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Contents

I. Introduction

Walme is an innovative Web3 platform that combines the capabilities of a multichain wallet, decentralized banking, and a secure messenger. It is designed to ensure convenience, security, and functionality when interacting with cryptocurrencies, decentralized applications, and Web3 protocols.

Three Key Components of Walme

1. Multichain Wallet:

- Full control over assets across multiple blockchains with support for popular tokens and standards.
- Supports Bitcoin, Ethereum, Solana, Polygon, Binance Smart Chain, and other networks.
- Generates unique addresses for each transaction to enhance privacy.
- Local storage of private keys, eliminating third-party access to assets.

2. Web3 Bank:

- Integration of fiat and cryptocurrency solutions for daily use.
- Crypto cards via Quicko integration.
- IBAN accounts for EU residents through Breinrock.
- Full compliance with KYC/AML and PCI DSS standards using SUMSUB.

3. Matrix Messenger:

- Secure communication with cryptocurrency transaction integration.
- End-to-End encryption for all messages, audio, and video calls.
- Ability to send crypto assets directly within chats.
- Personalized AI bot for analytics, signals, and notifications.

Key Features of Walme

Multichain Support:

- Supports over 15 blockchains, including Bitcoin (BIP44, BIP49, BIP84, BIP86), ERC20, SPL, BEP20, and others.

Security:

- Address and transaction verification via Webacy.
- Duress Mode for protection in extreme situations.

Convenience:

- A single app for communication, asset management, fiat, and cryptocurrency transactions.

DeFi Integration:

- Swap support through Uniswap, Jupiter, and 1Inch.
- Connection to decentralized applications (dApps) via WalletConnect.

AI and Analytics:

- Market signals and personalized analysis via an AI-powered bot.

Who Is Walme For?

- **Private Users:** A perfect solution for managing assets, communication, and using Web3 in everyday life.
- **Investors:** Access to analytics and signals for effective portfolio management.
- **Businesses:** Tools for integrating crypto payments and managing multi-currency assets.

Why Is Walme Unique?

Walme provides users with full control over their assets and data while offering intuitive access to decentralized financial and communication solutions. **It acts as a bridge between centralized financial systems and the Web3 world, simplifying advanced technologies for everyday use.nex**

Problems of the Web3 Market and Our Solution

1. Lack of Privacy in Bitcoin-like Networks

Problem:

The reuse of addresses, common in networks like Bitcoin, Litecoin, and Dash, leads to the following risks:

- Full balance of an address can be exposed.
- History of all transactions associated with the address is visible.
- Links between different addresses can be identified, compromising personal data.

The public nature of blockchains makes all transactions accessible to external services like Chainalysis, creating threats to user privacy.

Walme's Solution:

- **Generation of new addresses for each transaction:**

Walme supports standards such as BIP44, BIP49, BIP84, and BIP86, enabling unique addresses for transactions and minimizing traceability.

Older addresses remain active for receiving funds, ensuring compatibility and convenience.

- **Webacy Integration:**

Verification of addresses and counterparties before sending funds to identify risks of fraud or suspicious activity.

2. Transaction Security Issues

Problem:

- Smart contracts and addresses can be compromised or associated with fraudulent activities.
- Lack of tools for counterparty analysis leaves users vulnerable to attacks.

Walme's Solution:

- **Counterparty and contract analysis before transactions:**

Integration with Webacy API to check addresses and smart contracts for associations with malicious activity, hacking incidents, or data breaches.

Provides risk scores and detailed analysis of potential threats.

3. Fragmentation of the Web3 Ecosystem

Problem:

- Users are forced to use separate wallets, exchanges, messengers, and DeFi platforms to manage assets and interact with Web3 protocols.
- This creates navigation difficulties and increases the risk of errors.

Walme's Solution:

- **Unified Platform:**

Walme integrates a multichain wallet, DeFi features, and a messenger into one application.

Supports various blockchains, enabling seamless asset management and dApp interaction without switching between services.

4. Limited Access to Asset Analytics

Problem:

- Users often lack access to high-quality analytics for their transactions, assets, and interactions with dApps.

Walme's Solution:

- **AI-driven Analytics and Recommendations:**

A personalized bot in the messenger analyzes user data and provides insights, such as token price predictions and risk alerts.

Automatic notifications about suspicious transactions.

Why Walme Solves the Key Web3 Problems

Walme integrates innovative tools that not only enhance security and privacy but also create a comfortable and functional ecosystem. Features like unique address generation, contract analysis, and integration with multichain wallets make Walme a comprehensive solution for Web3 users.

Mission and Vision: Web3 Bank, Multichain Wallet & Messenger

Mission of Walme

Walme aims to become a universal platform for managing digital assets, communication, and interaction with Web3 protocols. The ecosystem is designed to combine security, functionality, and convenience, giving users full control over their assets, data, and digital interactions.

Vision of Walme

Web3 Bank:

- The future of financial management, where users can securely and conveniently handle both cryptocurrencies and fiat.
- Tools for wallet management, crypto cards, asset exchange, and access to DeFi eliminate the barriers between traditional finance and Web3.

Multichain Wallet:

- A solution that supports all key blockchains, including Bitcoin, Ethereum, Solana, Polygon, Binance Smart Chain, and others.

- Users can manage all their assets through a single interface, simplifying Web3 access for beginners and professionals alike.
- Local key storage and unique privacy features ensure secure and transparent asset management.

Messenger:

- A decentralized messenger built on Matrix that allows users to communicate securely, send crypto assets, and share information.
- Support for audio and video calls with End-to-End encryption transforms the platform into a universal tool for personal and professional communication.
- Integration of an AI bot for analytics, recommendations, and notifications turns the messenger into an intelligent assistant.

Walme's Values

Security:

- Prioritizing user privacy and data protection with encryption at every level and local key storage.

Transparency:

- Every component of Walme is developed with maximum openness, ensuring user trust.

Convenience:

- Walme combines functions that typically require multiple applications into one platform, making Web3 accessible to everyone.

Innovation:

- Continuously integrating advanced technologies like Webacy, AI analytics, and multichain solutions to remain an industry leader.

The Future of Walme

Walme serves as a bridge between Web2 and Web3, enabling users and businesses to transition smoothly into the digital economy of the future. The platform envisions a world where boundaries between financial, communication, and decentralized systems disappear, giving people full control over their digital lives.

Walme: Web3 Bank, Multichain Wallet & Messenger — platform, that makes Web3 accessible to everyone.

II. Overview of Walme

Key Features of the Platform

Walme is a comprehensive platform combining the functionality of a multichain wallet, decentralized banking, and a secure messenger. Each key feature is designed to address security, privacy, and usability challenges within the Web3 ecosystem.

1. Multichain Wallet

Manage cryptocurrencies across various blockchains with full functionality for sending, receiving, and storing assets.

- **Supported Blockchains:** Bitcoin, Ethereum, Solana, Polygon, Binance Smart Chain, Litecoin, Dash, and more.
- **Token Standards Supported:** ERC20, SPL, BEP20, and native assets of each network.
- **Privacy Enhancement:** Unique address generation for every transaction.
- **Local Key Storage:** Secure private key storage with Secure Enclave (iOS) and Keystore (Android).
- **Web3 Swaps:** Integration with Uniswap, Jupiter, and 1Inch for seamless asset exchanges.
- **WalletConnect:** Easy connection to decentralized applications (dApps).

2. Web3 Bank

Provides solutions for handling both cryptocurrencies and fiat assets, simplifying transitions between them.

- **Custodial Wallet:** Reliable storage solutions for assets.
- **Universal Swaps:** Tools for exchanging between cryptocurrencies and fiat.
- **KYC/AML Compliance:** Full regulatory compliance through SUMSUB integration.
- **Fee Reductions:** Users can enjoy discounted transaction fees when using the WLM token.

3. Secure Messenger

A decentralized messenger based on the Matrix protocol ensures secure communication and Web3 integration.

- **Decentralized Communication:** All messages are protected with End-to-End encryption.
- **Crypto Transactions in Chats:** Send crypto assets directly within the messenger.

- **AI Bot for Analytics:** Notifications, transaction analysis, and project recommendations.
- **Audio and Video Calls:** Encrypted calls powered by WebRTC.
- **Bridges Integration:** Connect seamlessly with platforms like Telegram and Discord.

4. Security and Privacy

Walme implements advanced solutions to safeguard user data and assets:

- **Webacy for Counterparty Verification:** Analyze addresses and contracts before transactions.
- **Local Data Encryption:** Private keys and transaction data are never transferred to servers.
- **Duress Mode:** A feature to conceal assets in emergency situations.
- **Unique Address Generation:** Ensures privacy in Bitcoin-like networks.

5. AI and Analytics

Walme offers powerful tools for analysis and recommendations:

- **Transaction Analysis:** AI-generated insights, including risk assessments.
- **Asset Recommendations:** Data on trends, volumes, and market changes.
- **Market Monitoring:** Notifications for significant movements like TVL changes and wallet activity.

Unique Features: Asset Management and Messenger

Asset Management

Walme provides a powerful multichain wallet with advanced technologies for managing crypto assets:

- **Multichain Support:**
  - **Bitcoin and its derivatives:** Support for Legacy, SegWit, and Taproot addresses using BIP44, BIP49, BIP84, and BIP86 standards.
  - **Ethereum and EVM-compatible networks:** ERC20 token handling through Ethers.js and Web3.js.
  - **Solana:** Support for SPL tokens and integration with Jupiter for high-speed swaps.
  - **Polygon, Binance Smart Chain, and others:** Full compatibility with BEP20 tokens and other popular standards.
- **Web3 Swaps Integration:**

    - Token swaps via leading DeFi protocols, including Uniswap, Jupiter, and 1Inch.
    - Intelligent liquidity routing to minimize costs.
- **Privacy Features:**
    - Unique address generation for every transaction in Bitcoin-like networks to prevent traceability.
    - Counterparty verification using Webacy to reduce risks.
- **Local Private Key Storage:**
    - Keys are stored locally on the user's device with Secure Enclave (iOS) or Keystore (Android).
    - Transactions are signed exclusively on the client side.
- **WalletConnect Integration:**
    - Seamless connection to decentralized applications (dApps) directly from the wallet interface.
- **AI Analytics:**
    - Automatic asset and transaction analysis with personalized recommendations.

Messenger Built on Matrix

Walme leverages the Matrix protocol to create a decentralized messenger that merges communication and crypto functionalities:

- **End-to-End Encryption (E2EE):**
    - All messages, audio calls, and video calls are fully encrypted, ensuring third-party access is impossible.
- **Crypto Transfers Within Chats:**
    - Users can send crypto assets to their contacts without leaving the messenger.
- Complete integration of the multichain wallet into the messenger.
- **AI Bot for Notifications and Analytics:**
    - Alerts about market changes, wallet activity, and personalized recommendations.
- Generates analytics based on user data and linked wallets.
- **Audio and Video Calls:**
    - Powered by WebRTC with encrypted data for confidentiality.
- **Bridges:**
    - Allows integration with platforms like Telegram and Discord for centralized communication in one place.
- **Crypto Transaction Control:**
    - Users can set restrictions on receiving assets via the messenger to enhance security.
- **Multichain Transaction Integration:**
    - Combines chat discussions with transaction execution for maximum convenience.

