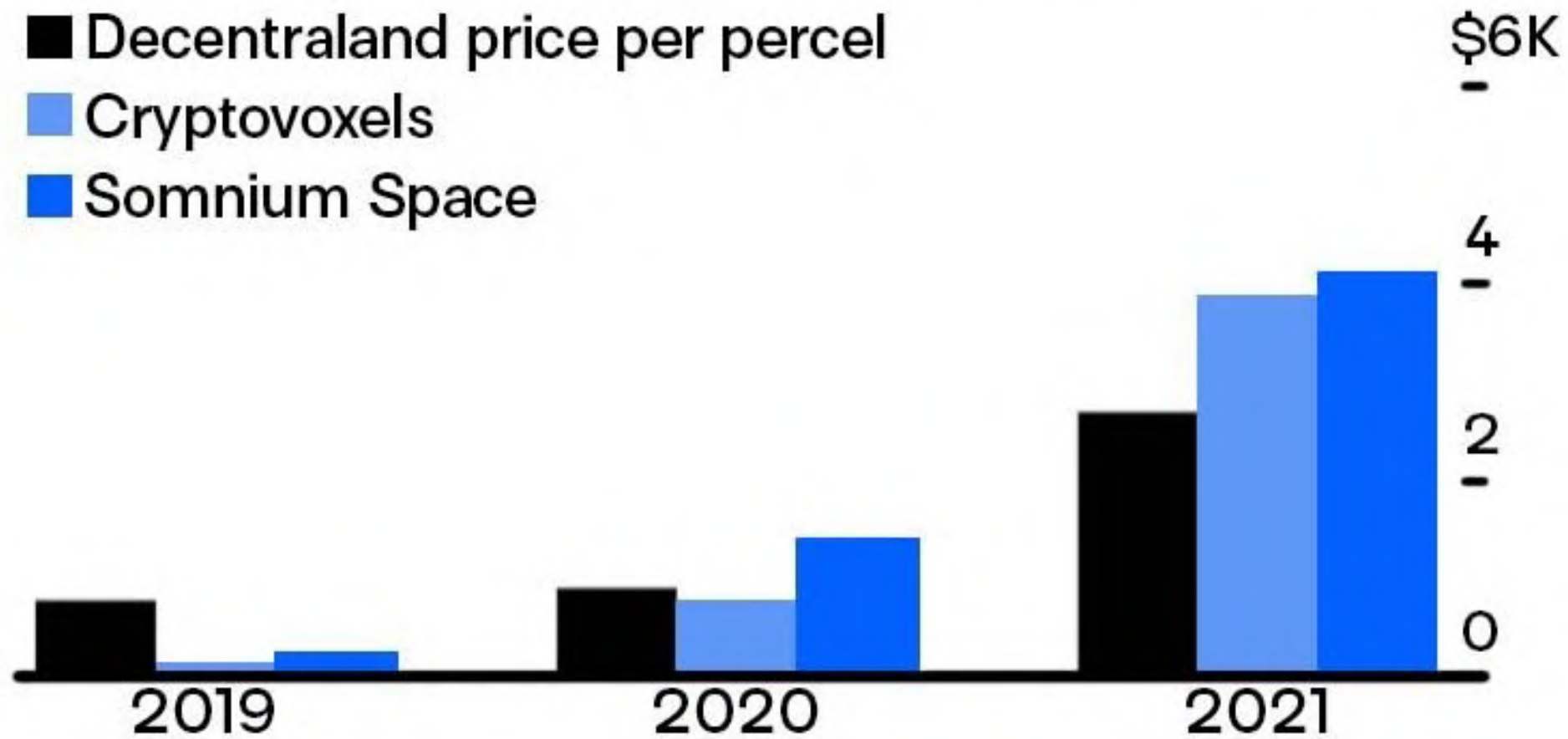
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# Public Sentiment

