



Sarcophagus — August 2023- January 2024 Proposal

▼ Current SOW Updates

2023 SOW Execution

Decent made 1 proposal to Sarcophagus DAO in 2023, which included funding for work to create the Sarcophagus SDK and ship v2 to Ethereum Mainnet. Below are updates on progress made from the initiatives identified:

Smart Contract Audit was conducted

Prior to the Mainnet launch, a second Decent team completed an internal review and audit of the contracts:

As a result of this review, some improvements were made to the contracts prior to launching on mainnet.

Sarcophagus v2 was shipped to ETH Mainnet

The contracts, UX + Archaeologist service were all launched on ETH mainnet. In addition to these launches, a few other pieces of key architecture were updated or created to support the launch:

1. Other updates made to the contracts:
 - a. Additional gas considerations came as a result of static analyzer tools
 - b. Tweaks to the arch bond system were put in place

- c. An additional admin role was added to allow for contract ownership renouncement
2. Archaeologist uptime monitor and statistics tracker — show/hide archs in the UX and track uptime stats for archs.
3. A subgraph for supplying indexed data from the mainnet contracts
4. Improvements made to the archaeologist service for RPC caching + copy updates and improvements to the Embalmer webapp
5. Updated version for the Sarcophagus contracts package:
<https://www.npmjs.com/package/@sarcophagus-org/sarcophagus-v2-contracts>

Sarcophagus SDK v1 was completed

Example apps are included for both server (NodeJS) + client (React).

<https://github.com/sarcophagus-org/sarcophagus-v2-sdk>

The SDK provides a toolset for both front-end and back-end developers to build on top of the Sarcophagus protocol. The embalmer webapp was used as a test-case for the SDK and the SDK was integrated into the webapp. An example NodeJS app was also created as reference for integration.

Testnet Beta Completed + Airdrops

Data was collected from both Archaeologists on testnet + Embalmer feedback to see where issues and bugs were, and the feedback was used to improve the protocol.

A contract to distribute testnet initiatives to testnet participators was deployed, and over 50% of the testnet funds have been claimed.

▼ Proposal

With Sarcophagus v2 being launched on Mainnet, there are some important development initiatives and technical support that will help improve Sarcophagus and accelerate adoption of the protocol. This proposal walks through resourcing and

budget requests, and the next section outlines the recommended development initiatives for the second half of 2023.

Resources

1 developers on retainer full-time, and 1 engineering manager on retainer part-time, through January 31, 2024.

The developer's daily work will be managed by managers at Decent, but their focus and goals will be set by the needs of Sarcophagus DAO.

These developers will also be available to help with any Community technical needs, such as technical support.

Budget

36k DAI x 6 months

= 216k DAI

▼ Recommended Development Initiatives

Technical Support

As new users and clients get onboarded into the ecosystem, Decent can provide developer support to respond to support requests coming from the internal Sarcophagus team as well as from external teams. Bug fixes, technical support and improvement features would all be part of this initiative.

Documentation Updates

An audit of documentation will be done for all Sarcophagus repos, and then work on moving docs to a central location for easy access and onboarding guides. This will help new users and actors in the ecosystem to quickly participate and get involved.

SDK Integration + Improvements

Decent will help onboard and train teams and developers building with the SDK, including those participating in the hackathon. As people and teams use the SDK, they will have questions and possible asks for improvements to the SDK. New feature requests can be built out, and we will also train external teams on how to contribute to the SDK if they would like to create new functionality themselves.

ETH → SARCO auto-swapper

Integrate 0x API to facilitate optional auto-swapping of ETH to SARCO so the user does not need to already have sarco to use the webapp. This could also be added to the archaeologist service.

Simple Embalmer

Build an alternate embalmer version (and treat current version like “advanced” version), which aims to automate most of the process (arch selection, bundlr funding, ETH → SARCO auto-swapping, etc) so the user can create a sarcophagus on a single basic form (3 or less inputs).

Archaeologist UX

A UX dashboard can be built for archs to monitor their stats and potentially do administrative tasks for the arch from their UX. This dashboard could live inside the current webapp or we can create a separate one.

Archaeologist Notifications

Setup notification system for archaeologists, to help notify them via channels like email/discord/etc when events happen to their archaeologists. This can be a combination of on-chain analytics, as well as in-service updates (i.e. if their arch service restarts or shuts down unexpectedly).

Layer 2 Launch

If a Layer2 ecosystem partnership emerges with Sarcophagus, the contracts can be deployed with any modifications necessary on the Layer 2. The arch service/SDK can also have instructions/modifications to support the Layer 2.

Offline Inner Layer Decryption Tool

Allow user to decrypt their Sarcophagus without being connected to internet. The team is actively working on completing this currently (and may be shipped before this SOW) starts, but if it isn't then this will be shipped in 3Q 2023.

Inner Layer Decryption UX Research

Right now a user must provide a private key to decrypt the inner layer. Having to retrieve and use a private key (and paste in clear text somewhere) is not good UX. Time should be spent to see if there is a different way to approach the inner layer encryption. The inner layer is separate from the contracts (which just facilitate the outer layer), so updates to the UX shouldn't (theoretically) require any contract changes.

Account Abstraction / Social Recovery

With EIP-4337 being officially adopted on mainnet, this opens up some potential new uses of Sarcophagus as well as alternative products that Sarcophagus can offer. Social recovery is one of the most touted functionalities AA offers, allowing wallet users to recover account access in the event their seed is lost. A wallet contract can be built out with this functionality and offered as part of Sarcophagus's suite of products — we could also possibly look into a partnership with a pre-existing AA wallet, like Argent.