

Date: April 19, 2024
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To: The Catalyst Team

Subject: Change Request - Project ID: 1100212

Dear Catalyst Team,

I am writing to submit a Change Request for project ID 1100212 titled "Open Source Integration of Hummingbot with Cardano for Enhanced DeFi Liquidity". Due to significant findings during our initial research phase, we request a modification of our deliverables.

We initially planned to implement two Hummingbot gateway connectors; one for a spot Decentralized Exchange (DEX) and a second for a perpetual DEX on the Cardano network. Upon comprehensive research, we discovered the absence of any operational perpetual DEX platforms on Cardano. Moreover, following multiple discussions with players in the ecosystem, There appears to be no such DEX close to rollout. Consequently, we propose to replace the perpetual DEX integration with an additional spot DEX integration.

The primary aim of our project is to enhance DeFi liquidity on Cardano through effective integration with Hummingbot. The idea of delivering integration with two materially different DEXs is meant to provide two diverse examples of integrations to facilitate future integrations. The absence of a perpetual DEX on Cardano renders our original deliverable unachievable within the current scope. Pivoting to another spot DEX integration will maintain the project's goal by diversifying the liquidity options available through different spot trading platforms and, as also discovered through our research, provide two materially different implementation examples.

Changes to Approved Deliverables:

Milestone	Before	After
First Milestone	Selection of one spot DEX and one perpetual DEX	Selection of two Spot DEXs to be integrated
Fourth Milestone	Implementation of integration with a perpetual DEX	Implementation of integration with a second spot DEX
Fifth Milestones	Testing and Refinement of integration with a perpetual DEX	Testing and Refinement of integration with a second spot DEX

Table 1: Description of Deliverable Changes

This change will not have any financial consequences nor will it adversely impact our ability to complete the project as per the original proposal. Instead, it aligns our deliverables more closely with the available technology on Cardano, ensuring that the project remains feasible and relevant.

Thank you for considering this change request. We look forward to your positive response and guidance on the next steps.

Shay Gammer
Project Lead

Requested Modifications to Effected Milestones

Milestone 1 - Hummingbot-Cardano Gateway Design & Specification

1. Milestone Outputs

- A milestone report containing two sections -
 - A short analysis of the Cardano DEX ecosystem leading to a selection of ~~one spot DEX and one perpetual DEX~~ **two spot DEXs** to be integrated in the following milestones
 - A detailed project plan for the following milestones given DEXs selected for implementation
- A template configuration file with identified integration parameters

2. Acceptance Criteria

- The milestone report should -
 - Cover the major DEXs currently on Cardano
 - Identify ~~one spot DEX and one perpetual DEX~~ **two DEXs** for integration
 - Provide a specific project plan for the following milestones, given the selected DEXs
- The template configuration file should list all integration parameters that are specific to the selected DEX

3. Evidence of milestone completion - Unchanged

Milestone 4 - Development of Hummingbot Connector for Perpetual Futures **a second DEX**

1. Milestone Outputs

- Initial codebase for the **second** Hummingbot-Cardano ~~perpetual~~ DEX connector
- Configuration documentation and integration guidelines for the ~~perpetual~~ connector
- Unit Tests for the connector

2. Acceptance Criteria

- The provided implementation will demonstrate programmatic interaction with the ~~perpetual~~ DEX to achieve the following (unit tests) -
 - Read price
 - Place an Order
 - Amend / Cancel Order (if applicable)
 - provide / remove liquidity (if applicable)

3. Evidence of milestone completion - Unchanged

Milestone 5 - Testing and Refinement - Hummingbot Connector for Perpetual Futures **the second DEX**

1. Milestone Outputs

- Integration test report highlighting the functionality and identified issues of the ~~perpetual~~ **second** DEX connector
- Regression tests on Refined codebase after addressing issues and improving performance
- Updated codebase and documentation

2. Acceptance Criteria - Unchanged

3. Evidence of milestone completion - Unchanged