Why Is This Unique?

1. **Synergy Between Wallet and Messenger:**
    - Walme unites asset management and communication in a single platform, eliminating the need to switch between apps.
2. **Privacy and Security:**
    - Comprehensive encryption for messages and transactions, counterparty verification, and local key storage.
3. **AI Analytics and Recommendations:**
    - Advanced AI integration for automated analytics, asset management, and market signals.
4. **Multichain Scalability:**
    - Supports multiple blockchains and DeFi protocols within one ecosystem.

User Experience and Benefits

User Experience in Walme

- **Intuitive Interface:**
    - A single application for asset management and communication with user-friendly navigation.
    - Accessible on mobile devices and web versions for seamless use anytime, anywhere.
- **Asset Management:**
    - Support for over 15 blockchains, including Bitcoin, Ethereum, Solana, and more.
    - Instant crypto swaps via integrations with Uniswap, Jupiter, and 1Inch.
    - Privacy-enhanced unique address generation for transactions.
- **Matrix-Based Messenger:**
    - Integrated chat and transaction execution.
    - End-to-End encryption for all communication and transactions.
    - AI bot providing market signals, analytical insights, and notifications.
- **Privacy and Security:**
    - Local storage of private keys ensures complete user control over assets.
    - Duress Mode enables asset concealment in emergencies.
    - Comprehensive protection, including transaction verification and access management.
- **AI and Analytics Integration:**
    - Personalized recommendations based on user assets.
    - Risk analysis and transaction safety checks.
    - Real-time market monitoring and alerts for significant movements.

Benefits of Walme

1. **Unified Ecosystem:**

Combines asset management, DeFi, and communication in a single platform.

2. **Privacy:**

Unique address generation and encrypted data storage ensure a high level of confidentiality.

3. **Accessibility:**

Available on multiple devices and supports several languages.

4. **AI Integration:**

Automated recommendations and analytics simplify decision-making.

5. **Multichain Scalability:**

Compatibility with most major blockchains and flexibility in operations.

6. **Security:**

Local key storage, Duress Mode, and counterparty verification.

III. Technical Architecture

Overview of Walme's System Architecture

Walme is an innovative Web3 platform built on a modular architecture that combines a multichain wallet, decentralized banking, and a Matrix-based messenger. The architecture is designed to ensure security, scalability, and flexibility for interacting with blockchains, custodial solutions, and analytical tools.

1. Core Components of the Architecture

1.1. Multichain Wallet

Walme provides a multichain wallet built on **Wallet Core**, enabling asset management across multiple blockchains.

- **Supported Blockchains:**

Bitcoin, Ethereum, Solana, Polygon, Binance Smart Chain, Litecoin, Dash, and more.

- **Technological Features:**
- **Local Key Storage:** Private keys never leave the user's device. Secure Enclave (iOS) and Keystore (Android) are used.

- **Standards Supported:** BIP44, BIP49, BIP84, and BIP86 for Bitcoin-like networks, as well as ERC20, SPL, and BEP20 tokens.
- **Web3 Swaps:** Integrated with Uniswap, Jupiter, and 1Inch for instant token exchanges.
- **WalletConnect:** Provides seamless interaction with decentralized applications (dApps).

1.2. Matrix-Based Messenger

Walme integrates a Matrix-based decentralized messenger to provide secure communication with Web3 capabilities.

- **Core Features:**
  - **End-to-End Encryption:** Protects messages, files, and calls from unauthorized access.
  - **Audio and Video Calls:** Delivered via WebRTC with minimal latency.
  - **Crypto Transfers in Chats:** Send assets directly within the messenger interface.
  - **Personal AI Bot:** Provides market data analysis, notifications, and insights.
  - **Federation:** Matrix servers create independent, interconnected nodes for scalability and resilience.

1.3. Custodial Solutions

Walme supports custodial services to integrate traditional financial tools into the platform.

- **Features:**
  - Asset management via custodial wallets.
  - KYC/AML verification through SUMSUB.
  - IBAN accounts and crypto cards support.
- **Security:** PCI DSS compliance ensures secure payment data handling.

1.4. Analytics and AI

Walme integrates analytics tools to enhance transaction safety and provide actionable insights.

- **Webacy API:** Verifies addresses and smart contracts for risks before transactions.
- **Market Monitoring:** Sends notifications on key market changes, such as TVL shifts and wallet activities.
- **AI Bot:** Generates personalized recommendations and forecasts based on user data.

1.5. Security Infrastructure

Walme deploys multilayered security measures across all components.

- **Duress Mode:** Allows users to hide assets during emergencies.
- **Data Encryption:** AES-256 encryption for stored data and TLS for data transmission.
- **Unique Address Generation:** Provides enhanced privacy for Bitcoin-like networks.

2. Component Interaction Architecture

2.1.Client-Side

- **Mobile Applications:** Developed using Kotlin Multiplatform Mobile (KMM) for Android and iOS.
- **Web Interface:** Built with React and integrated with Web3.js for blockchain interactions.

2.2. Server-Side

- **Matrix Server:** Manages decentralized communication, encryption, and federation.
- **API Layer:** Connects clients to blockchains, analytics tools (Webacy), and custodial services.
- **Databases:**
    - PostgreSQL for structured data like user profiles and transactions.
    - MongoDB for analytics and transaction data.

2.3.Blockchain Interaction

- Direct connection to RPC nodes via providers like Infura and Alchemy.
- Real-time transaction data through WebSocket connections.
- Transactions are locally signed on the client side.

3. Scalability and Resilience

3.1. Matrix Federation

- Federation architecture allows Matrix servers to interact, ensuring fault tolerance and load distribution.
- Scalability supports millions of users without degrading performance.

3.2. Cloud Infrastructure

- Docker and Kubernetes manage container orchestration and auto-scaling.
- Microservice architecture ensures flexibility and easy updates for individual components.

4. Supported Technologies

- **Blockchains:** Bitcoin, Ethereum, Solana, Polygon, Binance Smart Chain, and others.
- **Protocols:** Matrix.org, WebRTC, WalletConnect.
- **Libraries:** Wallet Core, Ethers.js, Web3.js, Solana Web3.js.
- **Infrastructure:** Docker, Kubernetes, PostgreSQL, MongoDB.
- **Security:** End-to-End encryption, AES-256, TLS, Secure Enclave/Keystore.

Benefits of Walme's Architecture

1. **Security:**

   Local key storage and transaction verification via Webacy.

2. **Scalability:**

   Federation and cloud infrastructure allow millions of users to interact seamlessly.

3. **Flexibility:**

   Supports multichain operations, custodial solutions, and decentralized applications.

4. **Innovation:**

   AI and analytics integration streamline processes and improve usability.

Interaction of Key Components in Walme

The Walme platform integrates the multichain wallet, decentralized messenger, Markets Engine analytics platform, custodial services, and Auth0 authentication to create a secure, scalable, and user-friendly ecosystem.

1. Auth0: Authentication and Access Management

- **Purpose:** Acts as a central point for user authentication, enabling access to all Walme features.

How It Works:

- Users authenticate through Auth0 using email, social media, or a Web3 account.
- Auth0 generates JWT tokens to securely transmit data between components.
- These tokens are used for authorizing actions in the messenger, wallet, and other modules.

Component Interaction:

Matrix Messenger: Manages user authentication for messenger access via OIDC.

Multichain Wallet: Authorizes asset operations.

Markets Engine: Controls access to analytics and personalized data.

Custodial Services: Verifies access to crypto cards and IBAN accounts.

2. Matrix Messenger: Decentralized Communication

Purpose: A messenger based on the Matrix protocol, offering secure communication integrated with the wallet.

How It Works:

- Provides decentralized communication with full End-to-End encryption.
- Supports audio and video calls via WebRTC.
- Enables users to send crypto assets directly within chats.
- Delivers notifications from Markets Engine and the AI bot to users.

Component Interaction:

- **Multichain Wallet:** Allows users to send crypto assets through chat.
- **Markets Engine:** Provides market updates, analytics, and recommendations.
- **Auth0:** Authenticates users for messenger access.

3. Multichain Wallet

Purpose: Securely manage crypto assets across multiple blockchains.

How It Works:

- Built on Wallet Core, supporting Bitcoin, Ethereum, Solana, and others.
- Stores private keys locally on the user's device.
- Generates unique addresses for each transaction to enhance privacy.
- Integrates WalletConnect for interacting with dApps.

Component Interaction:

- **Matrix Messenger:** Enables crypto transfers within chats.
- **Markets Engine:** Provides transaction and asset data for analytics.
- **Custodial Services:** Facilitates transfers between custodial wallets and crypto cards.

4. Markets Engine

Purpose: An analytics platform providing market data, insights, and personalized recommendations.

How It Works:

- Aggregates data from blockchains, DeFi protocols, and other sources.
- Consolidates information for display in Walme or delivery via the messenger.
- Generates analytical reports, including data on TVL, wallet activity, and market trends.

Component Interaction:

- **Matrix Messenger:** Sends market updates and analytics to users via the AI bot.
- **Multichain Wallet:** Updates asset data for personalized insights.
- **Auth0:** Manages access to analytics features.

5. Custodial Services and Crypto Cards

Purpose: Manage custodial assets and provide IBAN accounts and crypto cards for daily use.

How It Works:

- Users complete KYC/AML verification via SUMSUB to access custodial services.
- Assets in the custodial wallet are used to fund crypto cards.
- IBAN accounts enable transfers between traditional banks and crypto assets.
- Crypto cards automatically convert cryptocurrencies to fiat for real-world payments.

Component Interaction:

- **Auth0:** Authenticates access to crypto cards and IBAN accounts.

- **Multichain Wallet:** Facilitates crypto card funding from non-custodial wallets.
- **Markets Engine:** Provides analytics on transactions made with crypto cards.

Advantages of Component Integration

1. **Security:**

Local key storage, encrypted communication, and rigorous transaction verification ensure user data and assets are protected.

2. **Integration:**

Seamless interaction between messenger, wallet, analytics, and custodial services creates a unified user experience.

3. **Privacy:**

End-to-End encryption in the messenger and unique address generation for transactions ensure high confidentiality.

4. **Convenience:**

Manage crypto assets, access analytics, and use custodial services all within one app.

5. **Scalability:**

Modular structure allows for the easy addition of new features without disrupting existing components.

Multichain Approach in Walme

Walme is designed as a universal Web3 platform, integrating multiple blockchains to provide users with flexibility, scalability, and broad asset management capabilities. The multichain approach ensures seamless interaction with various networks, including Ethereum, Solana, Polygon, Binance Smart Chain (BSC), TON, TRON, and more.

