General Magic ✦

# UX
# AUDIT
# REPORT

AUGUST 2023

High level expert review
Heuristic evaluation & user interviews

velodrome

# In this report

# INTRODUCTION

# EXECUTIVE SUMMARY

In this comprehensive UX audit, we conducted an expert review of Velodrome Finance user experience based on Web3 usability guidelines and expert review checkpoints. The aim was to assess the platform's alignment with industry best practices, ensuring a seamless and user-centric experience for all users interacting with Web3 technologies.

Our review focused on evaluating critical aspects such as platform accessibility, navigation, search functionality, user education, error handling, and the integration of Web3 wallet functionalities. Through a meticulous assessment, we identified several areas that require immediate attention to enhance the overall user experience.

# 247 WEB USABILITY GUIDELINES

This review focused on evaluating critical aspects such as platform accessibility, navigation, search functionality, user education, error handling, etc. Through a meticulous assessment, we identified several areas that require immediate attention to enhance the overall user experience.

| UX PRINCIPLES | COMPLIES | DOESN'T COMPLY | NOT APPLICABLE | COMPLIANCE RATE |
|---|---|---|---|---|
| Home Page | 13 Criteria | None | None | 100% |
| Task orientation | 20 Criteria | 1 Criteria | 3 Criteria | 95% |
| Navigation and IA | 18 Criteria | 1 Criteria | None | 95% |
| Forms and data entry: | 13 Criteria | None | 3 Criteria | 100% |
| Trust and credibility | 8 Criteria | None | None | 100% |

| UX PRINCIPLES | COMPLIES | DOESN'T COMPLY | NOT APPLICABLE | COMPLIANCE RATE |
|---|---|---|---|---|
| Writing and content quality | 17 Criteria | 1 Criteria | 1 Criteria | 94% |
| Page layout and visual design: | 32 Criteria | 1 Criteria | 1 Criteria | 96% |
| Search usability | 10 Criteria | 5 Criteria | 1 Criteria | 53% |
| Help, feedback and error tolerance | 20 Criteria | 4 Criteria | 1 Criteria | 83% |
| Total | 150 Criteria | 16 Criteria | 9 Criteria | 92% |

# REVIEW BASED ON WEB3 UX PRINCIPLES

By Beltran

This review focused on evaluating critical aspects involved in the integration of Web3 wallet functionalities.

| UX PRINCIPLES | COMPLIES | DOESN'T COMPLY | NOT APPLICABLE | COMPLIANCE RATE |
|---|---|---|---|---|
| Transparency of Data provenance | 1 Criteria | 3 Criteria | None | 25% |
| Transparency of Transactions | 6 Criteria | 1 Criteria | 1 Criteria | 85% |
| Transparency of Smart Contract | 2 Criteria | None | 1 Criteria | 100% |
| Transparent User interaction History | None | 3 Criteria | None | 0% |
| Transparency of Code | 4 Criteria | 2 Criteria | 1 Criteria | 66% |

GM

| UX PRINCIPLES | COMPLIES | DOESN'T COMPLY | NOT APPLICABLE | COMPLIANCE RATE |
|---|---|---|---|---|
| Human Readable Hashes Format | 2 Criteria | 1 Criteria | 1 Criteria | 66% |
| Time/Wait Management | 2 Criteria | None | None | 100% |
| Permanent Newbie Mode | 1 Criteria | 2 Criteria | None | 33% |
| Gas Price and Transaction Reversal | 1 Criteria | 1 Criteria | 1 Criteria | 50% |
| Sense of Community | 4 Criteria | None | None | 100% |
| Total | 23 Criteria | 13 Criteria | 5 Criteria | 64% |

