







# Arxive

TEAM NAME: **Genesis**

DOMAIN: **Blockchain & Decentralized Solution**

## PROBLEM STATEMENT:

# Smart Contract Lifecycle Management on Aptos

-  **No Efficient Archival** – Unused smart contracts remain on-chain, consuming storage.
-  **Lack of Lifecycle Management** – No built-in tools for modifying, tracking, or archiving contracts.
-  **Cumbersome Deployment** – Requires multiple terminal commands, making the process inefficient.
-  **Storage Constraints on Aptos** – Move's resource-oriented model makes contract deletion difficult.
-  **Immutability vs. Scalability** – Removing/modifying contracts conflicts with blockchain finality & verifiability.
-  **No Unified Developer Tooling** – Developers lack a single platform to manage smart contracts seamlessly.



### Why this important?

- ✓ **Reduces blockchain bloat** by optimizing storage usage.
- ✓ **Improves developer experience** with easy contract deployment & management.
- ✓ **Enhances security & verifiability** while maintaining Aptos's core principles.
- ✓ **Ensures long-term scalability** for dApps by enabling structured contract management.

**\*\*Aptos lacks a comprehensive smart contract management system—[Arxive](#) fills this gap!**



# Arxive: Revolutionizing Smart Contract Management

- ❑ A decentralized smart contract lifecycle management platform built **on & for Aptos**.
- ❑ Enables developers to archive, manage, and retrieve smart contracts seamlessly.
- ❑ Uses zero-knowledge proofs (zk-SNARKs) to ensure verifiable archival without breaking immutability.
- ❑ Balances on-chain and off-chain storage, reducing storage overhead and gas costs.
- ❑ Optimized for Aptos ecosystem.

## How it works?

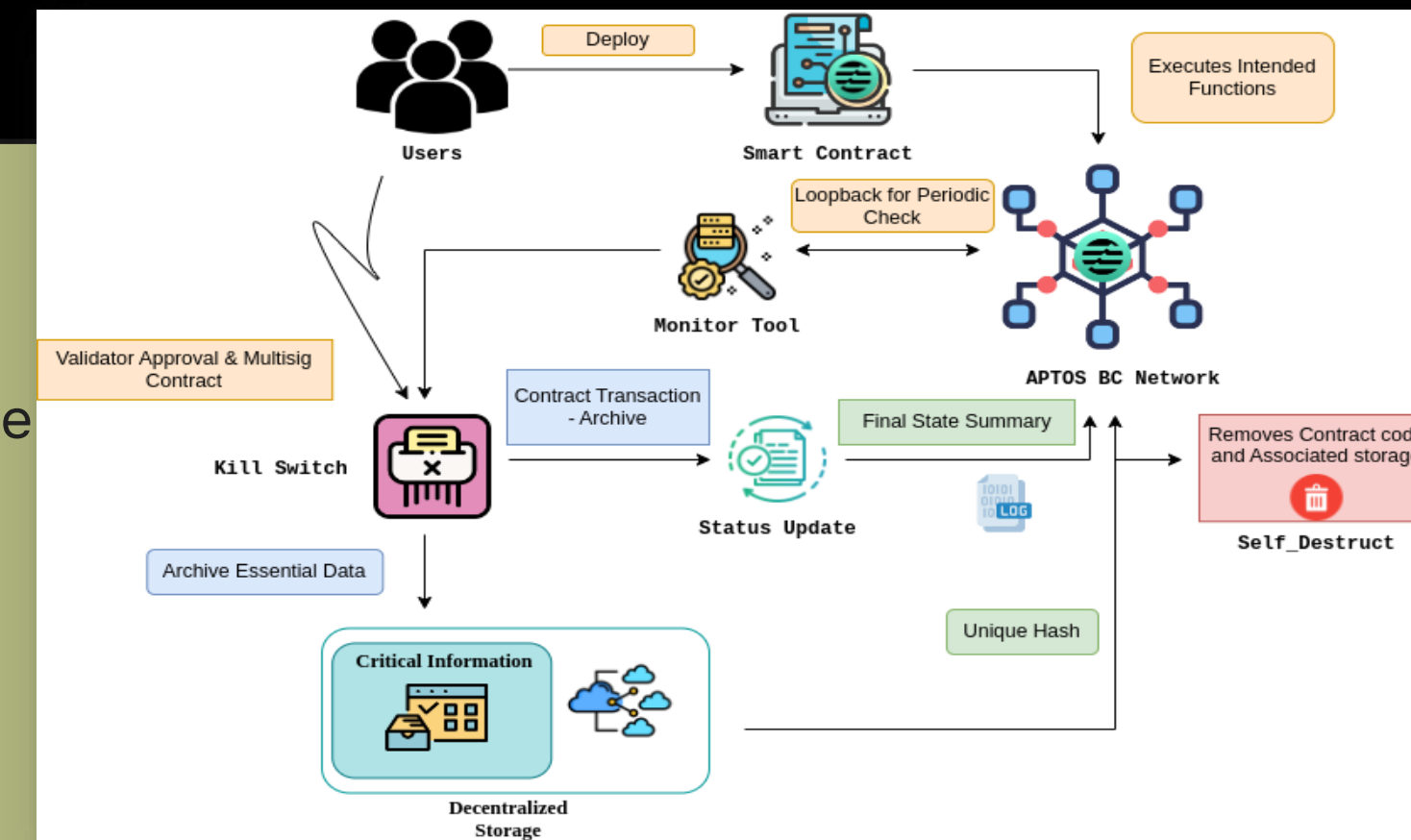
**Smart Contract Archival** – Uses zk-SNARKs to cryptographically seal and compress unused contracts.