1. Fundamentals of the Multichain Approach

Walme's multichain integration is achieved using modern libraries and protocols such as Wallet Core, Web3.js, Solana Web3.js, Ethers.js, and TronWeb. This framework supports seamless interaction with multiple blockchains within a single platform.

Key Principles:

- **Universality:**

Supports diverse networks and tokens (ERC20, SPL, BEP20, TRC20, etc.).

- **Scalability:**

New blockchains can be added without extensive system overhauls.

- **Privacy and Security:**

Local key storage and End-to-End encryption ensure transaction confidentiality.

2. Supported Networks

1. **Ethereum (ETH):**
- **Standards Supported:** ERC20, ERC721, ERC1155.
- **Functionality:**
    - Smart contract interaction via Ethers.js and Web3.js.
    - Participation in DeFi protocols and dApp usage via WalletConnect.
2. **Solana (SOL):**
- **Standards Supported:** SPL.
- **Functionality:**
    - High performance and low fees.
    - Integration with Jupiter for fast swaps.
    - Token management and transactions.
3. **Polygon (MATIC):**
- **Standards Supported:** ERC20, ERC721.
- **Functionality:**
    - Compatibility with Ethereum's ecosystem at lower costs.
    - DeFi protocol integration through Web3.js.
4. **Binance Smart Chain (BSC):**
- **Standards Supported:** BEP20, BEP721.
- **Functionality:**
    - Interaction with BSC-based dApps.
    - Fast, cost-efficient transactions.
5. **The Open Network (TON):**
- **Functionality:**
    - User-friendly token management and transactions.
    - Smart contract integration with TON's ecosystem.
6. **TRON (TRX):**
- **Standards Supported:** TRC20, TRC721.
- **Functionality:**
    - High-speed, low-cost transactions.
    - Token interaction through TronWeb.
7. **Bitcoin and Similar Networks:**
- **Supported Networks:** Bitcoin, Litecoin, Dash, Bitcoin Cash.
- **Functionality:**
    - Unique address generation for each transaction.
    - Support for SegWit and Taproot to optimize transactions.

3.Technical Implementation of the Multichain Approach

Technologies Used:

- **Wallet Core:**

Core infrastructure for address generation, transaction signing, and blockchain interactions.

- **Ethers.js and Web3.js:**

Tools for working with EVM-compatible networks like Ethereum, Polygon, and BSC, enabling smart contract interaction and DeFi operations.

- **Solana Web3.js:**

Facilitates interaction with Solana blockchain, supporting high-performance transactions and SPL tokens.

- **TronWeb:**

Provides connection to the TRON blockchain for TRC20 token management.

- **RPC Nodes and Providers:**

Services like Infura and Alchemy for Ethereum and other EVM networks, with direct RPC access for Solana and other blockchains.

4. User Experience in the Multichain Wallet

Functionality:

- **Asset Management:**

Manage assets from all supported blockchains in a unified interface.

- **Token Swaps:**
    - Integrated with Jupiter, 1Inch, and Uniswap for seamless exchanges.
    - Intelligent routing minimizes costs and slippage.
- **Send and Receive Assets:**
    - Unique address generation for each transaction in Bitcoin-like networks enhances privacy.
    - Real-time transaction notifications via Matrix Messenger.
- **dApp Integration:**
    - WalletConnect enables direct interaction with DeFi protocols and NFT marketplaces.

5. Advantages of the Multichain Approach

1. **Universality:**
- Supports major blockchains and token standards, ensuring compatibility with a wide range of ecosystems.
2. **Security:**
- Local private key storage and unique address generation protect user assets and privacy.
3. **Integration:**
- Enables seamless interaction with DeFi protocols, NFT platforms, and custodial services.
4. **Ease of Use:**
- Unified interface simplifies asset management and transactions.

Walme's multichain approach makes it a comprehensive tool for managing assets, trading, and interacting with decentralized applications, offering users unparalleled flexibility and security in the Web3 ecosystem.

Security Mechanisms in Walme

Walme implements a multilayered security framework to ensure the safety of user assets, data, and interactions. The platform employs advanced technologies such as End-to-End encryption, local key storage, and regulatory compliance tools to meet the highest Web3 security standards.

1. End-to-End Encryption (E2EE)

- **Purpose:** Encrypts user data on the client side, ensuring only the recipient can decrypt it.
- **Applications:**
  - Messages and calls in the Matrix messenger.
  - Transaction notifications and analytics.
- **Implementation:**
  - Uses AES-256, Olm, and Megolm algorithms to protect messages and files.
  - Encryption keys are stored locally on user devices.

2.Secure Enclave and Keystore

- **Purpose:** Provides secure storage for private keys.
- **Applications:**
  - Multichain wallet for managing crypto assets.
  - Local transaction signing.
- **Implementation:**

- **iOS:** Secure Enclave offers hardware-level protection for keys.
- **Android:** Keystore isolates keys from the main operating system.
- **Benefits:**
    - Private keys never leave the user's device.
    - Protection against OS-level attacks.

3.SUMSUB: KYC and AML

- **Purpose:** Ensures user identity verification and compliance with regulatory standards.
- **Applications:**
    - Custodial wallet.
    - Crypto cards and IBAN accounts.
- **Implementation:**
    - Automated document and identity checks.
    - Adheres to GDPR, FATF, and AML directives.

4. Transaction Risk Assessment Module

- **Purpose:** Enhances transaction security by analyzing addresses and counterparties.
- **Applications:**
    - Pre-transaction risk evaluation.
    - Alerts for suspicious activity.
- **Implementation:**
    - Generates a risk score to assess the safety of counterparties.
    - Integrated with the multichain wallet to provide warnings.

5. Duress Mode

- **Purpose:** Hides assets and wallets during emergencies.
- **Implementation:**
    - Users can activate an alternative interface by entering a secondary PIN.
    - Real data and assets remain hidden until the correct PIN is entered.

6. Biometric Authentication

- **Purpose:** Uses fingerprints or facial recognition for secure access.
- **Applications:**
    - Wallet login.
    - Transaction confirmation.

- **Benefits:**
    - Easy to use.
    - Protects against unauthorized access.

7. Data Tokenization

- **Purpose:** Replaces real user data with tokens to enhance security.
- **Applications:**
    - Crypto card and IBAN transactions.
- **Implementation:**
    - Real card data is replaced with tokens during processing.
    - Reduces the risk of data leaks.

8. TLS and HSTS

- **Purpose:** Protects data during transmission between client and server.
- **Implementation:**
    - TLS (Transport Layer Security) encrypts all communication.
    - HSTS (HTTP Strict Transport Security) prevents man-in-the-middle attacks.

9. Two-Factor Authentication (2FA)

- **Purpose:** Adds an additional layer of protection for user accounts.
- **Implementation:**
    - OTP (One-Time Password) applications.
    - Integrated with Auth0 for centralized management.

10. Regular Audits and Security Monitoring

- **Purpose:** Identifies vulnerabilities and tracks suspicious activities.
- **Applications:**
    - Code and infrastructure audits.
    - Monitoring user actions and transactions.
- **Implementation:**
    - External audits by trusted firms.
    - Monitoring tools such as Sentry and Prometheus.

Advantages of Walme's Security Approach

1. **Comprehensive Protection:**

Integrates multiple security mechanisms to safeguard all levels of the platform.

2. **Privacy:**

Local key storage and End-to-End encryption ensure user confidentiality.

3. **Flexibility:**

Easily expandable with additional tools, such as Webacy for advanced transaction protection.

4. **Regulatory Compliance:**

Fully adheres to international security standards, including PCI DSS and GDPR.

Walme combines cutting-edge technologies and best practices to deliver robust protection for user data, assets, and transactions in the Web3 ecosystem.

IV. Decentralized Messenger

Decentralized Communication Powered by Matrix

Walme Messenger is built on the Matrix protocol, renowned for its security, scalability, and decentralized architecture. Trusted by over 150 million users globally, including governments, military organizations, and major corporations, Matrix provides a robust foundation for creating reliable communication systems tailored for Web3 integration.

1. Matrix: A Proven Technology

Who Uses Matrix?

- **French Government (Tchap):**
  - Internal communication for government agencies.
  - Adapted for handling sensitive data, adhering to strict security standards.
- **Deutsche Bundeswehr (German Armed Forces):**
  - Secure communication within military units.
  - Features encryption and decentralized data storage for resilience.
- **Mozilla:**
  - Internal staff communication.
  - Emphasis on open-source software and encryption.
- **KDE Community:**
  - Used by KDE developers for project coordination and discussions.

- **Open Source Communities:**
    - Matrix adoption in major open-source projects like GNOME for communication management.

2. Technical Aspects of the Matrix Protocol

2.1. Federated Architecture

What it is:

- Federation allows users to communicate regardless of the server they are registered on, as servers interact to form a unified network.

Advantages:

- High resilience: Communication persists even if a server fails.
- Full data control: Users can host data on their own servers.

2.2. Event-Based Model

- Every message or action is recorded as an immutable event.
- Message history is synchronized across participants, ensuring data consistency.

2.3. End-to-End Encryption

Mechanism:

- Messages are encrypted on the sender's side and decrypted only by the recipient.
- Encryption keys are stored locally on user devices.

Algorithms:

- **AES-256:** Data encryption.
- **Olm/Megolm:** Key management for personal and group chats.

2.4. Scalability

- Matrix supports millions of users via its federated model.
- Servers (e.g., Synapse) can scale horizontally to handle high data loads.

3. Why Walme Messenger Uses Matrix

Walme Messenger leverages Matrix as its technological backbone, extending its potential for Web3 users.

3.1. Connection to Existing Matrix Users

- Matrix users can log in to Walme Messenger with their current accounts.
- Contacts, chats, and groups remain accessible, ensuring a seamless transition.

3.2. Web3 Integration

- Matrix acts as a bridge between traditional communication and Web3.
- Users gain unique capabilities like sending crypto assets in chat and receiving market change notifications.

3.3. Universal Client

- Walme Messenger functions as a primary client for all Matrix servers.
- Fully compatible with other Matrix clients like Element.

4. Technical Advantages of Walme Messenger

4.1. Backend

- **Synapse:**
  - Matrix server implementation optimized for high loads.
  - Supports federation with other Matrix servers, including government and corporate ones.
  - Security: Configured for HSTS and TLS to protect data in transit.

4.2. Frontend

- **Pure Matrix SDK:**
  - Allows full customization of the client for platform needs.
  - Web3 optimization: Integration with multi-chain wallets and notifications.
- **WebRTC:**
  - Enables high-quality, low-latency audio and video calls.

4.3. Data Security

- **Local Storage:** Encryption keys are stored locally on user devices.
- **Transparency:** Matrix's open structure enables third-party security audits.

5. Trust in Matrix

Matrix is trusted by governments, militaries, and large enterprises, making Walme Messenger an innovative solution built on a reliable and secure foundation. It enriches the experience for existing Matrix users by adding Web3 capabilities, enabling them to maintain connections, participate in decentralized networks, and utilize the Walme ecosystem's benefits.