# USABILITY STATS

## Overall Compliance percentage

■ Compliance scores %

Web Usability — **92**

Web3 Audits — **64**

0    25    50    75    100

**85.6%**
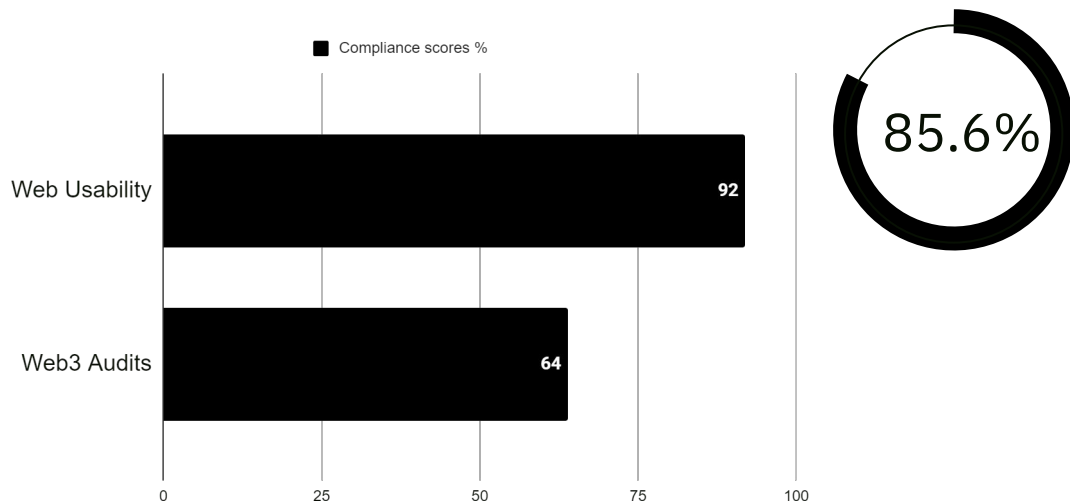
## Usability Score

### GOOD

Users should be able to use this site or system with relative ease and should be able to complete the vast majority of important tasks.

Overall Compliance

**173/202**

Overall non compliance

**29/202**

# PRODUCT OVERVIEW

Velodrome Finance is a next-generation AMM that combines the best of Curve, Convex and Uniswap, designed to serve as Optimism's central liquidity hub. Velodrome NFTs vote on token emissions and receive incentives and fees generated by the protocol.

# CONTEXT OF THE AUDIT

This study involved collecting a rich research database consisting of detailed observations and findings based on  Nielsen's Heuristic Evaluation, Design Arnold Lund's 34 Usability Maxims, and  Web3 Design Audit Checklist Based on Web3 Design Principles by Beltran
These valuable resources complement and support the findings presented in this report.

# METHODOLOGY

# METHODOLOGY

This report summarizes the findings of a comprehensive UX audit conducted on Velodrome Finance platform.

The audit utilized a combination of renowned UX methodologies, including Nielsen's Heuristic Evaluation, Ben Shneiderman's 'Eight Golden Rules of Interface Design, Arnold Lund's 34 Usability Maxims, Norman's Theory of Action, and the Web3 Design Audit Checklist Based on Web3 Design Principles by Beltran.

The purpose of the audit was to assess the user experience and identify areas for improvement to enhance usability and overall satisfaction

# SEVERITY SCALE

**Critical**

Severely impairs the use of the product and cannot be overcome by users. It is necessary to fix this before releasing the product..

**Serious**

Occurs frequently and persistently, or users may not be able to resolve the issue or may not be aware of it. It's important to fix this, so give it a high priority..

**Medium**

May occur more often or be harder to overcome. Fixing this should be a low release priority.

**Low**

Can be easily overcome by the user or occurs very rarely. The release does not require repair unless additional time is available.

# FINDINGS

# BUSINESS GOALS

- Enhanced Automated Market Maker (AMM) Functionality: The platform aims to provide a next-generation AMM that incorporates the best features of Curve, Convex, and Uniswap. This implies efficient and low-slippage trading for various assets, particularly focused on stablecoins or assets with similar characteristics..

