

C O S M O

The Native Execution Layer for the SupraOS Agent Economy

A specialized TRANSACT-class capability designed to serve cross-chain RFQ settlement inside SupraOS Mission Control workflows, anchored to Supra L1 by audited Move modules and a \$COSMO-staked operator council.

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Supersedes v1.4, v2.1, v3.0

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EOM DENKT. COSMOCLAW HANDELT. \$COSMO BINDET BEIDES.

1. Abstract

COSMO is a native Supra protocol designed to give autonomous agents a place to settle. COSMO, the protocol's reference execution provider, is built to plug into SupraOS Mission Control as a TRANSACT-class capability — the trading and DeFi-execution function that a Co-CEO, Co-CRO or Co-CFO delegates to when an on-chain action is required, pending final integration access and technical alignment with Supra Labs.

Above COSMO sits the Empire of Minds (EOM) — a swarm of eight specialized agents running inside SupraOS, chain-agnostically sensing markets, planning execution, and governing the protocol. EOM thinks. COSMO acts. \$COSMO binds both.

The settlement layer runs as audited Move modules on Supra L1, with cross-chain reach delivered by SupraFX rather than proprietary bridge contracts. A 21-of-30 council of \$COSMO-staked operators verifies cross-chain receipts and earns protocol fees. The Move-native implementation has cleared a nineteen-finding ultrareview and is ready to deploy bundled with the SupraFX integration. Whoever has the best workflows wins — and ours are designed to run natively on Supra.

2. Introduction

The agent economy is no longer a thesis. SupraOS Mission Control ships a working multi-agent operating system with a Co-CEO, Co-CRO, Co-CMO and Co-CFO hierarchy, persistent memory, a policy engine, and a SaaS deployment tier announced in April 2026. What it does not ship out of the box is a specialized DeFi execution layer, a settlement protocol with cryptoeconomic security, or a token-incentive system for external execution providers. That gap is where COSMO is designed to operate.

In the SupraOS Bot Builder taxonomy of WHEN, GET, THINK, PROCESS, ACT, TRANSACT and FLOW nodes, COSMO is designed to serve as a TRANSACT provider — the node that turns an agent's intent into an on-chain settlement on a network the calling agent does not have to understand. Above it, the EOM swarm provides the THINK and GET layers: eight specialized agents sensing markets, evaluating opportunities, and signalling execution intent. The \$COSMO token is the access, settlement, and reputation primitive that holds this entire layer accountable.

This document supersedes whitepapers v1.4, v2.1, and v3.0. It reflects two key strategic decisions made in April 2026: the native-stack pivot of April 23 (Move-canonical architecture, Solidity stack retired to open-source reference), and the elevation of EOM from a Move-native contract layer to a SupraOS-native agent swarm operating chain-agnostically above COSMO.

3. The Pivot: Why Native Supra — and Why One Stack

Until the OVC and AutoFi documentation landed, building settlement as an external coordinator made sense. The chain offered cheap state and fast finality; it did not offer atomic multi-step execution, MEV-resistant trigger scheduling, or verifiable off-chain computation as first-class primitives. Coordination logic had to live somewhere — and the lowest-friction somewhere was a Node.js process

polling the chain.

That argument is now structurally inverted. AutoFi gives Move modules the ability to schedule conditional, atomic, MEV-resistant trigger sequences directly on Supra L1. OVC anchors model inference and aggregation results to the chain with verifiable proofs. The combination removes the structural rationale for an external execution layer in any settlement-critical flow.

The Solidity stack — RFQEngine.sol, MakerVault.sol, COSMOSstaking.sol — served its purpose. It validated the RFQ state machine, the EIP-712 quoting pattern, the council model, and the end-to-end settlement flow across multiple counterparties. That work is done. The codebase is published as an open-source reference for other developers building on SupraEVM. It is not a second production stack; it is a documented learning artefact. The execution layer was known as ClawBot, then CosmoClaw — it is now simply COSMO, the eighth member of the EOM swarm.

The canonical stack going forward is Move-native, with cross-chain reach delivered by SupraFX. One codebase, one audit surface, one deployment event — bundled with the SupraFX integration when that access is confirmed.

4. Architecture: EOM → COSMO → Settlement

The protocol is three concentric layers, each with a distinct responsibility:

4.1 EOM Swarm — The Intelligence Layer

Empire of Minds is a swarm of eight specialized agents running inside SupraOS Mission Control. Originally conceived as soulbound Move contracts, EOM is elevated here to its natural home: SupraOS agents, chain-agnostic, NFT-gated by COSMO Hero NFTs. The swarm is not a loose collection of independent agents — it is a closed, self-reinforcing loop in which each agent has a defined input, a defined output, and a clear dependency on the agents around it.