Sending Crypto Assets via Chats in Walme

Walme Messenger introduces an innovative feature: sending crypto assets directly within chats using custodial or non-custodial wallets. This simplifies interactions with cryptocurrencies, eliminating the need for app switching while ensuring security and transparency.

1. How It Works

1.1. Sending Assets to a Contact

- **Description:** Users can send crypto assets directly to a contact in chat.
- **Mechanism:**

1. The sender selects a contact from their chat list.
2. Specifies the cryptocurrency, amount, and confirms the transfer.
3. The transaction message is encrypted and assets are delivered to the recipient's linked wallet.

1.2. Sending Assets by User Tag

- **Description:** A unique user tag (e.g., @username) is linked to wallets.
- **Mechanism:**

1. The sender enters the recipient's tag in chat.
2. The system identifies the wallet linked to the tag.
3. Assets are sent through the chosen blockchain network.

1.3. Recipient Settings

Recipients can manage asset reception settings:

- Enable or disable crypto asset reception.
- Set transaction limits.
- Select preferred cryptocurrencies.

2. Types of Wallets for Sending

2.1. Non-Custodial Wallets

- **Mechanism:**
  - Private keys are stored on the sender's device.
  - Transactions are signed locally and sent to the blockchain.
- **Advantages:** Full control over assets, multi-chain wallet integration.

2.2. Custodial Wallets

- **Mechanism:**
  - Transactions are processed by Walme's server using custodial services.
  - Instant transfers without blockchain confirmation delays.
- **Advantages:** Speed and convenience, integration with crypto cards.

3. Advantages of Sending Crypto Assets via Chats

3.1. Convenience

- Send assets without leaving the messenger.
- Multi-chain transaction support simplifies interactions with different blockchains.

3.2. Security

- Transaction details are encrypted using End-to-End encryption.
- Non-custodial transactions are signed locally, ensuring private key safety.

3.3. Transparency

- Recipients are instantly notified of asset receipt.
- Transaction history is accessible within the messenger and multi-chain wallet.

3.4. Access Management

- Recipients can control which contacts can send them assets.
- Options for blocking transactions or setting limits add extra security layers.

4. Supported Assets and Blockchains

- **Cryptocurrencies:** Bitcoin, Ethereum, Solana, Polygon, TON, TRON, and more.
- **Tokens:** ERC20, SPL, BEP20, and other standards.
- **Multi-Chain Support:** Transactions processed via integration with Wallet Core and other blockchain libraries.

5. Sending Interface in Messenger

1. **Select Recipient:** Choose a contact from the chat list or enter the recipient's tag.
2. **Specify Parameters:** Select cryptocurrency, enter the amount, and confirm.
3. **Sign and Send:** Locally sign the transaction (for non-custodial wallets) and send via blockchain.
4. **Recipient Notification:** The recipient gets a chat notification upon receiving assets.

6. Technical Aspects

6.1. Integration with Matrix

- Transaction data is transmitted through Matrix's encrypted channels.
- Full End-to-End encryption ensures data protection.

6.2. Technologies Used

- **Wallet Core:** Generates addresses and manages private keys locally.

- **Blockchain SDKs:**
- **Ethers.js:** Ethereum, Polygon, BSC.
- **Solana Web3.js:** Solana.
- **BitcoinJS:** Bitcoin.

6.3. Transaction Confirmation

- Transactions are verified through blockchain RPC nodes.
- Custodial transactions are confirmed on Walme's server.

7. Use Case Example

Scenario: User A wants to send 0.1 ETH to their friend, User B.

Steps:

1. User A opens a chat with User B in Walme Messenger.
2. Enters 0.1 ETH and confirms the transaction.
3. The transaction is signed locally or processed by the server.
4. User B receives a chat notification about the 0.1 ETH deposit.

8. Conclusion

The crypto asset transfer feature in Walme Messenger combines simplicity, security, and innovation. It enables users to manage their assets directly during conversations, creating a unique integration of Web3 and decentralized communication.

Groups, Channels, and Crypto Likes in Walme: Content Monetization

Walme Messenger offers tools for creating groups and channels where users can interact, share information, and monetize their content through crypto likes. This feature integrates Web3 and a multi-chain wallet, enabling creators and channel owners to earn from their content.

1. Groups and Channels: Dynamic Communication and Content

1.1. Groups

Features:

- Multi-user chats supporting text messages, files, voice messages, and calls.
- Access control: Groups can be public or private.

- Participant roles: Administrators, moderators, and members.

Use Cases:

- Discussions on professional topics.
- Interest-based communities.
- Private groups with premium content.

1.2. Channels

Features:

- One-way chats for posting information and media.
- Subscribers can only view content and interact through likes and comments.

Use Cases:

- Personal blogs or educational channels.
- Platforms for exclusive content.
- Corporate channels for notifications.

2. Crypto Likes: Supporting Creators

2.1. What Are Crypto Likes?

Crypto likes enable users to support creators by sending cryptocurrency. Each like represents a set amount of crypto, customizable by the user.

2.2. How It Works

1. A user likes a piece of content (post, message, or image).
2. The specified crypto amount is deducted from the user's wallet.
3. The assets are credited to the creator's wallet.

2.3. Benefits of Crypto Likes

- **Direct Monetization:** Creators earn rewards without intermediaries.
- **Transparency:** Transactions are recorded on the blockchain.
- **Multi-Chain Integration:** Users can send tokens from any supported networks (ETH, SOL, BTC, etc.).

3. Monetization via Groups and Channels

3.1. Paid Access

- Channel and group owners can set subscription fees.
- Payments are processed through custodial or non-custodial wallets.

3.2. Exclusive Content

- Creators can publish unique content accessible only to subscribers or premium group members.

3.3. Donations

- Group members can support creators with crypto likes or direct asset transfers via the built-in wallet.

3.4. DAO and Voting

- Group owners can use tokens for governance and decision-making within the community.

Example: Voting on the next content theme or community development initiatives.

4. Management and Security

4.1. Roles and Permissions

- **Administrators:** Manage content, access, and monetization.
- **Moderators:** Enforce community rules.
- **Participants:** Consume content and interact via likes and comments.

4.2. Privacy

- All messages, likes, and payments are protected by End-to-End encryption.
- Users can remain anonymous if desired.

4.3. Transaction Transparency

- All operations are recorded on the blockchain, preventing payment manipulation.

5. User Benefits

For Creators:

- **Commission-Free Monetization:** Earn directly without platform fees.
- **Direct Audience Engagement:** Utilize crypto likes for support.
- **Content Access Control:** Flexible monetization through subscriptions and exclusive materials.

For Participants:

- **Ease of Support:** Use crypto to back favorite creators.
- **Access to Unique Content:** Explore premium materials.
- **Community Participation:** Engage in voting and discussions.

6. Technical Aspects

6.1. Crypto Likes Mechanics

- **Local Transaction Signing:** For non-custodial wallets, transactions are signed locally.
- **Processing Speed:** Custodial wallets enable instant transfers without network confirmations.

6.2. Matrix Integration

- Crypto like notifications are delivered via Matrix.
- Like history is accessible in both chat and the wallet.

6.3. Interaction Tokenization

- Each interaction (like, comment, subscription) is recorded as a blockchain transaction.

7. Use Case Example

Paid Channel Creation

- A creator launches an educational channel with a $10 USDC monthly subscription.

Content Monetization via Crypto Likes

- Channel members support the creator by sending crypto likes for valuable posts.

DAO Management

- The creator conducts a vote on the next content theme using **WLM tokens** as a voting mechanism.

Conclusion

Walme Messenger empowers creators and users with innovative monetization tools like groups, channels, and crypto likes. This unique integration of Web3 and decentralized communication provides a secure, transparent, and flexible platform for content sharing and earning.

Personal AI Bot Walme: Smart Web3 Assistant

The **Walme AI Bot** is your personal assistant, offering recommendations, signals, and notifications based on data analysis of markets, blockchains, and user activity. Powered by cutting-edge AI technologies and deep integration with the **Markets Engine**, it combines convenience, security, and adaptability tailored to your needs.

1. Core Features of the AI Bot

1.1. Recommendations

- **Portfolio Analysis:**

The bot analyzes user assets, providing personalized recommendations for diversification and risk management.

- **Forecasts:**
    - Predicted token price changes.
    - Evaluation of short-term and long-term project prospects.

1.2. Market Signals

- **Sample Alerts:**
    - Sudden increases in token trading volume.
    - Sharp changes in TVL (Total Value Locked).
    - New asset listings on major exchanges.
- **Benefits:**

The bot enables quick responses to market changes, maximizing opportunities from key events.

1.3. Notifications

- **Transaction Alerts:**
    - Tracking large fund movements.
    - Detecting suspicious activity on linked wallets.
- **Security Signals:**

Warnings about potential risks related to projects or wallet addresses.

2. Walme AI Bot Technology

2.1. Intelligent Model

- **Architecture:**

Built on a Transformer model adapted for processing time series, market data, and textual information.

- **Training:**
    - Trained on data from the **Markets Engine**, including historical token data, transactions, and market trends.
    - Specialized blockchain metrics are used to analyze activity.

2.2. Markets Engine as a Data Source

- **Data Types:**
    - Token details: price, volume, market cap, and liquidity.
    - DeFi project activity: TVL, protocols, and trends.
    - Events and news related to cryptocurrencies and blockchains.
- **Implementation:**

The Markets Engine acts as a proxy server, aggregating data from exchange APIs, blockchains, and analytics services.

2.3. Integration with the Messenger

- Integrated with the **Matrix protocol**, using secure channels for data transmission.
- Notifications and recommendations are delivered in real-time through chats.

3. Personalization

3.1. User Adaptation

- The bot considers:
- User portfolios.
- Preferred tokens and projects.
- Interaction history with the platform.

3.2. Customizable Notifications

- Users can select which signals and recommendations to receive:
- Token price changes.
- Wallet activity.
- Market trends.

3.3. Multilingual Support

- The bot provides data and recommendations in multiple languages, including English and Russian.

4. Benefits of the AI Bot

- **Informative:**

Users receive timely signals and recommendations based on comprehensive market data analysis.

- **Secure:**

The bot helps protect assets by warning of suspicious actions.

- **Transparent:**

All data used by the bot is available for user verification.

- **Accessible:**

Notifications and recommendations are delivered via the user-friendly Walme Messenger interface.

- **Web3 Integration:**

Features multi-chain wallet support and blockchain analytics.

5. Use Cases

Scenario 1: Market Signal

- **Notification:**

“The trading volume for token $ABC increased by 200% in the last 24 hours. Check the trends!”

Scenario 2: Recommendation

- **Advice:**

“Add token $DEF to your portfolio for diversification. It has shown steady growth over the past 7 days.”

Scenario 3: Security Notification

- **Alert:**

“Suspicious activity detected on your wallet: a transaction of 50 ETH. Review the details.”

