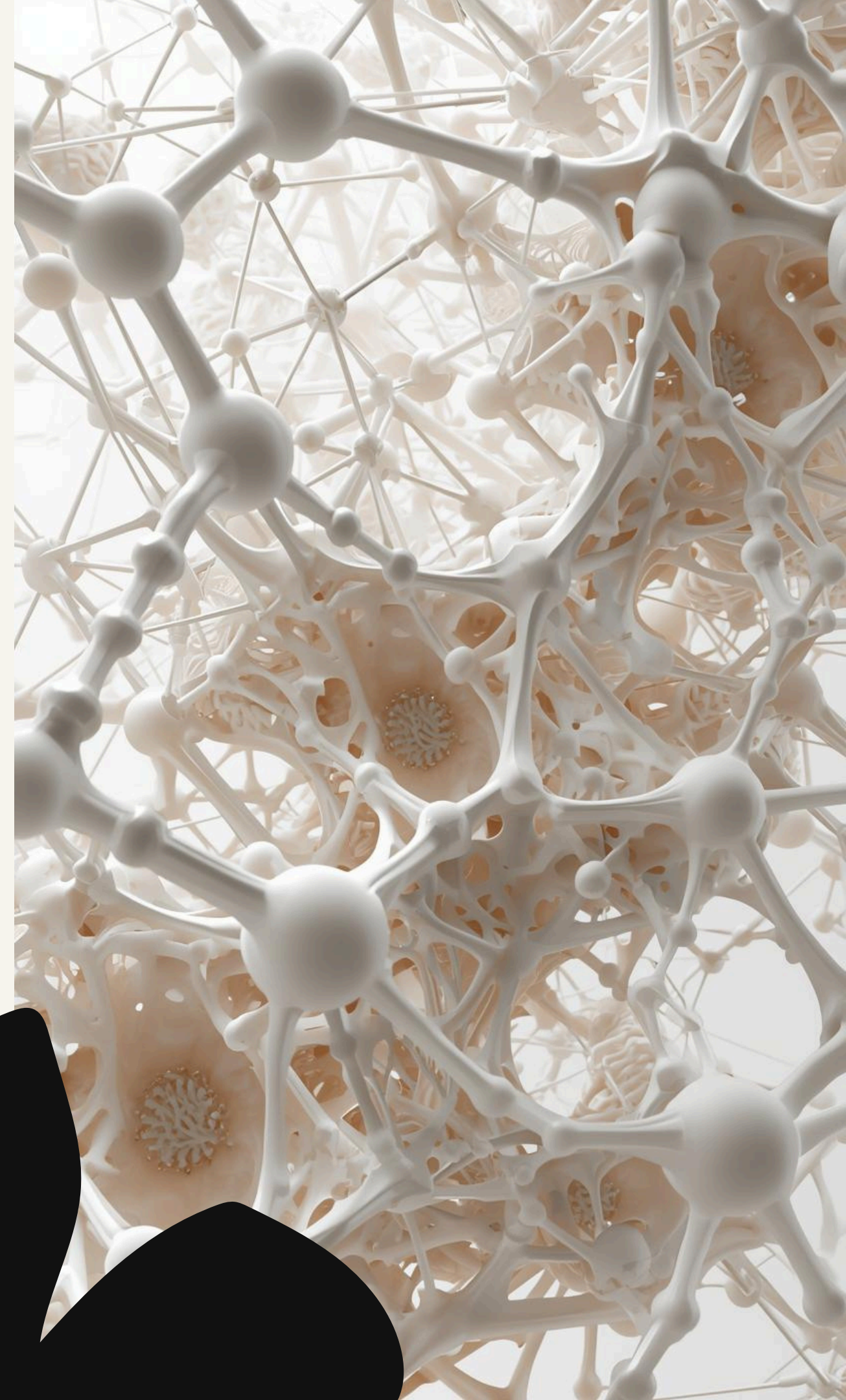


# OptiChain Technical PRD

PRESENTED BY [PRESENTER NAME]