- The platform aims to integrate with the Optimism scaling solution, which is designed to improve Ethereum's scalability and reduce transaction costs. By serving as Optimism's central liquidity hub, the platform aims to support and benefit from the increased scalability and reduced costs associated with the Optimism network.

- The platform intends to leverage non-fungible tokens (NFTs) as a means of voting on token emissions. This implies that token holders, through their NFT ownership, can participate in governance decisions related to the issuance and distribution of tokens. This feature provides a decentralized and inclusive approach to decision-making within the protocol.

# CUSTOMER GOALS

- Efficient and Low-Slippage Trading: Customers using this platform aim to benefit from efficient and low-slippage trading.

- Cost Savings through Optimism Integration: Customers seek to leverage the Optimism scaling solution to reduce transaction costs. By serving as Optimism's central liquidity hub, the platform aims to provide customers with access to a more scalable and cost-effective environment for their trades and interactions.

- Decentralized Governance Participation: Customers are interested in participating in the platform's governance decisions through NFT voting on token emissions. By holding NFTs, customers can exercise voting rights and have a say in the issuance and distribution of tokens. This empowers customers to actively contribute to the platform's development and decision-making processes.

- Incentives and Fee Sharing: Customers aim to receive incentives and a share of the fees generated by the protocol. By actively participating in the platform, providing liquidity, and engaging in governance activities, customers can earn rewards and benefit from the success of the ecosystem.

# FINDINGS

**Heuristic Used**

Select the appropriate heuristics principle that matches the usability issue you've identified.

**Severity**

From the severity scale, select the appropriate rating for the usability issue you've identified.

**Issue and Recommendation**

Describe the usability issue and spell out your recommendations for UX improvements.

# TASK ORIENTATION AND SITE FUNCTIONALITY

People go to web sites to achieve particular goals, not to look around and admire the design. This means web pages needs to support customer tasks. A site is task oriented when it supports users in the effective and efficient completion of their tasks.

## Issue (LOW)

- The platform exclusively presents command and action items as hypertext links, neglecting the use of action buttons. This approach limits visual variety and fails to differentiate between different types of actions.

## Recommendations

- Diverse Presentation: Introduce a diverse range of visual elements, including both buttons and hypertext links, to present command and action items. By using buttons for primary or critical actions that require user input and hypertext links for less important or secondary actions that navigate to different pages or sections, users can better differentiate between different types of actions and navigate the platform more efficiently.

Liquidity Pools

| Active | Stable | Volatile | Incentivized | Low TVL | Participating | All Pools |

🔍 usdc

| LIQUIDITY POOL | APR | FEES | POOL BALANCE | WALLET BALANCE |
|---|---|---|---|---|
| **sAMMV2-USDC/DOLA** <br> Stable Pool – 0.3% <br><br> TVL ~$21,983,922.84 | 22.81 % | ~$2,846.27 <br> 1,542.06631 USDC <br> 1,314.47 DOLA | 9,688,763.83139 USDC <br> 12,387,037.44 DOLA | 0.0 USDC <br> 0.0 DOLA <br><br> → <br> Deposit |
| **sAMMV2-USDC/sUSD** <br> Stable Pool – 0.05% <br><br> TVL ~$12,519,800.39 | 6.05 % | ~$231.79 <br> 173.41846 USDC <br> 58.59 sUSD | 5,963,297.22944 USDC <br> 6,567,156.44 sUSD | 0.0 USDC <br> 0.0 sUSD <br><br> → <br> Deposit |
| **sAMMV2-USDC/MAI** <br> Stable Pool – 0.3% <br><br> TVL ~$9,786,605.02 | 12.3 % | ~$1,828.47 <br> 813.49484 USDC <br> 1,051.31 MAI | 3,749,041.30235 USDC <br> 6,252,601.31 MAI | 0.0 USDC <br> 0.0 MAI <br><br> → <br> Deposit |
| **vAMMV2-STG/USDC** <br> Volatile Pool – 0.3% <br><br> TVL ~$9,570,593.32 | 50.66 % | ~$1,403.89 <br> 609.89 STG <br> 986.01476 USDC | 6,971,227.39 STG <br> 4,787,690.92119 USDC | 0.0 STG <br> 0.0 USDC <br><br> → <br> Deposit |

