Executive Summary

- Objective

: Implement a framework for executing Lido DAO's on-chain governance voted-in actions forwarded from Ethereum to outer networks to minimize or exclude involvement of multisigs, committees, and intermediates.

- Context

: For the recognized wstETH deployments on Layer 2 (L2) networks, Lido DAO currently utilizes established processes that employ canonical bridges, ensuring security congruent with the underlying rollups.

- Proposal

: This discussion aims to explore the adaptation of the governance infrastructure (a.DI) developed by BGD Labs to forward Lido DAO governance decisions (originated from the Lido DAO Agent contract on Ethereum) to external non-L2 networks, such as BNB Chain, to mitigate risks of third-party bridge services misoperation by utilizing bridge aggregation for messages.

Abstract

The a.DI system by BGD Labs serves as a cross-chain communication layer designed to facilitate secure interactions across different blockchain networks with minimal exposure to bridge-related vulnerabilities. This system is instrumental in AAVE's governance v3 as a secure message bus and has undergone multiple securityaudits and formal verification rounds.

However, a.DI doesn't contain a built-in execution module out of the box and requires one to be implemented supporting the interface needed. It's suggested to derive [BridgeExecutorBase

](https://github.com/lidofinance/governance-crosschain-bridges/blob/master/contracts/bridges/BridgeExecutorBase.sol) for the governance motion payload format to be compatible with the one used for L2 networks forwarding by the Lido DAO.

Scope of pilot implementation

Immediate goals

- Extend Lido DAO governance functionalities to pass executable decisions on BNB Chain

Proposed Adapter Configurations

- Quorum Requirement: 3/4
- Proposed Bridges: CCIP, HyperLane, LayerZero, Wormhole

Status

The proposed contractual solution shaped as a LIP, tailored for Lido deployments, is under audit byMixBytes(). Lido contributors anticipate sharing the comprehensive audit report on this forum shortly.

Testnet

Testnet deployments connecting the DAO Agent on Ethereum Sepolia and CrossChainExecutor on BNB Sepolia Testnet (Anchored to Sepolia) are available here. The deployments resemble the proposed adapter configurations.

Next steps

Should this proposal be considered favorably, Network Expansion Workgroup recommends to include a.DI to the scope of the follow-up wstETH bridged to BNB recognition proposal to avoid msig-based administration of the token and its bridge endpoints for wstETH on BNB deployments on Mainnet as early as possible.

Further details will be included in the corresponding snapshot proposal(s).

Feedback Request

Community feedback on the feasibility, security concerns, and any potential improvements to this framework to ensure robust and decentralized governance decision forwarding from Ethereum to diverse blockchain environments would be highly appreciated.