6. Technical Advantages

- **Speed and Accuracy:**

Processes data in real-time, delivering up-to-date recommendations.

- **Deep Integration with Markets Engine:**

Access to advanced analytics ensures highly accurate insights.

- **Scalability:**

Supports millions of users through data clustering and optimized queries.

- **End-to-End Protection:**

All data and notifications are encrypted within the messenger.

The Walme AI Bot is an intelligent assistant designed for Web3 users. It helps manage assets, analyze markets, and make informed decisions by providing real-time signals, recommendations, and alerts. With its integration into the **Markets Engine** and multi-chain wallet, the bot is an essential tool for anyone seeking to maximize the potential of Web3.

V. Platform Features

Walme offers a comprehensive set of tools for working with Web3, including a multi-blockchain non-custodial wallet, custodial solutions, a decentralized messenger, and Markets Engine analytics. The platform is designed to provide maximum convenience, security, and flexibility for users.

Non-Custodial Wallet: Multi-Blockchain Support

The **Walme Non-Custodial Wallet** gives users full control over their digital assets, eliminating third-party involvement. It supports a wide range of blockchains and tokens, offering reliable and convenient crypto asset management. Fully integrated with the Walme platform, the wallet ensures secure access to Web3 services and innovative features.

1. Key Features of the Walme Non-Custodial Wallet

1.1. Full Control Over Assets

- Private keys are stored exclusively on the user's device and never transmitted to servers.
- Transactions are signed locally, eliminating the risk of key compromise.

1.2. Multi-Blockchain Support

Walme supports numerous blockchains, including:

- **Bitcoin (BTC):** BIP44, BIP49, BIP84, and BIP86 address standards.
- **Ethereum (ETH):** Management of ETH and ERC20 tokens.
- **Solana (SOL):** Full access to SPL tokens.
- **Polygon (MATIC):** Support for ERC20 tokens on the Polygon network.
- **Binance Smart Chain (BSC):** Handling of BEP20 tokens.
- **TRON (TRX):** TRX and TRC20 token support.

- **Litecoin (LTC), Zcash (ZEC), Dash (DASH):** Support for key blockchains with multi-signature functionality.

1.3. New Address Generation

For enhanced privacy, the wallet automatically generates a new address for each transaction, safeguarding user history and balances from tracking.

2. Functional Capabilities

2.1. Sending and Receiving Assets

- Simplified asset management: Enter the recipient's address or select a contact in the messenger.
- Directly send assets through Matrix Messenger.

2.2. Transaction History

- Transparent and user-friendly history with filters by date, asset type, or amount.
- Detailed transaction data: status, fees, and blockchain network.

2.3. Token Support

- Handles major token standards like ERC20, SPL, BEP20, and TRC20.
- Send and receive tokens without additional contract configuration.

2.4. Local Data Storage

- **iOS Secure Enclave** and **Android Keystore**: Securely stores keys in encrypted form.
- Local encryption of user data on devices.

3. Non-Custodial Wallet Security

3.1. Security Mechanisms

- **End-to-End Encryption:** Transaction data and user messages are encrypted within the messenger.
- **Decentralization:** No single point of failure, ensuring assets are secure without key access.

3.2. Privacy

- Unique address generation for each transaction prevents tracking.
- Local key storage eliminates risks of server-based leaks.

4. Integration with the Walme Platform

4.1. Matrix Messenger

- Users can send crypto assets directly in chat using the linked wallet.
- Recipients can set restrictions or completely disable asset reception.

4.2. Markets Engine

- Analytics and market signals are integrated into the wallet, aiding informed decision-making.
- Access to data for tracking token prices, trading volumes, and activity.

4.3. Web3 Integration

- **WalletConnect** support for connecting to decentralized applications (dApps).
- Integration with swaps (e.g., Uniswap, Jupiter, 1Inch) for instant asset exchanges.

5. User Benefits

Simplicity

- Intuitive interface enables easy asset management and Web3 connectivity.

Security

- State-of-the-art encryption technology ensures private key protection.

Multi-Blockchain Support

- Comprehensive support for multiple networks and token standards.

Integration with Walme Ecosystem

- Seamless interaction with the messenger, Markets Engine analytics, and Web3 tools.

6. Future Developments

- **Support for New Blockchains and Token Standards:** Expanding compatibility with emerging networks.
- **Advanced Analytics:** Enhanced integration with AI for asset management recommendations.
- **Multi-Signature Options:** Adding multi-signature functionality for increased security.

The **Walme Non-Custodial Wallet** is an innovative solution for asset management, combining security, privacy, and flexibility in a single platform. It is ideal for Web3 users, offering extensive functionality and deep integration with decentralized services.

Custodial Wallet: Crypto Card and IBAN

The **Walme Custodial Wallet** is a versatile solution combining convenient crypto asset management with access to traditional financial tools. Users can leverage a crypto card for everyday purchases and open IBAN accounts for fiat transactions, bridging the gap between cryptocurrencies and the traditional economy.

1. Key Features

1.1. Crypto Card

Card Types:

- **Physical Card:**
  - For in-store payments, ATM cash withdrawals, and purchases.
- **Virtual Card:**
  - For online payments and contactless transactions via Apple Pay and Google Pay.

Functionality:

- Instant crypto-to-fiat conversion at the time of transaction.
- Card top-ups using cryptocurrency or bank transfers.
- Easy card management through the Walme app.

1.2. IBAN Accounts

Capabilities:

- Open a personal IBAN account for sending and receiving fiat payments via SEPA.
- Seamlessly integrated with the crypto card for funding and withdrawals.
- Simplified interaction with traditional financial tools.

Supported Features:

- Transfers in major global currencies, including EUR and USD.
- Direct management of funds through the custodial wallet.

2. Custodial Wallet Security

2.1. Verification via SUMSUB

- Users must complete KYC/AML verification to access custodial features.
- Identity and transaction checks ensure compliance with international security standards.

2.2. Data Protection

- **PCI DSS Compliance:**
    - Card and transaction data are safeguarded according to payment system security standards.
- **Card Data Tokenization:**
- Real card data is replaced with unique tokens for secure online transactions.

2.3. Access Control

- Users can set transaction limits and restrictions.
- Real-time notifications for every operation.

3. Crypto Card Usage

3.1. Physical Card

Ideal for:

- Payments at physical stores using POS terminals.
- Cash withdrawals from ATMs.

3.2. Virtual Card

- Contactless payments through Apple Pay and Google Pay.
- Secure online purchases.

3.3. Card Management

- **Top-ups:**
    - With cryptocurrency from the non-custodial wallet.
    - Via bank transfer to the IBAN account.
- **Expense Tracking:**
    - Monitor balance and transaction history.
    - Lock and unlock the card via the app.

4. IBAN Account Usage

4.1. Account Opening

- Quick setup after completing KYC.
- Available for both personal and corporate users.

4.2. Transfer Capabilities

- Send and receive fiat payments through SEPA.
- Convenient integration with crypto assets via seamless conversion.

5. Technical Aspects

5.1. Infrastructure

Walme leverages solutions from licensed providers for reliability and security:

- **Crypto Card Provider:** Quicko.
- **IBAN Account Provider:** Breinrock.

5.2. Platform Integration

The custodial wallet is fully integrated into the Walme app:

- Unified interface for managing cards and accounts.
- Real-time transaction notifications.
- Expense analytics.

6. User Benefits

- **Convenience:**
  - A single app to manage crypto assets, fiat accounts, and the crypto card.
- **Accessibility:**
  - Use cards for in-store, online, and ATM transactions globally.
- **Crypto Integration:**
  - Effortless conversion of cryptocurrencies to fiat for payments.
- **Security:**
  - Advanced data protection technologies and transaction monitoring.

7. Future Developments

- Expanding geographic support for crypto cards and IBAN accounts.
- Introducing additional features like crypto cashback.
- Supporting more currencies for IBAN accounts.

The **Walme Custodial Wallet** with its crypto card and IBAN features is an innovative solution that bridges the worlds of cryptocurrencies and traditional finance. It makes asset management accessible, convenient, and secure for users worldwide.

Web3 Swaps: Integration of Uniswap, Jupiter, 1Inch, and QuickSwap

Walme provides users with powerful tools to manage crypto assets through **Web3 Swaps**, enabling token exchanges across decentralized networks using leading DeFi aggregators and platforms such as Uniswap, Jupiter, 1Inch, and QuickSwap. With seamless integration

into the multi-chain wallet, users can exchange assets quickly and securely without leaving the Walme ecosystem.

1. What Are Web3 Swaps?

Web3 Swaps allow users to exchange tokens across various blockchains via decentralized exchanges (DEX) and liquidity aggregators. This feature eliminates the need for centralized intermediaries, enabling direct blockchain interaction.

Key Features:

- Direct access to liquidity on leading DEXs.
- Minimal exchange fees.
- Compatibility with multiple blockchains and tokens.

2. Integrations

2.1. Uniswap

- **Networks:** Ethereum, Polygon, Arbitrum, Optimism.
- **Features:**
    - Market leader in DEX liquidity.
    - Supports ERC20 token swaps.
    - User-friendly and access to a vast range of token pairs.

2.2. Jupiter

- **Network:** Solana.
- **Features:**
    - The top liquidity aggregator in the Solana ecosystem.
    - Optimized swap routes for cost efficiency.
    - SPL token support with low transaction fees.

2.3. 1Inch

- **Networks:** Ethereum, Binance Smart Chain, Polygon, Avalanche, Optimism, Arbitrum.
- **Features:**
    - Aggregates liquidity across multiple DEXs for the best prices.
    - Advanced tools for traders, including slippage control and route optimization.
    - Gas cost analysis for efficient transactions.

2.4. QuickSwap

- **Network:** Polygon.
- **Features:**
    - Fast transactions with low fees.
    - ERC20 token swap support.

- Simple integration with the Walme wallet.

3. Advantages of Using Web3 Swaps in Walme

3.1. Multi-Chain Support

- Token swaps available across multiple blockchains, including Ethereum, Solana, Polygon, and Binance Smart Chain.
- Effortless access to liquidity through connections with top DEXs.

3.2. Transparency and Decentralization

- Transactions occur directly on the blockchain, eliminating risks associated with centralized platforms.
- All operations are recorded in public ledgers for full transparency.

3.3. Convenience

- Users can exchange tokens directly via the Walme multi-chain wallet interface.
- Integration with **Matrix Messenger** delivers real-time notifications about swap completions.

3.4. Cost Efficiency

- Smart swap routes minimize fees and slippage.
- Notifications about favorable rates and trends provided by the **Walme AI Bot**.

4. How It Works

1. **Token Selection:**

The user selects the token to be exchanged and the target token.

2. **Parameter Setup:**

Configure the amount and optional slippage settings.

3. **DEX or Aggregator Connection:**

Walme automatically connects to the appropriate platform (e.g., Uniswap, Jupiter) for execution.

4. **Transaction Signing:**

For non-custodial wallets, transactions are signed locally to ensure private key security.