**Efficient Storage Management** – Moves archived contracts off-chain (IPFS) while retaining proof on Aptos.

**Selective Pruning & Retrieval** – Allows contract validation without full on-chain storage.

**One-Click Deployment** – Deploy Aptos Move contracts without running multiple terminal commands.

**Interoperability** – Supports Aptos SDK (Petra, Pontem) and Aptos Move for seamless contract management.





- ✓ **First-of-its-kind Smart Contract Archival on Aptos** → No existing tool enables contract storage optimization while preserving immutability.
- ✓ **zk-SNARK-powered Contract Verification** → Allows contract retrieval & validation without keeping full data on-chain.
- ✓ **Decentralized & Permissionless Management** → No central authority—users control their own contract lifecycle.
- ✓ **One-Click Smart Contract Deployment** → Eliminates complex terminal commands for Aptos Move developers.
- ✓ **Built-in Move Code Editor** → First-ever browser-based editor for Aptos smart contracts, improving developer productivity.
- ✓ **Seamless Aptos Integration** → Works natively with Aptos wallets (Martian, Petra, Pontem) for smooth interactions.
- ✓ **Interoperability Across Chains** → Supports Aptos Move
  - ✓ **Storage Optimization & Blockchain Efficiency** → Archived contracts remain verifiable via Merkle Proofs on IPFS, reducing blockchain bloat.

## Key Partners

Aptos

IPFS



## Key Activities

Smart contract archival & verification

zk-SNARK-powered proof generation

Move code editor & one-click deployment

API development & maintenance

Developer community engagement



## Value Propositions

Reduces blockchain storage costs

Ensures contract immutability & verifiability

First all-in-one smart contract archival & lifecycle management tool

Integrated zk-SNARK verification for contract integrity

Built-in Move code editor for seamless development

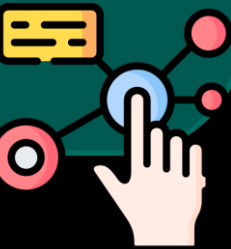


## Channels

Aptos ecosystem

Web3 developer communities

Hackathons & online workshops



## Customer Relationships

Developer support forums

Web3 hackathons & grants

Onboarding assistance for enterprises

Community-driven feature requests



## Customer Segments

Blockchain developers & dApp creators

Enterprises managing high-volume smart contracts

DeFi & NFT projects

Web3 startups adopting Aptos



## Key Resources

Aptos Move, zk-SNARKs

IPFS

Node JS, MongoDB

Developer grants & community funding



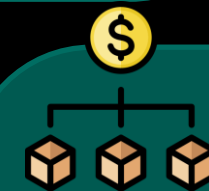
## Cost Structure

API maintenance & infrastructure

zk-SNARK validation costs

Smart contract indexing & archival expenses

Developer grants & incentives



## Revenue Streams

Freemium API model (basic archival free)