*Use buttons for primary or critical actions that require user input and hypertext links for secondary actions*

# PAGE LAYOUT AND VISUAL DESIGN

The checkpoints in this area ask if the dialogue is aesthetic and minimalist. Appropriate visual design means that the fonts, icons, colours and layout help the customer complete common tasks and that pages do not contain information that is irrelevant or rarely needed.

## Issue (LOW)

- Visual Feedback: The platform **does** provide a visible change when the mouse hovers over clickable elements, aside from cursor changes. But the presence of visual feedback on certain non clickable elements leaves users confused on the interactive nature of said elements, making it difficult for them to identify and engage with clickable areas.

## Recommendations

- Implement consistent and noticeable hover states or visual feedback for only clickable elements

## Liquidity Pools

| | Active | Stable | Volatile | Incentivized | Low TVL | Participating | All Pools | | | Q usdc |

| LIQUIDITY POOL | APR | FEES | POOL BALANCE | WALLET BALANCE |
|---|---|---|---|---|
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*The pool table has an change of state hover effect, signifying it could be interacted whereas only the pool name is clickable.*

# WRITING AND CONTENT QUALITY

Effective writing and content quality play a crucial role in communicating ideas, establishing credibility, and delivering a positive user experience. By prioritizing these aspects, organizations can create compelling content that resonates with readers, promotes understanding, and achieves its intended objectives

## Issue (LOW)

- The "Incentive" page fails to meet the recommended UX design practices in linking names to match the title of destination pages. This design oversight negatively impacts the user experience by causing confusion and making it difficult for users to determine if they have reached the intended page. This discrepancy can also create a disconnect between the link representation and the actual content users expect to find upon clicking the link. As a result, users may experience confusion and uncertainty about the relevance and accuracy of the information they are accessing.