## Land Rush

The price of property in the virtual world is booming

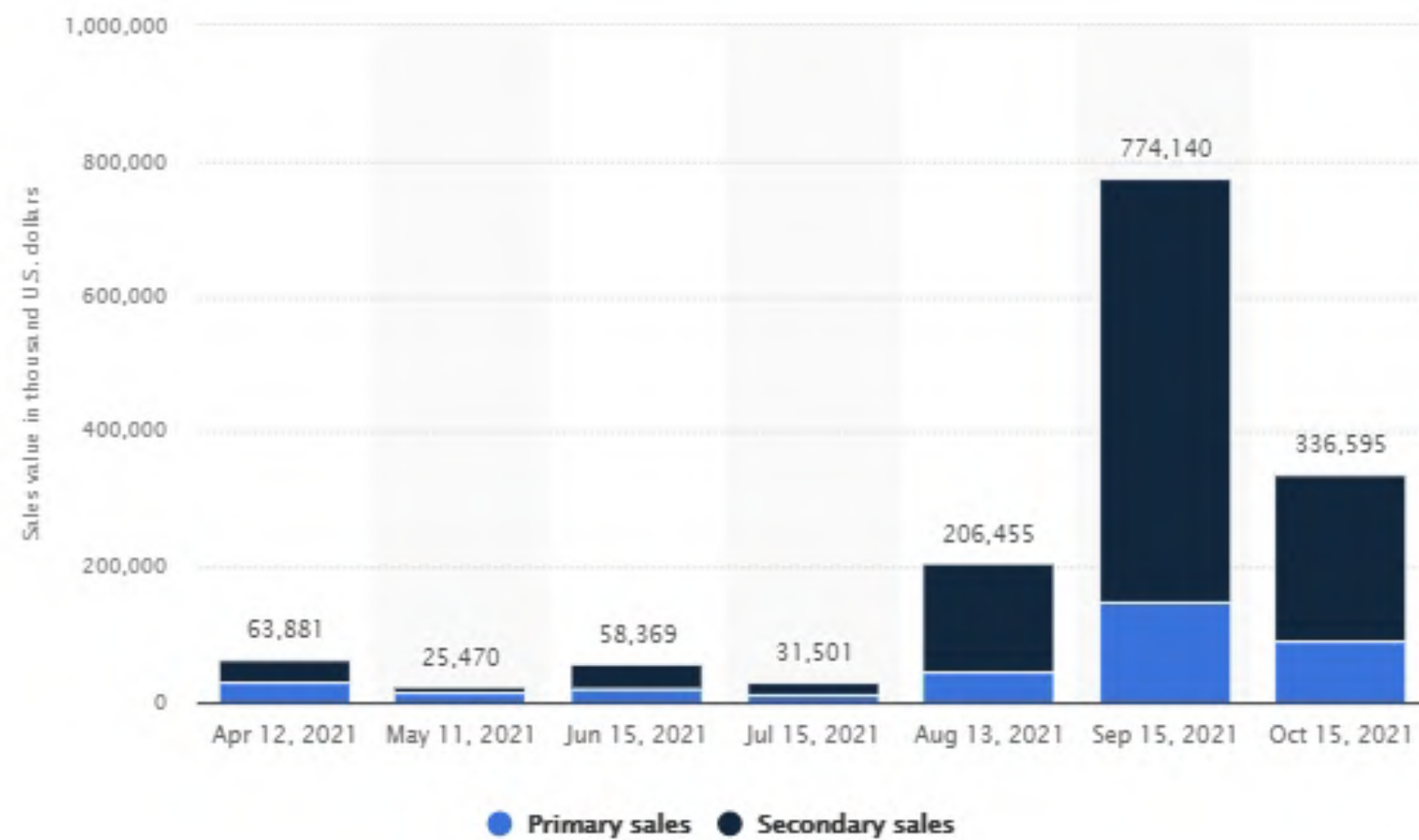


Source: NonFungible.com

Note: Figures for 2021 are through March 15

## Total value of sales involving a non-fungible token (NFT) in the art sector worldwide over the previous 30 days from April 12 to October 15, 2021

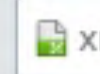
(in 1,000 U.S. dollars)