5. **Completion:**

Assets are credited to the user's wallet upon network confirmation.

5. Security and Privacy

- **Transaction Signing:**

All transactions are signed locally using private keys.

- **End-to-End Encryption:**

Transaction details are transmitted through encrypted channels.

- **Status Notifications:**

Users receive updates at every step of the swap process.

6. Benefits for Users

Flexibility

- Access to multiple blockchains and tokens through a unified interface.

Cost Savings

- Benefit from the best rates via liquidity aggregators.

Convenience

- Full integration into the Walme ecosystem enables asset swaps without switching platforms.

Security

- Decentralized operations eliminate risks associated with centralized platforms.

7. Future Developments

- Integration of new blockchains and DEXs to expand swap capabilities.
- Enhanced analytical tools for predicting exchange rates.
- AI-powered recommendations for optimal swap routes.

Web3 Swaps in **Walme** provide a seamless, secure, and decentralized way to exchange crypto assets. Integrated with leading DeFi platforms, it offers a powerful, user-friendly solution for Web3 users seeking efficiency, transparency, and control.

Binance API Integration: Asset Tracking and Quick Top-Ups

Walme allows users to connect their **Binance API**, providing convenient access to track assets held on the exchange and top up balances directly from the app interface. This integration bridges centralized exchange assets with the features of the Walme multi-chain wallet, enhancing flexibility and convenience within the Walme ecosystem.

1. Key Features of Binance API Integration

1.1. Real-Time Asset Tracking

- Full access to all asset balances on Binance.
- Intuitive visualization of assets:
- Distribution by tokens and networks.
- Current value in selected fiat currencies (e.g., USD, EUR).

1.2. Quick Balance Top-Ups

- **With Cryptocurrencies:**
  - Instantly top up Binance balances from the Walme multi-chain wallet.
- **With Fiat:**
  - Easy fiat deposits via IBAN accounts integrated with the custodial wallet.
  - Real-time notifications upon fund arrival on the exchange.

1.3. Notifications

- Alerts for significant changes in asset values.
- Updates on new deposits or transfers to the Binance account.

2. How It Works

1. **Create API Keys on Binance:**

Users generate API keys on Binance with **read-only permissions**.

2. **Integration with Walme:**

- Enter the API keys into the Walme app interface.
- A secure connection is established to access balance and account activity data.

3. **Asset Viewing and Management:**

- Updated balances and assets appear on the Walme dashboard.
- Users can initiate top-ups with just a few clicks.

3. User Benefits

3.1. User-Friendly Interface

- Asset balances displayed in a structured view, including asset distribution and current values.
- Filters available for tokens, networks, and value thresholds.

3.2. Quick Top-Ups

- Instant integration with the Walme multi-chain wallet for transferring assets to Binance balances.
- Seamless fiat deposits via an IBAN account linked to the custodial wallet.

3.3. Notifications and Monitoring

- Alerts for fund movements and asset value changes.
- Real-time access to updated balance information.

3.4. Transparency and Security

- **Read-only access:** Prevents unauthorized operations.
- API keys are stored securely in encrypted form.

4. Security

Data Encryption

- **API Keys Protection:** Secured using AES-256 encryption and transmitted via secure connections.

Access Permissions

- API integration is limited to **read-only access**, ensuring no transactions can occur without user authorization.

Activity Monitoring

- Users receive alerts for all interactions with the API connection.

5. Integration with the Walme Ecosystem

5.1. Analytics via Markets Engine

- Access to detailed analytics for assets, including price trends and trading volumes.
- Unified balance visualization alongside the multi-chain wallet.

5.2. Notifications via Matrix Messenger

- Real-time asset status updates delivered through Walme Messenger.

5.3. AI Bot Walme

- Personalized recommendations for asset management on Binance.
- Signals on trading opportunities or reinvestment strategies.

6. Future Developments

- **Automated Top-Up Scenarios:** Enabling regular Binance balance replenishments.
- **Integration with Additional Exchanges:** Expanding connections to other centralized platforms.
- **Enhanced Notifications:** Including updates on fees and yield forecasts.

Binance API Integration within the Walme ecosystem provides a seamless and secure way to track assets and manage balances efficiently. By bridging centralized and decentralized finance, Walme empowers users with flexibility, transparency, and convenience in managing their crypto portfolios.

WalletConnect for Interacting with dApps

Walme integrates **WalletConnect**, enabling users to access decentralized applications (dApps) directly from the multi-chain wallet. This integration allows secure and convenient interactions with the Web3 ecosystem, including DeFi platforms, NFT marketplaces, DAOs, and more.

1. What Is WalletConnect?

WalletConnect is a protocol that links wallets to dApps through a secure, encrypted connection. Users can interact with decentralized services by confirming transactions and operations via the **Walme** app.

Features of WalletConnect:

- **Multi-Chain Support:** Connect to dApps on Ethereum, Polygon, Binance Smart Chain, Solana, and other blockchains.
- **Secure Interaction:** Transactions are only confirmed through the user's wallet.
- **Ease of Use:** Instant connection via QR codes and links.

2. How It Works in Walme

1. **Select a dApp:**
    - Open a decentralized application on a device or browser.
2. **Scan QR Code:**
    - Use Walme's WalletConnect feature to scan the dApp's QR code.

3. **Establish Connection:**
    - Walme sets up a secure connection with the dApp via WalletConnect.
4. **Interact:**
    - Perform actions within the dApp (e.g., staking, DAO participation, NFT purchases) by confirming operations through the Walme wallet interface.

3. Features for Users

3.1. DeFi Integration

- **Liquidity and Staking:**
    - Connect to platforms like Aave, Compound, and Curve to provide liquidity and earn staking rewards.
- **Lending and Borrowing:**
    - Access decentralized platforms for loans, collateralized assets, and borrowing opportunities.

3.2. NFT and Metaverse

- **Buying and Selling NFTs:**
    - Integration with marketplaces like OpenSea, Rarible, and Foundation.
- **Metaverse Participation:**
    - Interact with virtual worlds such as Decentraland and The Sandbox.

3.3. DAO Management

- **Voting:**
    - Participate in DAO governance directly from the wallet.
- **Proposals:**
    - Submit and support initiatives within decentralized autonomous organizations.

4. Benefits of WalletConnect in Walme

4.1. Multi-Chain Support

- Seamlessly connect with dApps across multiple blockchains.

4.2. Convenience

- Quick connection using QR codes or links.
- Interact with dApps in just a few clicks.

4.3. Security

- Transactions are signed locally, with private keys never leaving the user's device.
- Data is transmitted through encrypted, secure connections.

4.4. Deep Integration

- **Transaction Notifications:** Updates delivered via **Matrix Messenger**.
- **AI Bot Recommendations:** Personalized suggestions on trending and popular dApps.

5. Technical Aspects

5.1. Technologies Used

- **WalletConnect 2.0:**
  - Supports the latest protocol version, enabling multi-session and multi-blockchain functionality.

5.2. Local Transaction Signing

- Private keys remain securely stored on the user's device.
- Transactions are signed locally using Secure Enclave (iOS) or Keystore (Android).

5.3. dApp Compatibility

- Integration supports all dApps that adhere to the WalletConnect standard.

6. Use Case Examples

- **DeFi Connection:**
  - A user connects the Walme wallet via WalletConnect to Aave to deposit liquidity.
- **NFT Purchase:**
  - On OpenSea, the user selects an NFT, connects the Walme wallet through a QR code, and confirms the purchase within the app.
- **DAO Participation:**
  - The user connects to a DAO via WalletConnect, votes on a proposal, and confirms the transaction through Walme.

7. Future Developments

- **New Blockchain Support:**
  - Integration of emerging blockchains like Aptos and Sui.
- **Enhanced WalletConnect Features:**
  - Support for transaction notifications.
- **AI Bot Recommendations:**
  - Insights into promising dApps and optimized user strategies.

WalletConnect in **Walme** provides users with secure and efficient access to the decentralized Web3 ecosystem. This integration makes Walme a versatile tool for interacting

with DeFi, NFTs, DAOs, and other dApps, enhancing usability and security in the Web3 space.

Walme Earn: Maximizing Asset Yield

Walme Earn offers advanced tools to help users generate and grow their income through a combination of **Web2 traditional finance** options and **Web3 strategies**. Users can manage both fiat-based credit solutions and innovative reinvestment strategies directly through the Walme ecosystem.

1. Classic Loans (Web2)

Walme enables users to obtain traditional fiat loans by using crypto assets as collateral.

Key Features:

- **Crypto Collateral:**
  - Users can lock cryptocurrencies (BTC, ETH, SOL, and others) in the custodial wallet as collateral for loans.
- **Fiat Loans:**
  - Loans are disbursed in USD, EUR, or other fiat currencies directly to the user's personal IBAN account.
- **Flexible Terms:**
  - Low-interest rates for users with high collateral coverage.
  - Options for partial repayment or automatic renewal if sufficient collateral is maintained.

Benefits:

- **Preservation of Assets:**
  - Users retain their crypto holdings and regain access once the loan is repaid.
- **Quick Liquidity:**
  - Access fiat funds without selling crypto assets.
- **Seamless Integration:**
  - Manage loans through the unified Walme app interface.

2. Web3 Reinvestment

Walme Earn empowers users to reinvest their crypto assets and earn additional income through innovative Web3 strategies.

Key Strategies:

- **Staking Yields:**
  - Interest earned on assets can be automatically reinvested into staking to compound earnings.

    - Options for flexible or fixed-term reinvestment.
- **Liquidity Pool Reinvestment:**
    - Profits from liquidity pools can be redirected to other DeFi platforms for further participation.
- Automatic reinvestment managed by smart contracts.
- **DUO Strategies with Reinvestment:**
    - Earnings from DUO strategies can be used to purchase additional assets or participate in new investment strategies.

Benefits of Reinvestment:

- **Higher Yields:**
    - Compound interest allows users to increase their earnings over time.
- **Flexibility:**
    - Configure automatic or manual reinvestment.
- **AI Integration:**
    - The **Walme AI Bot** recommends optimal reinvestment strategies based on market data and user behavior.

Technical Aspects

1. Classic Loans:

- **Infrastructure:**
    - Loans are issued via partnerships with PCI DSS and GDPR-compliant banks.
- **Collateral Monitoring:**
    - Collateral levels are recalculated in real-time to minimize liquidation risks.
- **Flexible Repayment:**
    - Users can select fixed repayment schedules or flexible repayment terms.

2. Reinvestment:

- **Smart Contracts:**
    - Reinvestment operations are implemented through decentralized smart contracts for transparency and automation.
- **Security:**
    - User data and assets are protected with local encryption and **Secure Enclave** technology.
- **Integration:**
    - Fully synchronized with the Walme multi-chain wallet and **Markets Engine** analytics.

User Benefits

Flexibility:

- Choose between Web2 traditional loans or Web3 reinvestment strategies.

Maximized Yield:

- Reinvest earnings to grow capital through compounding interest.