## Recommendations

- Use clear and descriptive link names that accurately convey the content or purpose of the destination page. This helps users understand the relevance and context of the information they will find when they click on the link.
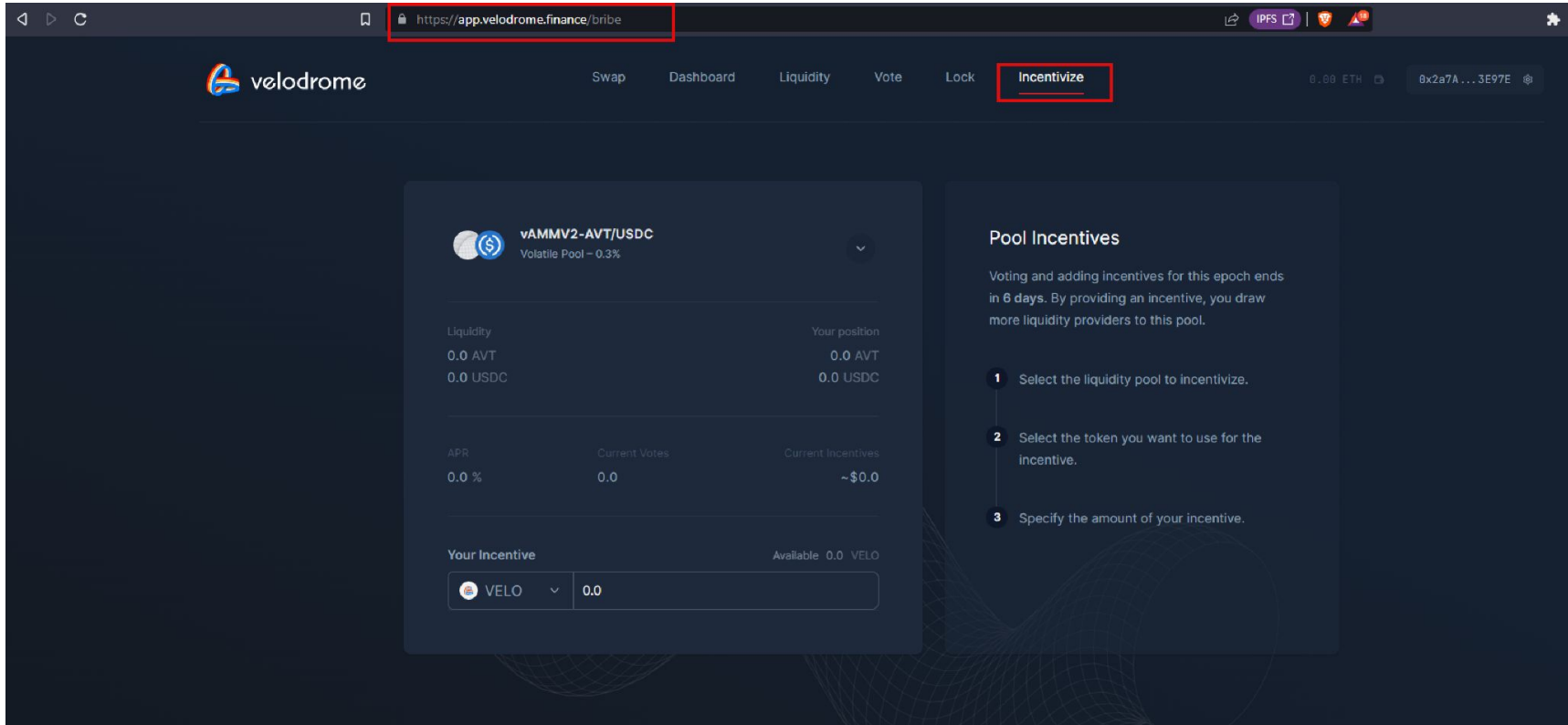
*While incentive and bribe might mean the same thing contextually on velodrome finance, there is a minor difference especially to first time users and the link name might cause a pause for this user category.*

# SEARCH USABILITY

Search is one of the dominant ways that many customers interact with web sites. A good search engine needs to acknowledge the 'human' side of searching, which means dealing with spelling errors and synonyms (such as 'laptop' for 'notebook'). Google has set the standard for how search should look and behave, and many of these guidelines are based on this best practice.

## Issue (MEDIUM)

- Search Result Clarity: The search results page does not clearly indicate the number of retrieved results. Providing the number of retrieved results enhances transparency and assists users in gauging the relevance of their search queries.
- Query Improvement Suggestions: When no results are returned, the system does not offer ideas or options for improving the query based on identifiable problems with the user's input.