### DOWNLOAD



PDF



XLS



PNG



PPT

### Source

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### Release date

October 2021

### Region

Worldwide

### Survey time period

April 12 to October 15, 2021

### Special properties

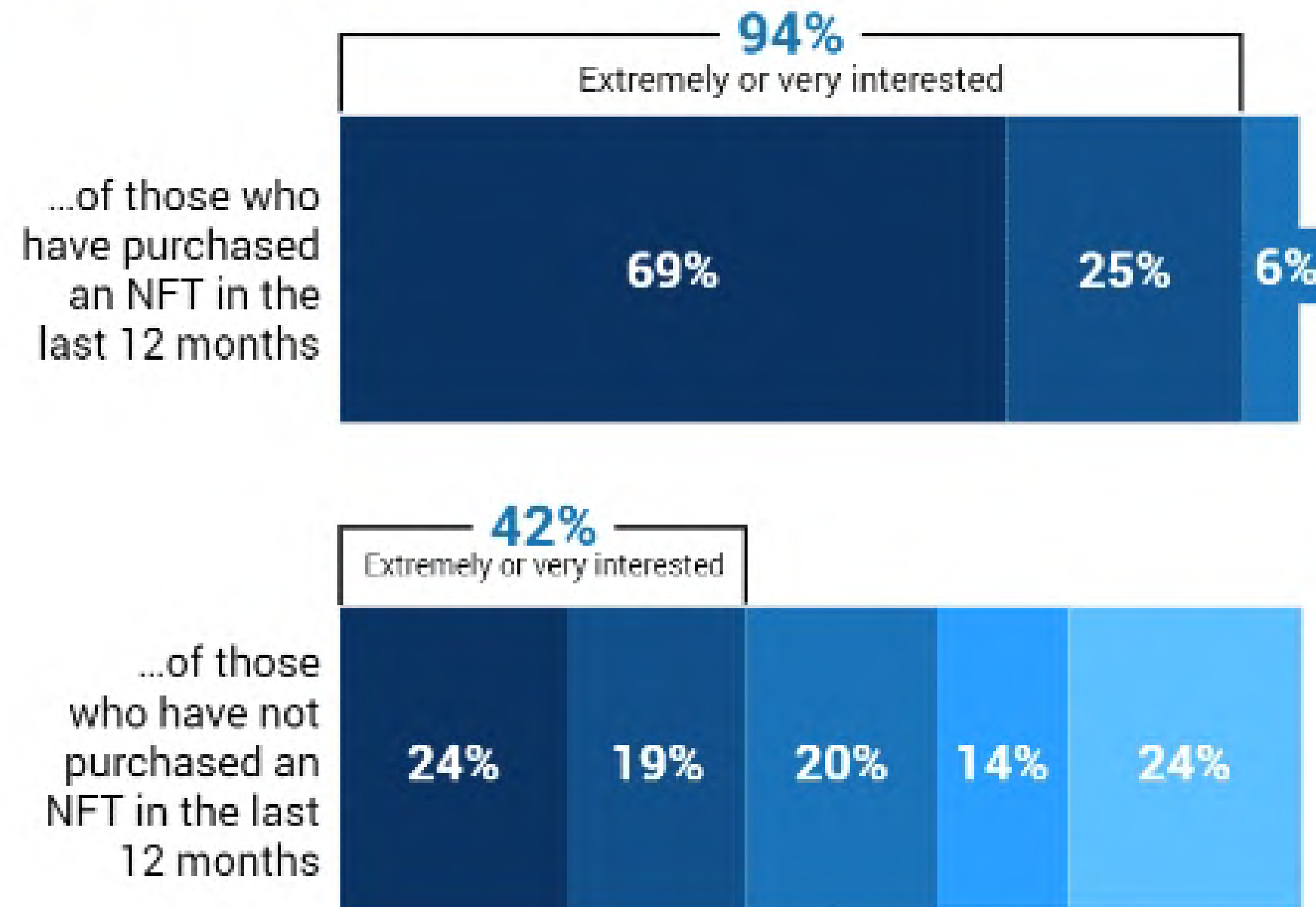
figures refer to the aggregated value of sales recorded on the Ethereum blockchain during the previous 30 days



## INTEREST IN PURCHASING NFTS IN THE NEXT 12 MONTHS<sup>3</sup>, U.S., 2021, % ADULTS AGED 18+ AWARE OF NFTS<sup>4</sup>