Ease of Use:

- Manage all features through a single, intuitive app interface.

Access to Liquidity:

- Obtain fiat funds without selling cryptocurrencies.

Walme Earn: The Ultimate Tool for Asset Management

Walme Earn combines the best of Web2 and Web3, enabling users to earn through staking, liquidity pools, and DUO strategies while also offering traditional loans for fiat liquidity. Reinvestment options amplify returns, making **Walme Earn** ideal for both new and experienced Web3 users seeking to maximize their earnings and manage their assets effectively.

VI. Technical Security Aspects

Walme ensures a high level of security for managing crypto assets by protecting private keys, which form the foundation of blockchain operations. It incorporates industry-best practices for storing and signing transactions to safeguard user assets.

1. Local Storage of Private Keys

User private keys are never transferred off the device and are stored in an encrypted format using advanced security mechanisms:

1.1. iOS: Secure Enclave

- Private keys are isolated from the operating system and apps.
- Transactions are signed within a secure environment, preventing data leaks.
- Encryption occurs at the hardware level.

1.2. Android: Keystore

- Secure storage with access restricted by system mechanisms.
- Encryption adheres to Android security standards.
- Biometric authentication secures access to keys.

1.3. Data Encryption

- Private keys and critical data are encrypted using AES-256.
- Data transfer between devices and servers is secured with TLS connections.

2. Transaction Signing

Transactions are signed locally on the user's device, ensuring confidentiality and preventing key exposure on external servers.

Process Overview:

- The user initiates a transaction in the wallet interface.
- The transaction is prepared and sent to local storage for signing.
- The private key signs the transaction within **Secure Enclave** or **Android Keystore**.
- The signed transaction is broadcast to the blockchain via an encrypted connection.

3. Benefits of Local Storage and Signing

3.1. Maximum Confidentiality

Private keys are never transferred online or stored on external servers.

3.2. Attack Resilience

Keys remain secure even if the device is compromised, thanks to isolated storage.

3.3. User Control

Users retain full control over their assets without reliance on third parties.

4. Protection Against Key Loss

Walme implements additional safeguards to minimize the risk of losing private keys:

4.1. Recovery Phrase (Seed Phrase)

- Users receive a 12/24-word phrase for wallet recovery.
- Recommended storage: offline physical media with multi-factor protection.

4.2. Encrypted Backup

- Option to store encrypted recovery phrases in secure cloud storage.

4.3. Biometric Authentication

- Access the wallet via Face ID, Touch ID, or fingerprint.

5. Security Scenario Example

5.1. Wallet Creation:

- The private key is generated and stored securely in the **Secure Enclave** or **Android Keystore**.

5.2. Transaction Execution:

- The user inputs recipient details and transaction amount.
- The private key signs the transaction locally.
- The signed transaction is sent securely to the blockchain.

Local key storage and transaction signing ensure Walme users maintain full control and security of their crypto assets.

Transaction Risk Assessment Module

Walme provides a subscription-based **Transaction Risk Assessment Module** to analyze and mitigate risks associated with counterparties, addresses, and transactions, helping users avoid unsafe interactions.

1. Features of the Risk Assessment Module

1.1. Address and Counterparty Checks

- **Address Analysis:**
  - Verification of recipient or sender against:
    - Fraudulent schemes.
    - Suspicious transactions.
    - Sanctioned lists (e.g., OFAC).
- **Risk Scoring:**
  - Assigns a **Risk Score** based on:
    - Transaction history.
    - Associated smart contracts.
    - Geographic origin and KYC/AML compliance.
- **Risk Categorization:**
  - Low Risk: Safe for interaction.
  - Medium Risk: Additional verification recommended.
  - High Risk: Potential danger warning.

1.2. Smart Contract Analysis

- **Code Review:**
  - Detects vulnerabilities like reentrancy and front-running risks.
  - Verifies deployment and audit legitimacy.
- **Security Ratings:**
  - Evaluates contracts based on usage history and developer reputation.

1.3. Predictive Risks and Alerts

- **Spam Transaction Filtering:**
  - Identifies and blocks suspicious transactions.
- **Notifications:**
  - Alerts for sudden address activity changes or high-risk transactions.
- **AI Recommendations:**
  - Walme AI Bot provides actionable insights based on risk analysis.

2. Benefits for Users

2.1. Enhanced Security

- Reduces fraud and asset loss risks.
- Prevents unauthorized or illegal transactions.

2.2. Convenience

- Conduct risk checks directly within the wallet interface.
- Access detailed reports on counterparties and transactions.

2.3. Time Efficiency

- Automates analysis, eliminating the need for manual checks.

3. Technical Aspects

3.1. Integration with External Sources

- Data from:
  - Blockchain analytics platforms.
  - Fraud reports and sanction lists.

3.2. AI Automation

- Continuously updated databases for accurate risk analysis.
- Recommendations are automatically generated.

3.3. Real-Time Notifications

- Matrix Messenger integration for instant risk alerts.

4. Usage Scenario

A user wants to send 2 ETH to a counterparty address:

1. Activates the Risk Assessment Module before sending.

2. The module flags the address with a **Risk Score** of 80 (high risk).
3. Recommendations advise against proceeding, citing links to suspicious contracts.
4. The user receives an alert via Matrix Messenger and cancels the transaction.

Duress Mode and Access Control

Walme offers **Duress Mode** and robust **Access Control** to protect assets in extreme situations, ensuring security even under duress.

1. Duress Mode

Users can activate a mode where assets are hidden, even if forced to unlock their wallet.

1.1. How It Works

- A duress code or fingerprint activates the mode.
- In duress mode:
- Main assets are hidden.
- The wallet displays a decoy balance and safe transaction history.

1.2. Example

- In a coercive situation, the user enters the duress code.
- The attacker sees only a small decoy balance.
- Main assets remain secure.

2. Access Control Features

2.1. Multi-Factor Authentication (MFA)

- Options:
    - Biometric authentication.
    - One-time passwords via Google Authenticator or SMS.

2.2. Transaction Limits

- Set limits on transaction amounts or frequency.
- Restrict transfers to specific addresses.

2.3. Trusted Devices

- Manage a list of approved devices.
- Notifications for access attempts from new devices.

2.4. Geofiltering

- Restrict wallet access to specific regions.

3. Matrix Messenger Integration

- Real-time alerts for access attempts or transactions.
- Duress mode activation via the messenger interface.

4. Implementation and Data Security

4.1. Duress Mode:

- Private keys linked to hidden assets are encrypted separately.
- Duress profiles display only decoy data.

4.2. Access Management:

- Local encryption secures access requests.

Walme's advanced security features, including **local key storage**, **risk assessment**, and **duress mode**, make it a highly secure platform for managing crypto assets in Web3.

VII. WLM Tokenomics

WLM is the native utility token of the Walme ecosystem, designed to support a sustainable, decentralized platform. Its primary goals include incentivizing user activity, fostering ecosystem growth, and providing access to unique features and services.

- **Base Network:** Solana (SPL) ensures high transaction speed and low fees.
- **Multi-Chain Support:** Through bridges, WLM will be available on Ethereum (ERC-20) and Polygon (MATIC), expanding token accessibility.
- **Total Supply:** 10 billion WLM — fixed to prevent inflation.

Token Distribution

- **25% — Marketing and Development:** 2.5 billion WLM.
- **20% — Treasury:** 2 billion WLM.
- **14% — Team and Ambassadors:** 1.4 billion WLM.
- **10% — Community Rewards:** 1 billion WLM.
- **8% — Liquidity:** 800 million WLM.
- **7% — Private Sale 1:** 700 million WLM.
- **5% — Private Sale 2:** 500 million WLM.
- **5% — Staking Rewards:** 500 million WLM.
- **4% — Angel Investors:** 400 million WLM.
- **2% — Advisors:** 200 million WLM.

Core Token Functions

1. Utility:

WLM provides access to premium features, analytics, exclusive chats, and trading signals.

2. Governance (DAO):

Token holders participate in strategic platform decisions.

3. Fee Discounts:

Holders receive significant discounts on platform services.

4. DeFi Ecosystem Access:

Staking, liquidity pools, and farming offer earning opportunities.

5. Escrow and Secure Transactions:

WLM facilitates secure deals within the platform.

Earn Utility: Ways to Earn WLM

Walme incentivizes user activity with multiple earning mechanisms:

1. Staking:

- Lock WLM tokens to earn passive income.
- Long-term stakers receive enhanced rates.

2. Task Marketplace (Tasker):

- Complete tasks (content creation, testing, promotion) for WLM.
- Transparent payments via smart contracts.

3. Social Engagement and Referrals:

- Rewards for inviting new users, participating in campaigns, and activity in chats and votes.

4. Play-to-Earn:

- Earn WLM by completing in-game quests and challenges.

5. Liquidity and Commission Sharing:

- Provide liquidity to earn a share of transaction fees.

6. Content Rewards:

- Earn through crypto-likes and tips for creating quality content.

7. Bounty Programs and Promotions:

- Participate in special campaigns to earn additional WLM.

8. Loyalty Program:

- Cashback in WLM for transactions:
- Crypto/crypto, fiat/fiat, crypto/fiat conversions.
- Cashback rates depend on token holdings and activity levels.

9. Transaction Rewards:

- Earn WLM for platform transactions, including P2P and fiat top-ups.

Spend Utility: Using WLM

WLM tokens play a key role in the Walme ecosystem, driving user interaction and engagement.

1. Premium Features and Analytics:

- Pay for:
    - Advanced market analytics and price predictions.
    - AI-driven trading signals.
    - Exclusive content and premium alerts.

2. DAO Participation:

- Use WLM to vote on:
    - Platform functionality updates.
    - Token listings and partnerships.
    - Community initiatives.

3. Escrow Services:

- Conduct secure P2P or B2B transactions with minimal fees.

4. Crypto-Likes and Tips:

- Reward content creators directly within the platform.

5. Marketplace Purchases:

- Buy NFTs, courses, and other user-provided services.

6. Fee Discounts:

- Reduce fees for:
    - Crypto and fiat exchanges.
    - P2P transfers and transactions.

7. Exclusive Access:

- Pay for entry into premium groups, expert chats, and AMA sessions.

8. Token Burning:

- Users can burn tokens to reduce supply and enhance scarcity.

Value Retention Mechanisms

To maintain WLM's value, the ecosystem employs the following strategies:

1. Token Burning:

- Periodic buybacks and burns reduce the circulating supply.
- Users can voluntarily burn tokens to enhance scarcity.

2. Fee Reductions:

- Discounts incentivize users to hold and spend WLM.

3. Long-Term Incentives:

- Staking bonuses and loyalty rewards encourage long-term token retention.

4. Balanced Earn/Spend Utility:

- **Earn Utility:** Limited earning opportunities prevent inflation.
- **Spend Utility:** Extensive use cases sustain token demand.

WLM in the Walme Messenger

WLM integrates seamlessly into the messenger, enhancing communication and transactions.

1. Asset Transfers:

- Send tokens directly through chats with secure settings for recipients.