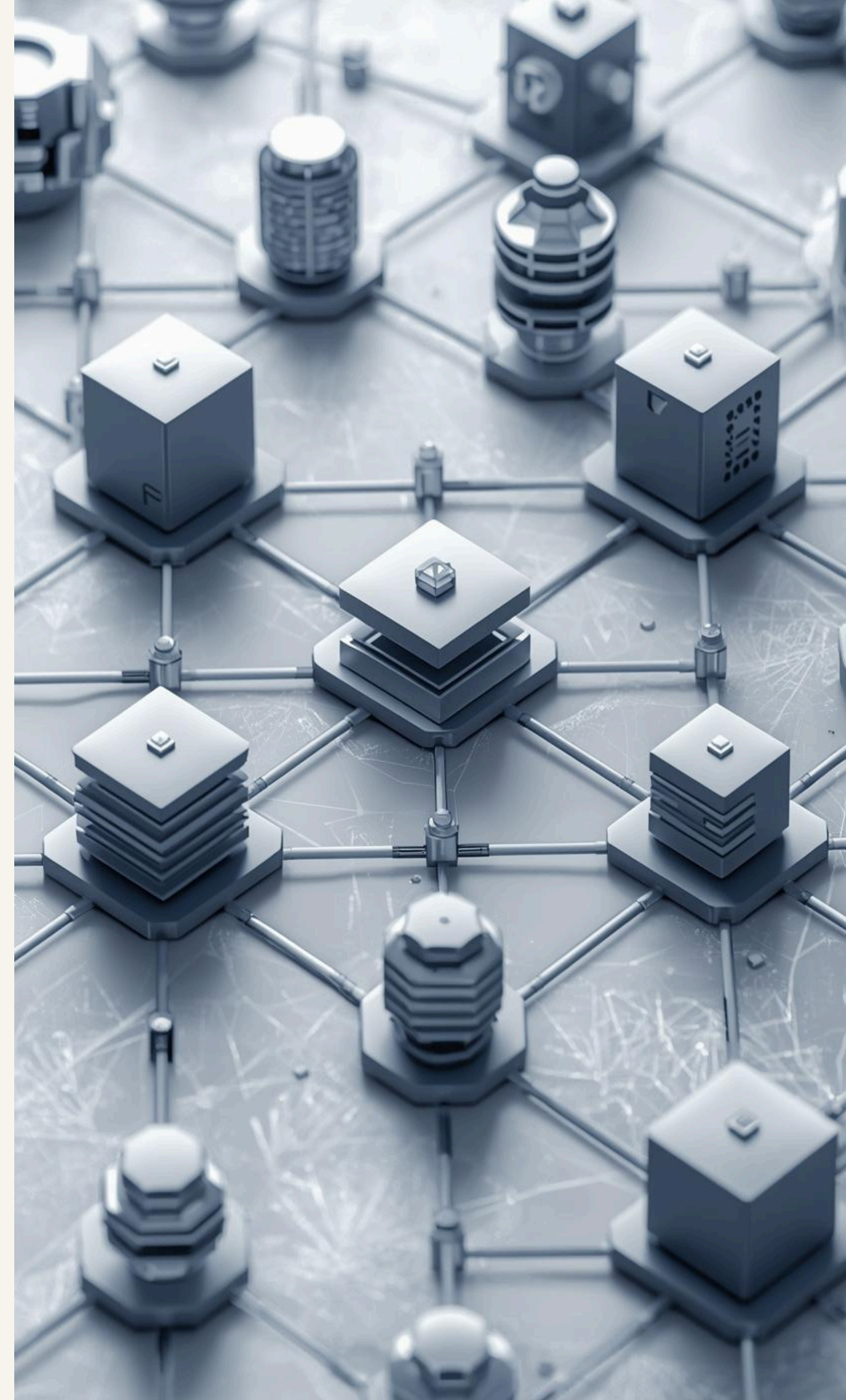




# Overview of Digital Trust Marketplace Components

## INTERCONNECTED SYSTEM MODULES

The Digital Trust Marketplace integrates **various modules** to ensure seamless interactions between users, services, and regulatory frameworks to enhance trust.



# Core Use Cases of OptiChain

## SUPPORTING MSMEs

OptiChain empowers MSMEs by providing access to funding, marketplace opportunities, and essential resources for sustainable growth in today's competitive landscape.

## ENGAGING CORPORATES

Corporates leverage OptiChain's robust infrastructure for efficient transactions, transparent engagements, and compliance with regulatory standards, enhancing their operational effectiveness.



# Architecture Stack

## TRUST LAYER

The Trust Layer ensures secure transactions through advanced verification methods, fostering confidence among users and promoting a sustainable marketplace environment.

## COMMERCE LAYER

The Commerce Layer integrates various marketplace functions, enabling seamless transactions, efficient bidding processes, and enhanced user engagement through intuitive interfaces.

## CAPITAL LAYER

The Capital Layer streamlines funding mechanisms, offering accessible credit options and crowdfunding solutions that empower businesses and facilitate investments in the marketplace.

# Digital Services Overview



## IDENTITY MANAGEMENT

Our identity management service ensures secure user verification, enabling trust and transparency in transactions within the Digital Trust Marketplace.