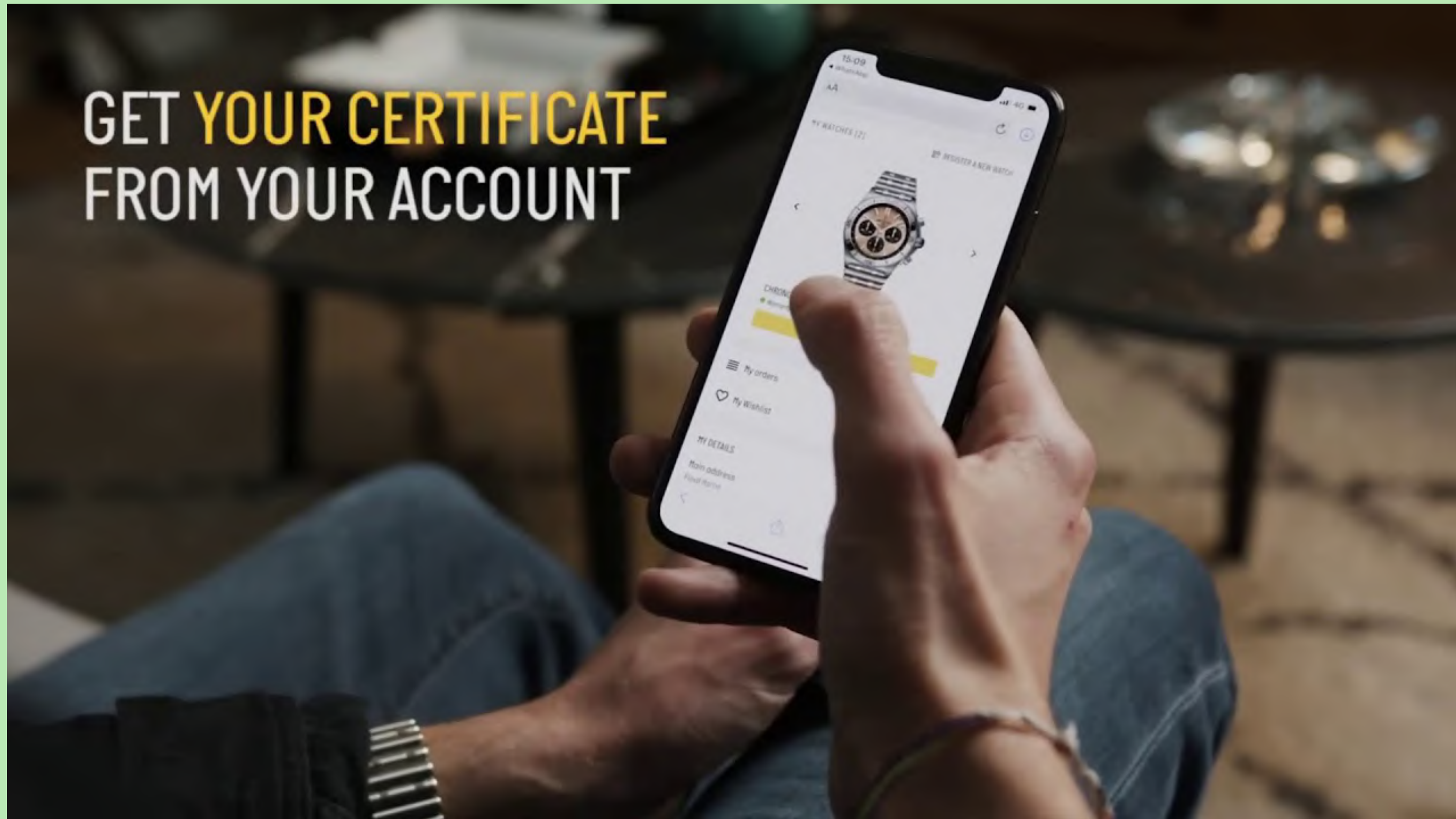
- Extremely Interested
- Somewhat Interested
- Not at All Interested
- Very Interested
- Slightly Interested



# PepperMint

- NFT implementation in the real world (as opposed to the Metaverse).
- Quick Response (QR) code implementation.
- Consumers can see the history of goods they purchase via immutable blockchain records.