The loop runs as follows:

Oracle Node	Validates price feeds from Supra DORA oracles. Foundation of the loop – without reliable data, no downstream agent can reason correctly.
Arbiter	Scans Atmos pools and external chain prices for raw spreads. Pure sensing, no judgement. Only as good as the Oracle beneath it.
Strategist	Evaluates each opportunity: does this spread cover costs, inventory, and risk appetite? Produces actionable signals – or discards noise.
Liquidator	Receives confirmed signals and triggers COSMO as the TRANSACT provider.
COSMO	Executes the RFQ settlement on-chain.
Keeper	Archives every settlement outcome as a labelled training example. Closes the loop by feeding the Learning Layer – which sharpens the Strategist's next decision.

Oracle and Keeper are the silent enablers. Oracle is the precondition for everything above it — without validated price data, Arbiter sees noise and Strategist decides blind. Keeper is the protocol's memory — without archived outcomes, the Learning Layer has nothing to learn from, and execution quality

stagnates. Together they form the temporal backbone of the loop: Oracle anchors the present, Keeper compounds the past.

Governance sits above the execution loop. Kahless and Gov. Architect operate at the Co-CEO level, setting policy, exercising veto power, and executing parameter changes through on-chain governance. Liquidity General manages vault inventory as a parallel function — ensuring COSMO always has the maker-side capital to accept inbound RFQs alongside the opportunities the Arbiter surfaces.

Agent	Node Type	Role in Loop
Oracle Node	GET	Price feed validation — loop foundation
Arbiter	GET	Raw spread sensing across pools and chains
Strategist	THINK	Opportunity evaluation, signal generation
Liquidator	ACT	Signal execution — triggers COSMO
Liquidity General	ACT	Vault inventory management
Keeper	THINK + ACT	Outcome archiving, Learning Layer feed
Kahless	FLOW	Governance root, 24h veto
Gov. Architect	FLOW	On-chain proposal execution

4.2 COSMO — The Execution Provider

COSMO is the TRANSACT provider. It receives signals from the EOM swarm (or direct calls from other SupraOS agents) and executes RFQ settlement on-chain. It does not reason, plan, or govern — those responsibilities belong to the layers above. Its job is to be the boring, reliable arm that executes faithfully and reports outcomes.

COSMO is designed to serve as the TRANSACT-class capability for SupraOS-compatible workflows pending final integration access and technical alignment with Supra Labs. The SaaS deployment tier of SupraOS makes this positioning particularly relevant: SaaS users cannot host private keys or execution endpoints, making specialized execution providers the natural path to DeFi capability.

4.3 Settlement Layer — Move-Native

The settlement layer is audited Move modules on Supra L1. AutoFi triggers provide atomic, MEV-resistant execution — conditional on-chain transactions that fire when their predicate is satisfied, inside the same block as their dependencies. There is no inter-block window where a partial state can be observed or sandwiched.

Cross-chain reach is delivered by SupraFX, not by COSMO-owned bridge contracts. This means COSMO's security perimeter is 'council bond + per-leg chain finality' -- not 'bridge contract liveness.' The council's job is attestation, not custody.

4.4 The RFQ State Machine

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createRFQ      Taker submits an RFQ on chain.
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4.5 Cross-Chain Reach

Taker support at v3.1 launch covers Supra (Move), SupraEVM, BNB Chain, Base, AVAX, and Sei — consumed via SupraFX. Sui and Solana are out of scope for v3.1 and revisited in a subsequent version.

4.6 DAG-Native Execution

A single RFQ has serial dependencies (taker leg precedes maker leg), but a multi-RFQ batch is naturally parallel. Each RFQ becomes one DAG node; only the pre-funding step on the maker side is shared. COSMO is designed to run cleanly inside SupraOS's DAG-parallel execution model — parallel settlement legs are a first-class case, not an afterthought.

5. The \$COSMO Token

\$COSMO is the access, settlement and reputation primitive of the protocol. It is not a fee discount token and does not exist for governance theater.

Utility

Every settlement charges a small execution fee, denominated in \$COSMO, split three ways:

- **Burn** — protocol-level deflationary pressure proportional to volume.
- **Vault Stakers** — yield to anyone who stakes \$COSMO on a specific operator's ClawAgentNFT. NFT ownership is not required to stake.
- **Council** — recurring revenue to the 21-of-30 council members for attesting cross-chain receipts.

Staking and Reputation

Anyone can stake \$COSMO on any operator. Yield is reputation-weighted: a high-reputation operator attracts more stake, captures more flow, and earns more for their stakers. A -33% reputation event on a missed leg cuts the stake's yield share until reputation recovers. This is a market for execution quality, denominated in \$COSMO.