Premium enterprise services (custom archiving, zk-proof verification)

SaaS subscription model (advanced analytics, team collaboration)

Enterprise API licensing for Web3 platforms



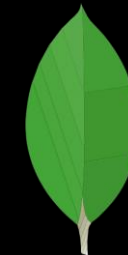


## Blockchain & Smart Contracts



Aptos Move, Aptos SDK, zk-SNARKs (Groth16/Plonk), IPFS

## Backend & Storage



Node JS, Aptos REST API, MongoDB, IPFS-based archival

## Frontend & UI



React, Next.js, Tailwind CSS,

## Security & Validation



Zero-Knowledge Proofs (ZKPs), State Commitments, Cryptographic Hashing

## Archival & Verification Page

### ARCHIVAL & VERIFICATION CENTER

Manage your smart contract archival process and verify contract integrity with zk-SNARK technology.

#### Smart Contract Archival

Archive eligible contracts to reduce storage costs

Archive Selected

Eligible (3)	Archived (5)	Ineligible (2)
<div> <div>TOKENSWAP CONTRACT</div> <div>0x1a2b...3c4d</div> <div>Last active: 45 days ago</div> </div> <div>Eligible</div> <div>Storage: 2.4 MB</div> <div>Est. savings: 0.12 API/month</div>		
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#### Verification Portal

Verify contract integrity with zk-SNARKs

ZK-SNARK SYSTEM STATUS

Proof Generation

Operational

Verification System

Operational

Merkle Tree Integrity

Verified

Verify Contract

#### Storage Impact

Visualize your storage optimization

Total Contracts	10
Archived Contracts	5 (50%)
Storage Saved	15.3 MB

## Contract Management

### CONTRACT MANAGEMENT

Archive Selected

Search contracts...

Status Network

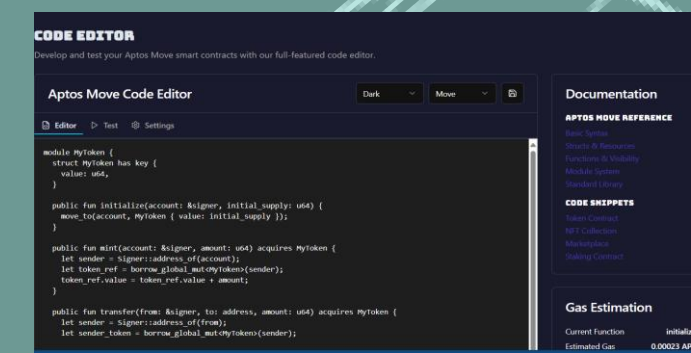
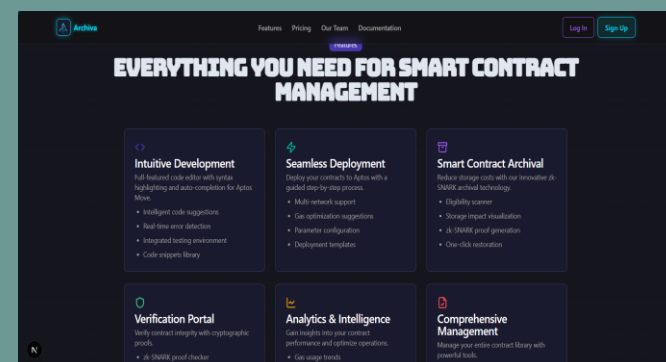
Name	Address	Deployment Date	Network	Status	Last Interaction	Storage Size
TokenSwap	0x1a2b...9s0t	2023-10-15	Aptos Mainnet	Active	2023-11-01	1.2 MB
NFTMarketplace	0x2b3c...0t1a	2023-09-22	Aptos Mainnet	Active	2023-10-30	2.5 MB
LendingProtocol	0x3c4d...1a2b	2023-08-05	Aptos Testnet	Archived	2023-09-15	1.8 MB
StakingRewards	0x4d5e...2b3c	2023-11-01	Aptos Mainnet	Active	2023-11-02	0.9 MB
GovernanceDAO	0x5e6f...3c4d	2023-07-12	Aptos Mainnet	Deprecated	2023-08-20	3.1 MB

5 contracts

WIREFRAME

Landing Page

Code Editor (AI powered)



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