# Real World Example: Breitling



# Features & Benefits

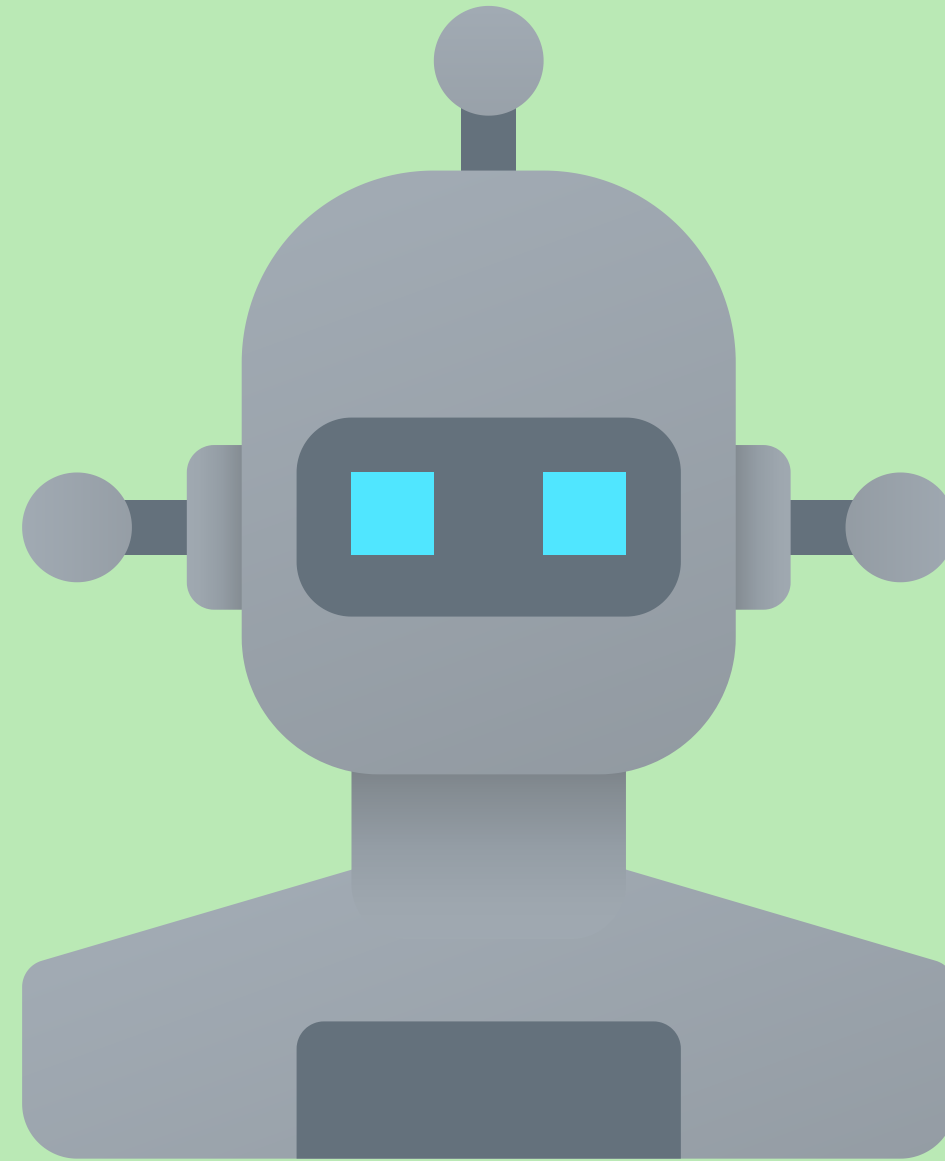
- Counterfeit and fraud prevention.
- Consumers may verify the authenticity of their products and the legitimacy of their ownership.
- NFT and product owners have the ability to transfer ownership.
- Eliminate the re-sale of stolen goods with a sustained reduction of the criminalised offence over time.

- Existing solutions offering pre minted NFT's attract transfer fees that in most cases exceeds the minting fee. By contrast, PepperMint provides consumers with the ability to mint NFT's as part of the unboxing process.
- The unboxing experience will result in user generated marketing content by the consumer. User-generated content is an effective marketing strategy.
- pepperMint() isn't reserved for global brands. Minting services available to business' of all sizes.



