Allocation System technical specification

The Allocation System is a key innovation of Endgame and SubDAOs that, if executed right, will redefine what's possible in terms of efficiency and flexibility through fully decentralized governance processes.

This post is to share the preliminary design of the Allocation System for feedback, so that all input can be incorporated before I add a propose of the design and requirements to the Protocol Scope through a mip102 edit in order to prioritize the work with the Ecosystem Actors. As with everything else, further changes should of course also be expected.

The Allocation System will be launched in two phases.

The Phase 1 Beta Launch version of the Allocation System, in effect before the AllocatorDAOs launch, will be managed by the MakerDAO Facilitators, based on advice from the Allocator Advisors.

The Phase 2 SubDAO Launch version of the Allocation System will see each Allocation System transition to the control of an AllocatorDAO Proxy, alongside the transition of the attached Allocator Advisor, so that each of the 4 AllocatorDAOs will have their own fully functional and live-tested Allocation System with an attached and experienced Advisor from the moment they launch.

The Allocation System is split up into two parts:

1. The Core Allocation System Layer which contains the immutable core components of the Allocation System that each AllocatorDAO needs to function
2. The Deployment Layer which is customizable and individual to each AllocatorDAO, and contains all of the logic and mechanisms related to deploying the generated NewStable into the various market opportunities such as market making, defi protocols and Real World Assets.

In order to make sure all AllocatorDAOs have some level of basic functionality, this post specifies a number of default smart contracts that will be made available for all 4 of the Allocation Systems as a part of their Deployment Layers. All additional Deployment Layer functionality must be prioritized, funded and built individually by the AllocatorDAOs themselves.

Core Allocation System Layer

The Core Allocation System Layer are the smart contracts that can be considered a part of the Maker Core Protocol, and that are immutable and present in all Allocators. The function of these smart contracts is to act as the infrastructure that enables the Allocator's to generate Dai and allocate it to collateral based on their individual Deployment layers.

Allocator Vault

The Allocator Vault is a vault that is individual to each AllocatorDAO, and controlled by the Allocator's SubDAO Proxy.

It has infinite dummy collateral, allowing the Allocator to, technically, generate as much Dai as necessary.

The Allocator Vaults have dynamic Debt Ceiling modification modules (IAMs) that are set to a medium "ttl" and medium "gap" value resulting in a throttling effect on the amount of NewStable that can be generated at once. The IAM acts as a circuit breaker in case of technical problems with the AllocatorDAOs Deployment Layer, limiting the potential for damage.

Base Rate Module

The Base Rate Module is a smart contract that can modify the SFs of all 4 Allocator Vaults simultaneously, so they always have the same stability fee.

The Base Rate Module also modifies the DSR, based on a spread against the Base Rate.

At Phase 2 the Base Rate Module is extended with a Rate Feedback Mechanism system that modifies the base rate based on a NewStable/USDC oracle.

This feature is not present at Phase 1. Instead the Base Rate is set manually based on the Stability Scope.

Allocation Buffer

The Allocation Buffer is the smart contract that the Allocator Vaults can draw NewStable into. Once the NewStable is in the Allocation Buffer, it is immediately distributed through funnel modules that can be hooked up to the Allocation Buffer.

Each of the 4 AllocatorDAOs have an Allocation Buffer each, paired with their individual Allocator Vaults.

Deployment layer

The Deployment Layer are configurable smart contracts that are mutable and individual to each Allocator. They have a few preset starting modules that ensure all AllocatorDAOs can perform basic operations, including market making NewStable on Uniswap, and deploying centralized stablecoins into real world assets. AllocatorDAOs can add extra modules to it, including funnel modules to new markets and yield opportunities.

Funnel Module

A Funnel Module is a smart contract that takes funds from the Allocation Buffer and deposits or sends it somewhere, based on some sort of automated logic, such as algorithms, oracle input, governance vote, or on-chain data. The Funnel Module can be thought of as the spiritual successor to the Direct Dai Deposit Modules that MakerDAO has successfully been operating for years to automatically allocate collateral into Aave and other lending markets.

Default Module #1:

Funnel Module to UniV3 NewStable/USDC

This is a funnel module that takes NewStable from the Allocation Buffer, swaps the appropriate amount to USDC and then adds liquidity to the NewStable/USDC UniV3 market.

Default Module #2:

Funnel Module to UniV3 NewStable/USDT

This is a funnel module that takes NewStable from the Allocation Buffer, swaps the appropriate amount to USDT and then adds liquidity to the NewStable/USDT UniV3 market.

Default Module #3:

Funnel Module to Spark Protocol

This is a funnel module that takes NewStable from the Allocation Buffer and deposits it to the NewStable market on Spark Protocol, based on rates, total exposure, and other parameters determined by the AllocatorDAO, in compliance with the Stability Scope.

Decentralized Coinbase Custody USDC

A hypothetical smart contract (that may or may not be possible depending on Coinbase) built on top of Coinbase Custody that would allow AllocatorDAOs to gain marketing rewards for any USDC they hold with Coinbase Custody without being exposed to additional centralization risk. USDC can be deposited to and instantly withdrawn from the Decentralized Coinbase Custody USDC smart contract by any AllocatorDAO, and their balances are calculated separately so they can fully automate deposit/withdraw, and the earned yield is distributed manually to each AllocatorDAO based on an offchain calculation.

It may not be possible to actually build the Decentralized Coinbase Custody USDC solution with the desired level of decentralization, in which case the AllocatorDAOs will have to just hold USDC directly, and more aggressively allocate into RWA assets such as money market funds.

Default Module #4:

Funnel Module to Decentralized Coinbase Custody USDC through UniV3

This is a funnel module that takes NewStable from the Allocation Buffer and swaps it through the NewStable/USDC UniV3 market to accumulate USDC, and the USDC is then deposited into the MakerDAO Decentralized Coinbase Custody smart contract (assuming it will be built).

Arranged Structure Conduit

Arranged Structure Conduit Smart Contracts allow whitelisted accounts to deposit USDC. The Conduit has an Arranger attached to it (modifiable by Maker Governance), and the Arranger can either return the USDC to a whitelisted account, or send it to the Arranged Structure for allocation into RWA.

Arranged Structure Conduits can also take “withdraw requests”, where a whitelisted account makes a transaction to request a withdrawal. This causes the Arranged Structure to sell assets and return USDC to the Conduit, and the Arranger will then push the USDC to the whitelisted account that requested the withdrawal. This should also include logic to cancel withdraw requests.

Arranged Structure Conduits are managed by an AllocatorDAO. The managing AllocatorDAO can use the Arranged Structure Conduit freely, and can set a Conduit Fee that other AllocatorDAOs must pay if they want to use the Arranged Structure. The managing AllocatorDAO can also change the Arranger for the Arranged Structure.

Default Module #5:

Funnel Module from Coinbase Custody USDC to Clydesdale Conduit

A funnel module that withdraws USDC from Coinbase Custody and deposits it to the Clydesdale Conduit.

(This is the currently operational Arranged Structure that started from MIP65)

Default Module #6:

Funnel Module from Coinbase Custody USDC to Andromeda Conduit

A funnel module that withdraws USDC from Coinbase Custody and deposits it to the Andromeda Conduit, or the reverse.

(This is the soon-to-be operational Arranged Structure that started from MIP90)