# Treasury Withdrawal - BloxBean Java Tools Maintenance and Enhancement

## **Title**

Withdraw ₳99,600 for BloxBean Java Tools Maintenance and Enhancement

## **Abstract**

This treasury withdrawal funds **BloxBean** **Java Tools Maintenance and Enhancement** which will provide the following services:

BloxBean provides several essential Java libraries and tools for building applications on Cardano. These tools—CCL, Yaci, Yaci Store, and Yaci DevKit—require continuous maintenance and feature updates to meet the evolving needs of the Cardano ecosystem.

To meet the growing demands of this project, we require an additional full-time developer for the next 12 months.

The requested funds will support this additional developer, who will focus on the following areas:

1. Ongoing Maintenance:

- Ensure compatibility with new Cardano network upgrades.

- Address bug fixes, performance improvements, and security issues.

2. Feature Enhancements:

- Implement new features based on community feedback.

- Optimize the codebase to improve performance and scalability.

3. Documentation and Developer Tools:

- Expand the documentation with detailed guides, tutorials, and example code to assist developers.

4. Community Engagement & Support:

- Provide ongoing support via GitHub discussions, forums, and discord.

- Engage with developers to understand their needs and ensure tools are optimized for real-world use.

This Treasury Withdrawal is submitted by Intersect on behalf of the vendor. The following sections; Abstract, Motivation, Rationale and Vendor Profile have been sourced from the approved proposal submitted by the Vendor as part of the Intersect budget process.

This treasury withdrawal funds one of 39 proposals to give effect to the approved budget info action for ₳275,269,340, administered by Intersect via gov\_action1u9x73kwufaxa70lfy59g4ynwyrcsaxdcd0gxzzmh67s9fxq4j8hqqk2phgh. The information provided herein is intended to fulfill the spirit of the constitutional requirement for a treasury withdrawal info action by also providing the details of the proposed solution, alignment to the budget, and amount to be withdrawn from the Cardano Treasury.

## **Motivation**

This proposal aims to solve the following problem:

BloxBean has developed a suite of open-source Java tools essential for Cardano developers, including the Cardano Client Lib (CCL), Yaci, Yaci Store, and Yaci DevKit. These tools enable Java developers to interact seamlessly with the Cardano blockchain.

Tools like Yaci DevKit are also used by non-Java teams to quickly set up a local Cardano devnet for testing purposes.

As the Cardano ecosystem evolves, it is crucial to keep these tools up-to-date with the latest network changes, optimize their performance, and provide robust documentation and feature enhancements to ensure continued effectiveness.

While BloxBean projects are supported by a small team of contributors, with the lead maintainer (Satya) being an employee of the Cardano Foundation, the growing demands for ongoing improvements require additional resources.

This proposal seeks funding to hire one additional full-time developer through BloxBean to support the maintenance and enhancement efforts for the next 12 months.

BloxBean Tools Overview

----------------------

\*\*Cardano Client Lib (CCL):\*\* A powerful off-chain Java SDK designed for Java/Scala/Kotlin developers to build and submit all types of transactions to the Cardano Blockchain. Used by many Java and Scala developers in the community.

\*\*Yaci:\*\*

A Java library implementing the Cardano mini-protocol. It allows any Java/Scala/Kotlin application to interact directly with the Cardano blockchain to retrieve real-time blockchain data.

\*\*Yaci Store:\*\*

A modular Java library designed for developers building custom indexing solutions. It also provides out-of-the-box indexers and includes a reward calculation component. It is used in key projects like the Rosetta Java exchange tool.

\*\*Yaci DevKit:\*\*

A comprehensive developer toolkit enabling faster iteration with a custom local Cardano network that can be easily created and destroyed. Used by both Java and non-Java projects.

## **Rationale**

### Project Solution

- Long-Term Support: Ensure BloxBean tools remain compatible with future Cardano upgrades for a seamless developer experience.

- Enhanced Developer Efficiency: Improve tools and documentation, making it easier for developers to build on Cardano using Java and other JVM languages.

- Ecosystem Growth: Support the continued adoption and integration of BloxBean tools by Java developers, benefiting the overall Cardano ecosystem.

- Open-Source: Maintain these tools as open-source projects, encouraging collaboration and contributions from the global developer community.

### Vendor Profile

The BloxBean team has extensive experience in developing and maintaining Cardano-related tools for Java developers. We have been maintaining these tools since 2021 and have been active in the Cardano ecosystem for several years, ensuring the tools remain up to date and functional for the community.

### Contract Management

A written off-chain Legal Contract will be created between the Vendor and the Cardano Development Holdings (CDH), as mandated by the constitution, and will be administered by Intersect. This will include details of the project delivery schedule and dispute resolution.

### Project Delivery

All milestones, acceptance criteria, payment amounts and expected delivery dates will be agreed between the Vendor and Intersect, acting on behalf of the CDH. The vendor will deliver according to the agreed-upon project schedule within the Legal Contract, of which the necessary information will be made public via the budget management platform via transaction metadata.

Defined by the milestones within a Legal Contract, the vendor will submit and attest milestone acceptance to the community, Intersect or 3rd Party Assurer.

Project progress will be monitored via Intersect’s delivery assurance function which will be communicated to the community.