## MARKETPLACE FUNCTIONALITY

The marketplace connects buyers and sellers seamlessly, facilitating a robust platform for transactions while maintaining compliance and security standards.

## AUCTION CAPABILITIES

Our auction feature allows for dynamic bidding processes, creating competitive opportunities while leveraging data-driven insights for optimized outcomes.

# Module Specifications Overview



## REVERSE AUCTION

The Reverse Auction module allows users to submit bids, creating a competitive environment that drives prices down for buyers.

## CROWDFUNDING

Our Crowdfunding module facilitates collective funding, enabling multiple investors to support projects while diversifying their investment portfolios effectively.

## DCP ENGINE

The Digital Credit Platform (DCP) Engine streamlines credit applications, assessing risk through advanced algorithms for quicker and more accurate decisions.



# Data Models Overview

## USER MANAGEMENT

The user management model captures essential details for onboarding, including personal information, verification, and interaction history within the marketplace ecosystem.

## TRANSACTION DYNAMICS

The transaction model encompasses bids and loans, detailing the lifecycle from creation through approval, ensuring security and compliance throughout the process.

# API Overview for OptiChain

## IDENTITY MANAGEMENT

The Identity API enables secure user verification, ensuring compliance with regulatory standards while maintaining user data security and privacy.

## AUCTION SERVICES

The Auction API facilitates real-time bidding processes, allowing users to participate seamlessly while tracking bids and auction status effectively.

## PAYMENT GATEWAY

The Payments API supports diverse transaction methods, ensuring secure processing and integration with various financial institutions for smooth user experiences.



# Event Flows

**BID CYCLE**

Initiating bids to secure marketplace transactions efficiently.

**CREDIT CYCLE**

Assessing creditworthiness for loan approvals and disbursements.

**ESCROW CYCLE**

Managing secure transactions between buyers and sellers seamlessly.

**PAYMENT CYCLE**

Processing payments through secure and efficient methods.

**REVIEW CYCLE**

Collecting feedback to improve marketplace services continually.



# Workflow Summary

## PROCUREMENT

The procurement process involves identifying needs, sourcing suppliers, and facilitating transactions to ensure optimal resource allocation and efficiency.

## CROWDFUNDING

Crowdfunding enables individuals and businesses to raise funds by pooling contributions from a large number of people through the marketplace platform.

## LOAN ISSUANCE

Loan issuance streamlines the process of granting credit, ensuring compliance with regulations while providing necessary resources to borrowers effectively.



# Security Model Overview

## ZERO-TRUST

The zero-trust architecture ensures that every access request is verified, minimizing risks by treating all network traffic as untrusted.

## ENCRYPTION

End-to-end encryption safeguards sensitive data, ensuring that information remains confidential and protected during transmission and storage across the platform.

## FRAUD DETECTION

Advanced fraud detection systems utilize machine learning to identify suspicious behavior patterns, enhancing the platform's integrity and maintaining user trust.



# Blockchain Layer Components

## AUDIT LOGS

Audit logs provide a complete history of transactions, ensuring transparency and accountability within the OptiChain ecosystem through immutable records.

## SMART ESCROW

Smart escrow automates the release of funds based on predefined conditions, enhancing trust between parties in transactions while minimizing risks.

## RECEIPTS

Receipts generated through blockchain technology ensure secure, verifiable proof of transactions, simplifying dispute resolution and enhancing user confidence in the marketplace.





# 80%

## TRUST SCORE

The **Trust Score** reflects a composite measure indicating the perceived reliability of individuals or entities within the OptiChain ecosystem. Scoring at **80%** demonstrates a strong track record and positive engagements, illustrating commitment to transparency and responsibility in financial dealings and governance practices.



# Compliance Requirements

## CBK

The Central Bank of Kenya mandates regulations ensuring financial institutions maintain **robust governance** and risk management frameworks for sustainable operations.

## CMA

The Capital Markets Authority oversees compliance with **securities regulations**, safeguarding investor interests while promoting transparency and efficiency in financial markets.

## DATA PROTECTION

Adhering to data protection laws is crucial for **maintaining user trust** and ensuring the integrity of personal information within the marketplace environment.



# Deployment and DevOps

## ENVIRONMENTS

We utilize multiple environments including development, testing, and production to ensure efficient deployment and minimize potential disruptions.

## CI/CD

Our Continuous Integration/Continuous Deployment (CI/CD) pipeline automates testing and deployment processes, facilitating rapid iteration and enhancing software quality.

## SCALING

Leveraging cloud infrastructure allows for seamless scaling, accommodating varying loads while maintaining optimal performance and resource allocation throughout the application lifecycle.

# Contact Information

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