

# Market Making and High Frequency Trading on Cardano

## — Project Close-Out Report —

MuesliSwap Team

February 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.**