Acceptance of the above work is expected to be supported by a 3rd Party Assurer, who will be responsible for reviewing and signing off the work completed at each project milestone against the corresponding milestone deliverables detailed within the Legal Contract. This work is funded from a portion of this treasury withdrawal.

### Budget Management Tooling

To administrate treasury funds on-chain, Intersect will utilize the treasury management smart contract framework developed by Sundae Labs. The smart contracts have been [extensively tested](https://github.com/SundaeSwap-finance/treasury-contracts/tree/main/offchain/tests) including audits from TxPipe and MLabs. Examples of the usage of these contracts can be seen across mainnet described across Intersect authored [Blog 1](https://www.intersectmbo.org/news/smart-contract-mainnet-demo-a-step-toward-on-chain-treasury-withdrawals), [Blog 2](https://www.intersectmbo.org/news/smart-contract-mainnet-demo-day-two-update) and [Blog 3](https://www.intersectmbo.org/news/smart-contract-mainnet-demo-day-three-update).

Final mainnet validation test can be seen via the Disburse action within transaction: 0f591dc544ae14102dbb4a74d5311a6acffc1772b163d8b7a9656b9525950b17

With the confirmed treasury reserve contract address being: stake17xzc8pt7fgf0lc0x7eq6z7z6puhsxmzktna7dluahrj6g6ghh5qjr

#### Specifics

Intersect will utilize a single Treasury Reserve Smart Contract (TRSC), with many Project-Specific Smart Contracts (PSSC), managed by Intersect. Intersect’s management consists of three ‘admin’ and two Intersect ‘leadership’ roles. An Oversight Committee consisting of five external, independent third-party entities will provide checks and balances on Intersect, and safeguard against errors and unilateral control. The administration of both TRSC and PSSCs will be managed by Intersect, with external oversight on certain actions from the Oversight Committee.

The Oversight Committee consists of Sundae Labs, Cardano Foundation, Dquadrant, Xerberus and NMKR. Their role is to independently verify key administrative actions using on-chain logic, ensuring accuracy and consistency without exercising discretion over governance decisions.

For all details on Intersect’s configuration please see the [**Smart Contract Guide**](https://docs.intersectmbo.org/cardano-facilitation-services/cardano-budget/intersect-administration-services/smart-contracts-as-part-of-our-administration) on the knowledgebase.

The high level permissions are as follows:

* TRSC Fund and PSSC Modify
  + Two of the three Intersect admins, two of the five trusted entities and one of the two Intersect leadership sign-off must authorize
* TRSC Disperse
  + Two of three Intersect admins, three of five trusted entities and two of two Intersect leadership sign-off must authorize
* TRSC Pause and Resume
  + Two of three Intersect admins, and one of two Intersect leadership sign-off must authorize
* TRSC Sweep
  + One of three Intersect admins, and one of two Intersect leadership sign-off must authorize
* TRSC Reorganize
  + Two of three Intersect admins and three of five trusted entities must authorize

#### Processes

Upon enactment of this governance action, funding for this project will be directed into the TRSC’s stake account. All instances of TRSC and PSSC can not be staked with a SPO and will be delegated to the auto-abstain predefined DRep. From here funds will be withdrawn into a UTxO remaining at the TRSC.

When the Legal contract is prepared and the vendor is ready, funding for this project will be transferred using the Fund action to a PSSC. All milestones will be outlined within the metadata.

A dashboard will be available for the community to audit the TRSC or PSSC and track metrics related to this withdrawn ada as well as being immutably verifiable on chain.

The subsections; Contract Management, Project Delivery, and Budget Management Tooling described above cover the constitutional requirements specified in Article IV section 4 and 5.

## **References**

Java Tooling for Cardano dApps Development YouTube

* <https://www.youtube.com/watch?v=L1_E9Bc-f_Y>

Yaci DevKit Demo YouTube

* <https://www.youtube.com/watch?v=lY7Ceuyc5qw>

BloxBean GitHub Organization

* https://github.com/bloxbean

Project Proposal In Ekklesia

* <https://2025budget.intersectmbo.org/ballots/680d1b63565577986442d123/proposals/680d1b63565577986442d214>

Approved Budget Info Action submitted by Intersect via GovTool

* https://gov.tools/outcomes/governance\_actions/e14de8d9dc4f4ddf3fe9250a8a926e20f10e99b86bd0610b77d7a054981591ee#0

Details of all successful proposals (CSV)

* ipfs://bafybeicwrop4q7xvnyjdd5drumbe56sqtm5lbe2ul3c262zt4hgguzdycm

Automating Accountability: Cardano’s Smart Contract Framework Blog

* ipfs://bafybeihqx4ae72z7suqfnxrpqpqithp43cai7o2uuewnqtezgaoyc3ptyq

Sundae Labs Budget Management Smart Contracts Github Repository

* https://github.com/SundaeSwap-finance/treasury-contracts

Budget Management Smart Contracts TxPipe Audit Report

* ipfs://bafybeiccnwejbgj43wo6hrlseckkkmprtoqc5cfuy2hesm6c6yealwho3e

Budget Management Smart Contracts MLabs Audit Report

* ipfs://bafybeiah5fnjhda5hemj3qvaehc4mre3qllqzw2l7mkdsguytn4ftgafw4

## **Authors**

* Intersect