## Recommendations

- Clearly indicate the number of retrieved results on the search results page to provide users with an understanding of the search result scope and quantity.
- Offer ideas or options for improving search queries when no results are returned based on identifiable problems with the user's input. This feature assists users in refining their queries and increasing the chances of successful search outcomes.
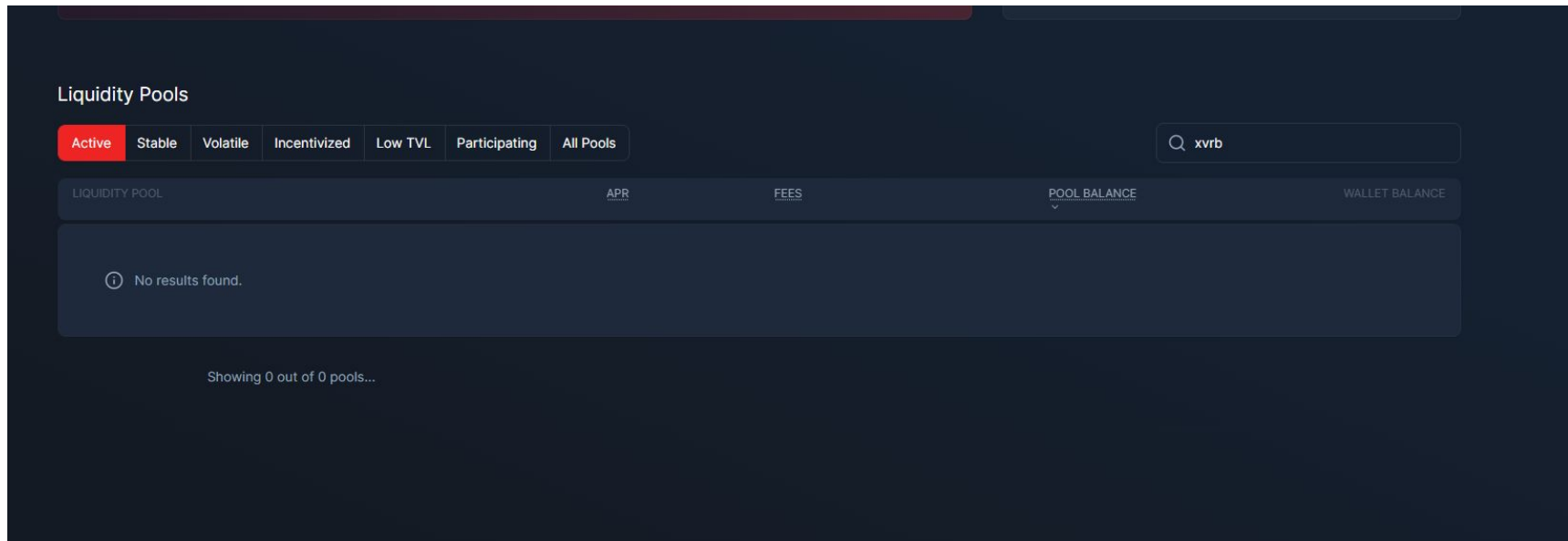
## Issue (LOW)

- The platform does not allow users to set up and save complex searches for regular execution. This absence prevents users from conveniently keeping up-to-date with dynamic content and conducting repetitive searches efficiently. Implementing the capability to save and execute complex searches on a regular basis empowers users and enhances productivity.

## Recommendations

- Make the scope of the search explicit on the search results page, and provide options for users to restrict the search scope if relevant to their task. This clarity empowers users to refine their searches and obtain more precise and relevant results.

*The search results page does not make it clear how many results were retrieved, and if the number of results per page can be configured by the user*

## Liquidity Pools

| Active | Stable | Volatile | Incentivized | Low TVL | Participating | All Pools |

🔍 xvrb

| LIQUIDITY POOL | APR | FEES | POOL BALANCE | WALLET BALANCE |
| --- | --- | --- | --- | --- |

ⓘ No results found.

Showing 0 out of 0 pools...

*If no results are returned, the system offers no ideas or options for improving the query based on identifiable problems with the user's input.*

# TRANSPARENCY OF DATA PROVENANCE

- Does the application clearly indicate which data comes from the blockchain and which does not?
- Are the addresses of the contracts clearly stated?
- Are all blockchain data linked to independent blockchain explorers?
- Is it clear which data comes from oracles?

## Issue (LOW)

- Velodrome fails to clearly indicate actions that could potentially lead to user identification. This lack of clarity raises significant concerns regarding user privacy and data protection.

## Recommendations

- Improve User Identification Disclosure: Clearly indicate any actions or processes that may result in user identification, ensuring users are informed about the potential risks and implications. This is one of the hardest principles to implement as potentially any writing data can help to identify the user (until ZTKSnarks), and as smart-contract and web3 developers we can be unaware of the current and future sophistication of forensic tools, which are also usually closed source solutions.

