

Market Making and High Frequency Trading on Cardano

— Project Close-Out Report —

MuesliSwap Team

September 2025

Official Close-Out Summary

- **Name of project and Project URL on Fund:**
Market Making and High Frequency Trading on Cardano
<https://projectcatalyst.io/funds/10/osde-open-source-dev-ecosystem/market-making-and-high-frequency-trading-on-cardano>
- **Project ID:** 1000104
- **Project managed by:** MuesliSwap Team
- **Project started in:** October 2023
- **Project completed in:** September 2025
- **Challenge KPIs and how the project addressed them:**
 - **Liquidity:** Delivered a framework that enables decentralized market-making and boosts liquidity across Cardano DEXes.
 - **Decentralization:** By releasing the code open-source, trading bot control is placed directly into the hands of the community.
 - **Adoption:** Provided customizable templates and documentation, lowering barriers to entry for developers and users.
- **Project KPIs and how the project addressed them:**
 - **Open-source trading bot framework:** Designed and published a modular framework compatible with Cardano's eUTXO model.
 - **Integration with MuesliSwap:** Successfully connected the framework to MuesliSwap to demonstrate improved liquidity.
 - **Customizable templates:** Released multiple templates for market-making, arbitrage, and liquidity mining strategies.
 - **Community engagement:** Shared results and progress openly via GitHub and social channels.
- **Key achievements:**
 - Completed all four planned milestones: Research, Framework Development, Integration with MuesliSwap, and Customizable Templates.
 - Released the first open-source trading bot framework specifically designed for Cardano.

- Established a foundation for future extensions into broader DeFi strategies.
- **Key learnings:**
 - Adapting traditional finance market-making models to Cardano requires careful handling of the eUTXO model.
 - Open-source collaboration accelerates iteration and increases adoption.
 - Providing ready-to-use templates greatly lowers the entry barrier for community participation.
- **Next steps for the product or service developed:**
 - Expand support for more Cardano DEX protocols beyond MuesliSwap.
 - Develop advanced strategy modules (e.g., dynamic liquidity provision, cross-DEX arbitrage).
 - Grow community contributions and maintain continuous updates.
 - Explore partnerships with other Cardano projects to strengthen liquidity infrastructure.
- **Final thoughts/comments:**

This project successfully delivered a foundational open-source trading bot framework for Cardano, addressing the critical need for decentralized market-making. By enabling developers and traders to customize and deploy bots, we believe this work will enhance liquidity, foster innovation, and strengthen decentralization in the Cardano ecosystem.
- **Links to other relevant project sources or documents:**
 - GitHub Repository:
<https://github.com/MuesliSwapTeam/muesliswap-market-maker>
 - Close-Out Video:
<https://youtu.be/d6f2KLuWxRQ>

1 Introduction

This report summarizes the development of the first open-source trading bot framework for Cardano. The project was initiated to address the absence of Cardano-compatible market-making bots and to empower the community with tools that enhance liquidity. Our goal was to design a robust, extensible, and open-source framework that supports default and customizable trading strategies.

2 Project Overview and Milestones

The project was executed over a period of five months and structured into four milestones:

1. **Milestone 1 – Research and Requirement Analysis:**
Produced a detailed report analyzing the requirements of trading bots under Cardano’s eUTXO model. Identified challenges and mapped out the framework architecture.
2. **Milestone 2 – Framework Development:**
Designed and released the first version of the open-source trading bot framework. Published the codebase with modular components for extensibility.

3. Milestone 3 – Integration with MuesliSwap:

Integrated the framework with MuesliSwap, demonstrating successful market-making activity and improved liquidity.

4. Milestone 4 – Customizable Templates:

Delivered multiple strategy templates, including market-making, arbitrage, and liquidity mining, enabling users to adapt bots to their needs.

3 Conclusion

The successful completion of this project marks a significant step toward decentralized liquidity provision on Cardano. By creating an open-source, customizable trading bot framework, we have not only improved liquidity for MuesliSwap but also established a foundation for future cross-DEX strategies. We believe this framework will foster greater decentralization, adoption, and innovation within the Cardano DeFi ecosystem.

For further information or to contribute, please refer to the links provided in the summary above.