Long-term, \$COSMO stakers also gain access to signals from the EOM Arbiter — the pool-scanning agent that identifies spread opportunities. Staking is therefore not only a yield mechanism but an access mechanism to the protocol's intelligence layer.

Workflow Settlement

SupraOS Mission Control's Cost Counselor already surfaces per-workflow model spend in real time. This opens a concrete door for \$COSMO as the settlement asset for execution fees inside SupraOS workflows. The settlement-token policy for the SaaS tier is in active alignment with Supra Labs and is intentionally left open in this draft; the technical surface is ready either way.

Governance

Council membership, fee parameters, and chain-support additions sit behind on-chain governance, anchored in the Imperium Protocol — Supra Labs' cryptographic delegation framework for autonomous AI agents. Voting weight is staked \$COSMO, time-decayed to disincentivize last-minute capture.

Migration

The existing \$COSMO contract migrates 1:1 into the v3 utility contract. Holders sign one transaction; balances move; the legacy contract is frozen. No vesting cliffs are added at migration.

6. Learning Layer

Every settlement decision — whether successful or not — produces a labelled training example. Operators improve their quote models locally on the basis of their own outcomes. The protocol aggregates these improvements without centralising private operator data.

The result: COSMO becomes more accurate with every settlement — as a protocol, not only as an individual operator. Execution quality compounds over time. This is the feedback loop that turns

settlement volume into a structural moat.

7. Roadmap

The roadmap is organized around the SupraFX integration, not arbitrary calendar quarters. Milestones marked with a dependency do not move until that dependency is met.

Window	Milestone	Dependency
Q2 2026	SupraFX integration alignment with Supra Labs; SaaS-tier policy locked	Joshua DeFi reveal
Q2 2026	Move-stack canonical deploy on testnet, bundled with FX wiring	SupraFX API access
Q2 2026	\$COSMO 1:1 migration contract published, audited, opened to holders	Audit slot
Q2 2026	EOM swarm deployed in SupraOS; chain-agnostic operation confirmed	SupraOS alpha access
Q3 2026	Council bootstrapping: 21 of 30 seats filled; first slashing event lived	Operator pipeline
Q3 2026	Arbiter signals live: \$COSMO stakers receive opportunity feed	EOM swarm stable
Q4 2026	SaaS-tier integration with Mission Control as TRANSACT provider	SaaS GA
Q4 2026	Workflow Settlement live: \$COSMO as execution-fee asset inside SupraOS	Token policy locked

Anything past Q4 2026 is intentionally not promised.

8. Risks and Honest Caveats

The honest caveats are short and named.

SupraOS access

SupraOS / SupraFX alpha access from Joshua Tobkin is pending. There is no signed integration agreement and no SDK contract. COSMO is designed to become a TRANSACT-class provider for SupraOS-compatible workflows — this is the thesis the alpha cycle will validate or invalidate.

AutoFi maturity

AutoFi is new. The migration from EVM-coordinator to Move-AutoFi is staged, and the open-source EVM stack exists as a documented fallback reference precisely because AutoFi has not yet seen its first protocol-scale incident.

Cross-chain trust

Receipts on the taker side depend on per-chain finality and on the council's honest reading of those receipts. The 21-of-30 stake-and-slashing model bounds the trust assumption — it does not eliminate it. A coordinated 11-of-30 collusion remains a survivable but expensive attack.

Agent economy timeline

The revenue thesis assumes Co-CFOs and the Mission Control hierarchy reach mainstream usage in 2026 and 2027. If that adoption curve slips, settlement volume slips with it. We are sized for a longer ramp than the bull case implies.

Pending DeFi pattern

The DeFi pattern Joshua will demonstrate in his next Mission Control video has not yet been published. The final integration shape between COSMO and that pattern is therefore pending. The protocol is built to adapt; the brand positioning is the part that is exposed.

Settlement-token policy

Whether \$COSMO can serve as the SaaS-tier workflow-settlement asset, or whether SupraOS will require a stablecoin denomination, is in active alignment with Supra Labs. The whitepaper does not promise either outcome.

9. Conclusion

EOM thinks. COSMO acts. \$COSMO binds both.

COSMO is designed to be the boring, reliable TRANSACT-class capability that an autonomous Co-CFO calls, a SaaS-tier Co-CEO trusts, and a DAG-aware orchestrator parallelises without thinking about. The EOM swarm provides the intelligence layer that makes it more than a dumb executor — eight specialized agents sensing markets, planning execution, and governing the protocol from inside SupraOS itself.

\$COSMO's job is to make sure the operators running that capability are honest, accountable, and paid in a unit that tracks the protocol's own success. An audited Move implementation, a defined council role, a learning layer that compounds with every settlement, and a clear path into SupraOS Mission Control — that is the foundation v3.1 ships on.

Whoever has the best workflows wins — and ours are designed to run natively on Supra.

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