# Technology Stack

- Solidity
- Python
- Metamask
- Ganache
- QR Code
- Streamlit



# Unanticipated Problems and Insights

The peppermint() smart contract accepts the name and symbol of a tokenised asset and invokes a peppermint instance. When there are multiple instances of the same contract, the cost of the resulting transactions (gas) will increase by a multiple equivalent to the number of instances generated in the pepperMint() smart contract.

An upgradable smart contract will contribute to a significant reduction in transaction costs.

Ethereum contracts are immutable. Once they are deployed to the blockchain they cannot be updated, however the need to alter their logic with time is necessary. During a contract upgrade, the following factors need to be considered -

- Block gas limit, and
- Inter-contract dependencies.

The following must be considered when deploying an upgradable smart contract:

- Implementation of permanent storage.
- Encapsulating logic in a library of functions.
- Abstracting via an interface.

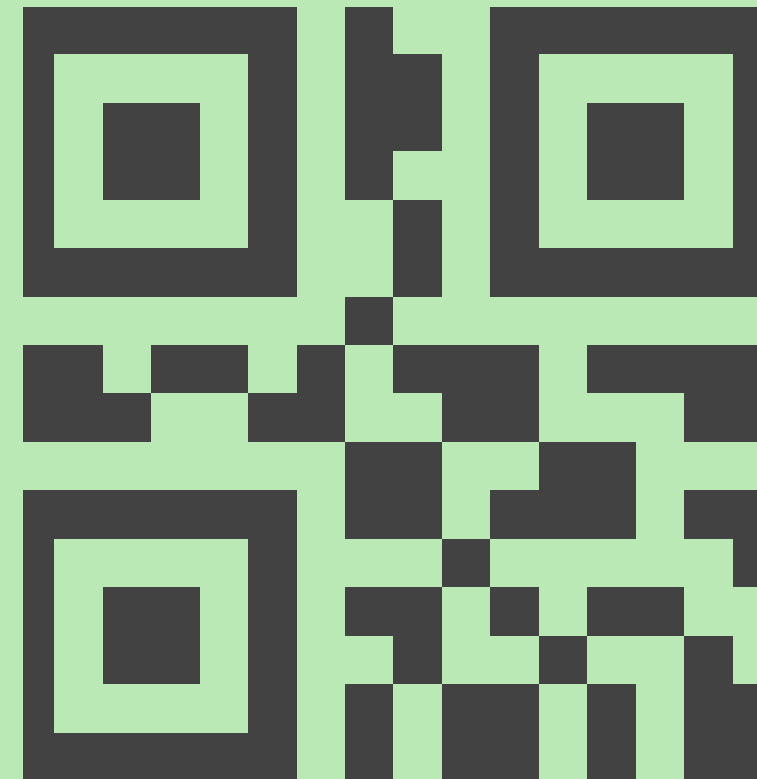
# Future Developments

- RFID and NFC 'smart tag' integration.
- Off chain validation using Chainlink Oracles.
- Metaverse implementation. (wearable NFTs)
- Customer service functionality.
- Social media integration.
- Manufacturer user interface.
- Gated NFT website with access restricted to VIP token holders.
- NFT gallery.

# Conclusion

pepperMint() eliminates counterfeit production, and is the conduit for intellectual property right validation and enforcement for small sized business' and multinational corporations.

If your focus is on NFT's, just like this bored looking ape, you can support pepperMint() by scanning the QR code below to make a financial contribution (within your means) to our project.



Disclaimer: The QR code seen within this slide or any other part of this presentation (including Github) is not linked to a cryptocurrency wallet address. The images displayed are intended for novelty purposes. Placement of a QR code within this slide or any other part of this presentation is not connected with any team members cryptocurrency wallet address. Please do not use the QR code to facilitate payment. The bored ape image has been used in accordance with Shutterstock's terms and conditions for the editorial use of their design assets. Please see [https://support.submit.shutterstock.com/s/article/What-is-the-difference-between-Commercial-and-Editorial-content?language=en\\_US](https://support.submit.shutterstock.com/s/article/What-is-the-difference-between-Commercial-and-Editorial-content?language=en_US) for more details.