# TRANSPARENCY AND ACCESSIBILITY OF USER'S INTERACTION HISTORY

- In a future where we interact with hundreds or thousands of Dapps, tokens and probably chains, it makes sense for the user to have a clear history logged of her interactions with each one for future reference.
- Does the application provide a history of all transactions from a given address?
- Is it clear where the history is stored (local or server)?
- Are tools provided to navigate, search, export, and delete the history cache?

## Issue (LOW)

- Wallets already store the history of all transactions, which is a start, but it's only for one account at a time, and it might therefore be hard to figure out if you interacted across several of them.
- It is certainly user friendly for a Dapp to help you remember every interaction you did with it, just like you can go back to "purchase history" in any normal app

## Recommendations

- Implement a dedicated section that provides users with a clear and complete transaction history for a given address. This feature will empower users to review and analyze their past activities, fostering transparency and accountability

# HUMAN READABLE HASHES FORMAT

- Are compact versions of the hashes shown but always showing the initial and end parts?

- Are users allowed to expand the full address/hash?

- Can users easily copy it?

- Is a custom human readable name or text associated with the addresses and hashes?

## Issue (LOW)

- Copy Functionality: Users do not have an easy method to copy addresses or hashes. This absence of a copy functionality creates an additional step for users who need to copy the information for further use or verification. Providing a clear and intuitive copy feature enhances user convenience and efficiency.

## Recommendations

- Implement a user-friendly copy functionality for addresses and hashes. This functionality should be easily accessible and allow users to quickly copy the information with a simple action
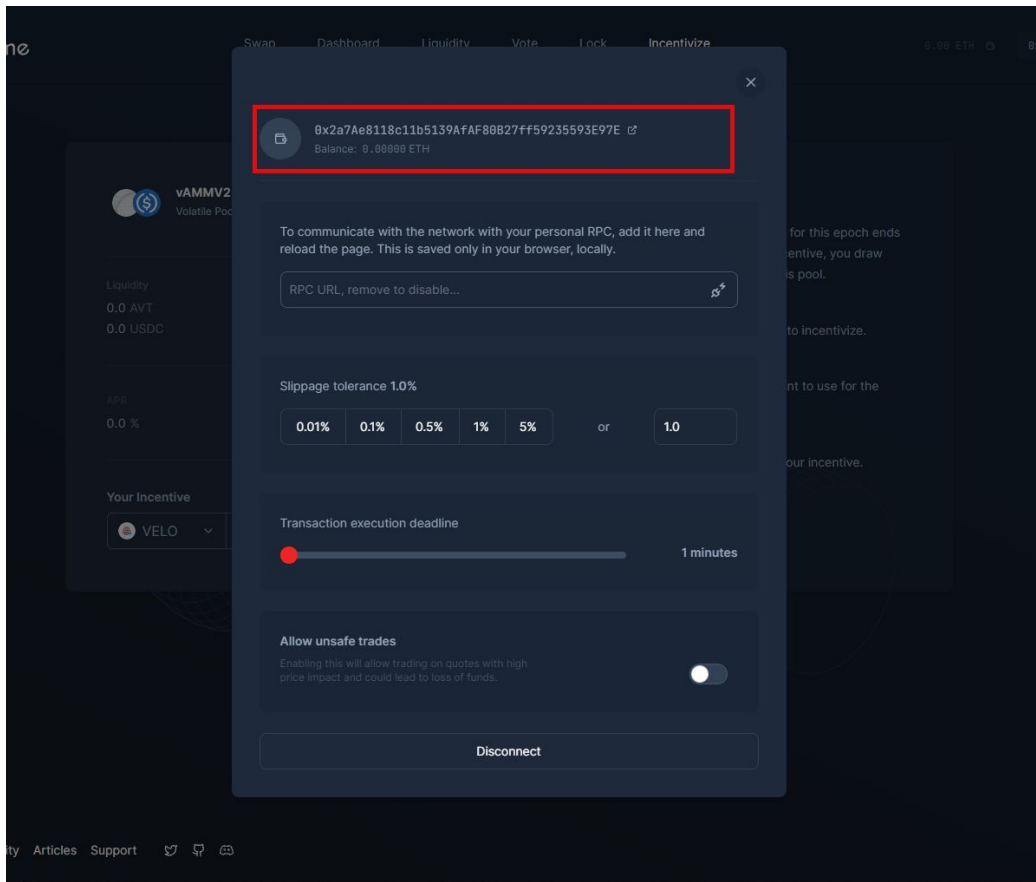
*Users should be able to 1 click on a copy icon to copy full address.*

# PERMANENT NEWBIE MODE

- Is educational information woven into normal interaction?

- Are there 2 or more levels of educational content: Blockchain basics and Dapp specific lingo?

- Is the amount of new things and concepts that the user needs to learn minimized and increased progressively?

## Issue (LOW)

- Velodrome does not provide two or more levels of educational content, covering both blockchain basics and Dapp-specific terminology. This absence of explanatory educational resources limits users' ability to grasp essential concepts and terminology.
- Moreover, the platform does not minimize the amount of new things and concepts that users need to learn, nor does it progressively increase the complexity of educational content, making it challenging for users to grasp unfamiliar concepts.

## Recommendations

- Provide 2 or more levels of educational content: Blockchain basics and Dapp specific lingo.
- This is not a principle just for our time in which newbies are coming on board, it would be a good practice for all apps, especially those that have an internal or contextual lingo or unique mechanism, to add another educational layer: ie. if you are building a token fund manager, don't assume your users know finance and what each term means; instead educate them both to the basics of Blockchain and the basics of finance, at the very least to understand the words you are using.

| Stable & Volatile Trading for Low Fees ⊘ | 100% of Protocol Incentives and Fees Go to Voters ⊘ | Liquid Locked Positions in the Form of NFTs ⊘ |
| --- | --- | --- |
| Permissionless Pools, Gauges, and Incentives ⊘ | Self-Optimizing Liquidity Flywheel ⊘ | Anti-dilution rebases for voters ⊘ |

*Explain site lingo especially for first time users*

# GAS PRICE AND TRANSACTION REVERSAL

- Is what Gas and Gas price clarified?

- Are gas prices ranges suggested and time approximations for the upper and lower bounds clarified?

- Are transaction reversals allowed?

## Issue (SERIOUS)

- Gas price and Gas explanation is not provided
- Gas Price Ranges and Time Approximations: The platform does not suggest gas price ranges or provide time approximations for the upper and lower bounds. This absence of information makes it challenging for users to estimate transaction costs and plan their interactions accordingly. Clear suggestions and time approximations would help users make informed decisions based on factors like network congestion and gas fees.

## Recommendations

- Clarify what is Gas and Gas price
- Gas Price Ranges and Time Estimates: Suggest gas price ranges and provide time approximations for the upper and lower bounds. These are functions of the current congestion of the network.This information will assist users in estimating transaction costs and better planning their interactions based on network conditions and gas fees.

# USABILITY SCORE

# 173 /202

**GOOD**

Users should be able to use this site or system with relative ease and should be able to complete the vast majority of important tasks.

## USABILITY SCORE

Ultimately, the usability score is a quantitative or qualitative representation of how usable and effective a product is in meeting user needs and goals. It helps evaluate the success of UX design and identify areas for improvement to enhance the overall user experience.

# NEXT STEPS

# NEXT STEPS

## Suggestions to improve the  Velodrome experience

**#1**

**Implement Findings -**

follow up the  Implementation of
the Research Findings on live
platform.

# RESOURCES

# SOURCES

Explore attached Unabridged UX audit detailed  findings on Velodrome Finance

- [Expert Review Based On web Usability Guidelines Spreadsheet report](#)

- [Expert review based on Web3 UX Principles by Beltran Spreadsheet report](#)

- [Expert review collation and usability score report on Airtable spreadsheet Report](#)

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