2. Crypto-Likes and Tips:

- Reward quality content or valuable contributions.

3. Exclusive Features:

- Access premium chats, expert channels, and personalized alerts.

4. DAO Voting:

- Participate in governance directly within the messenger.

5. Escrow Transactions:

- Secure P2P deals with minimal fees.

6. Engagement Rewards:

- Earn WLM for referrals, campaigns, and social activity.

WLM serves as the backbone of the Walme ecosystem, providing powerful tools for earning, spending, and engaging with the platform. This tokenomics model ensures a sustainable balance of supply and demand while fostering a vibrant, user-driven ecosystem.

VIII. AI and Analytics

Generating Analytics and Signals for Tokens and Projects

Walme integrates AI-powered tools and advanced analytics, accessible through the WLM token, to deliver critical insights and trading signals. These features empower users to make informed decisions in cryptocurrency and Web3 spaces.

Core Capabilities

1. Trend Analytics and Signals

- **Trend Analysis:**

AI-driven insights based on historical price data, trading volumes, and token volatility.

Indicators highlighting current market trends and potential entry/exit points.

- **Trading Signals:**
- **Buy/Sell Alerts:** AI-based predictions grounded in technical analysis (TA).
- **Portfolio Recommendations:** Asset reallocation suggestions to optimize yields and manage risks effectively.

2. Risk Assessment and Security

- **Risk Scoring:**
  - Evaluation of tokens and wallet addresses for safety.
  - Detection of suspicious activities or associations.
- **Smart Contract Analysis:**
  - AI scans for vulnerabilities like reentrancy or front-running risks.
  - Comprehensive audits for transparency and safety.

3. Market Monitoring

- **Real-Time Alerts:**
  - Sudden trading volume spikes.
  - TVL (Total Value Locked) shifts.
  - Listings on CEX and DEX platforms.
- **Price Trend Indicators:**

    - Short- and long-term trends visualization.
    - Key support and resistance levels on charts.

4. Project Reports

- Automatically generated reports covering token dynamics, market metrics, and project updates.
- Personalized insights on engagement opportunities with projects.

Benefits for Users

1. Save Time

Automated analytics reduce manual data research efforts.

2. Enhance Accuracy

AI models analyze vast datasets to minimize human error and provide precise insights.

3. Transparency

Real-time alerts and reports enable users to make well-informed, data-driven decisions.

4. Accessibility

Premium analytics tools are made available to users through WLM tokens, offering advanced capabilities for a competitive edge.

Integration with WLM Token

- Premium analytics access for WLM holders.
- WLM tokens can be used to pay for signals, reports, and exclusive tools.
- Discounts on advanced analytics for users holding WLM.

Markets Engine in the Walme Ecosystem

Markets Engine is a comprehensive analytics module offering real-time, actionable insights into cryptocurrencies, tokens, and projects. It enhances the user experience with precise and secure analytics tools integrated seamlessly within Walme.

Core Features of Markets Engine

1. In-Depth Token and Project Analysis

- **Trading Signals:**

Buy/sell alerts based on historical trends, technical indicators, and machine learning algorithms.

- **Project Evaluation:**
    - Smart contract analysis for reliability.
    - Metrics like price history, liquidity, and activity.

2. Market Monitoring

- **Real-Time Notifications:**
    - Sudden trading volume changes.
    - Whale wallet activity.
    - New token listings and TVL changes.
- **Market Indicators:**
    - Volatility and trend signals.
    - Support and resistance levels.

3. Risk Assessment

- **Risk Score:**
    - Safety analysis for wallet addresses, transactions, and contracts.
- **AML Compliance:**
    - Verifications against Anti-Money Laundering (AML) standards.

4. Personalized Reports

- Auto-generated insights tailored to user portfolios.
- Custom recommendations for optimizing asset allocation.

Benefits for Users

- **Better Decisions:**

Markets Engine equips users with real-time data for actionable insights.

- **Risk Mitigation:**

Comprehensive Risk Score analysis minimizes exposure to unsafe projects.

- **Portfolio Optimization:**

Personalized recommendations align assets with market trends.

- **Increased Earnings:**

Trading signals and trend analysis help identify profitable opportunities.

Bot Integration with Markets Engine

The Walme Analytics Bot, powered by a **Generative Pre-trained Transformer (GPT)** model, processes and interprets market data for users.

Key Features

- **AI-Powered Content Generation:**
  - GPT-based responses deliver tailored reports and actionable insights.
- **Deep Integration with Markets Engine:**
  - Comprehensive analytics sourced directly from real-time market data.
  - Risk Score assessments for safe interactions.
- **Self-Learning Architecture:**
  - Continuous improvements based on user feedback and real-time data.

Bot Capabilities

- **Trading Signals and Analytics:**
  - AI-generated recommendations on asset buy/sell actions.
  - Predictive trends and volatility insights.
- **Real-Time Alerts:**
  - Updates on token listings, trading volume changes, and unusual wallet activity.
- **Personalized Recommendations:**
  - Tailored portfolio management tips.

Integration with WLM Token

- Premium bot features available for WLM token holders.
- Discounts and prioritized access for users staking WLM.

Markets Engine and the AI-powered Analytics Bot elevate the Walme ecosystem with precision-driven insights, offering users the tools they need to navigate and thrive in the dynamic Web3 landscape.

IX. Licensing and Compliance

The **Walme ecosystem** operates in full compliance with international standards and regulations, holding VASP licensing, implementing robust KYC/AML processes, and partnering with licensed providers for financial operations. This ensures a high level of security, trust, and transparency for users and partners.

VASP Licensing

Walme Finance s.r.o. is registered as a Virtual Asset Service Provider (VASP), allowing the platform to offer a wide range of financial services, including custody, exchange, and management of crypto assets.

Registration Details:

- **Company:** Walme Finance s.r.o.

- **Registration Number:** 22161856
- **Address:** Revoluční 1082/8, Nové Město, 110 00 Prague 1, Czech Republic

VASP License Role:

- **Regulated Activities:** Custody, transfer, and exchange of virtual assets.
- **AML/CFT Compliance:** Adheres to anti-money laundering and counter-terrorism financing standards.
- **User Trust:** Legal transparency builds confidence among users and partners.

Custodial Wallet Operator: Kauri Finance

Kauri Finance is the operator managing custodial wallet and crypto card services within the Walme ecosystem. It holds key licenses, including MiCA (Markets in Crypto-Assets Regulation), meeting EU regulatory requirements for crypto operations.

Kauri Finance Overview:

- **Licenses:**
  - MiCA for crypto-asset operations.
  - Payment processing and custodial service licenses.
- **Services Provided:**
  - Secure custody of crypto assets.
  - Issuance and management of crypto cards.
  - Seamless integration with Walme for a unified user experience.

Benefits of Integration:

- Reliable custodial wallet infrastructure.
- Compliance with the highest regulatory and security standards.

Quicko and IBAN Integration via Breinrock

1. Quicko

Quicko facilitates seamless exchange and transaction processing in the Walme ecosystem.

- **Role in Walme:**
  - Instant P2P and P2B transfers.
  - Reduction of transaction costs.
  - Support for integrating crypto with traditional financial instruments.
- **Technological Advantages:**
  - Rapid payment processing.
  - Full compatibility with custodial and non-custodial wallets.

2. IBAN through Breinrock

Breinrock, a licensed financial provider, offers IBAN services to Walme users, bridging traditional banking with Web3.

- **IBAN Services in Walme:**
    - Generation of personalized IBANs for users.
    - Cross-border transfers integrating crypto and fiat assets.
    - Flexibility in managing assets across banking and crypto ecosystems.
- **Compliance Standards:**
    - Operates under PSD2 (EU Payment Services Directive).
    - SEPA (Single Euro Payments Area) support for efficient euro-zone transactions.

KYC/AML Processes via SUMSUB

To ensure security and regulatory compliance, Walme utilizes **SUMSUB** for robust KYC/AML processes.

Key Features:

1. **Identity Verification:**
- Validation through official documents and biometrics.
- Analysis of geographic location and source of funds.
2. **Transaction Monitoring:**
- Automated detection of suspicious activities.
- Real-time risk evaluation.
3. **Platform Integration:**
- Fully automated registration process.
- GDPR compliance for user data protection.

Compliance with GDPR and PCI DSS

1. GDPR (General Data Protection Regulation):

- **Data Security:** Encryption and protection of user data.
- **Transparency:** Clear terms for data processing and storage.

2. PCI DSS (Payment Card Industry Data Security Standard):

- **Transaction Security:** Ensures secure crypto card transactions.
- **Tokenization:** Replaces sensitive card data with secure tokens.

Benefits of Licensing and Compliance

1. **Enhanced User Trust:**

Partnerships with verified operators (Kauri Finance, Quicko, Breinrock) reinforce user confidence.

2. **Comprehensive Functionality:**

Integration of IBAN and crypto assets provides flexibility for individual and business users.

3. **Full Legal Compliance:**

Adherence to MiCA, VASP, GDPR, and PCI DSS ensures protection for users and partners.

Walme is built on a foundation of reliability, transparency, and regulatory security, making it a standout platform in the Web3 market.

X. Roadmap

The **Walme platform roadmap** outlines a strategic plan focused on building a sustainable Web3 and fintech ecosystem. Walme has achieved significant development milestones, with ambitious plans for the next few years to expand functionality, strengthen its market position, and attract a growing user base.

Completed Development Phases

H1 2024: Feature Outline and Funding

- **Seed Funding:**

Successfully closed a seed round, raising **$400K**, allocated for initial platform development, technical infrastructure, and team expansion.

- **Security Audit:**

Conducted an initial security audit to ensure platform resilience and compliance with regulatory standards.

H2 2024: Rebranding and Strategic Focus

- **Brand Relaunch:**

Developed a new growth strategy emphasizing Web3 and fintech integration.

Positioned **Walme** as a multifunctional Web3 bank and messenger.

- **Platform Redesign:**

Improved UI/UX for seamless user interaction.

Integrated a secure messenger with multi-chain support and an embedded crypto wallet.

Plans for the Next 6–12 Months

Q1 2025: Development and Launch

- **Core Product Launch:**

- **Non-Custodial Wallet:** Multi-chain transactions, WLM token integration, and an intuitive interface for asset management.
- **Custodial Wallet:** Secure asset storage via **Kauri Finance**, compliant with MiCA regulations.
- **Bank Card Integration:** Features for managing wallet-linked cards, including top-ups, transactions, and balance tracking.
- **Security Enhancements:**

Strengthened **KYC/AML** processes through **SUMSUB** to ensure user protection and regulatory compliance.

Q2 2025: Additional Features Implementation

- **Feature Expansion:**
- **Physical Bank Cards:** Support for instant top-ups, transactions, and withdrawals.
- **Market Analytics Module:**
    - Deep market analysis via **Markets Engine**.
    - Personalized recommendations and forecasts for users.
- **Encrypted Messenger:**
    - Enhanced secure communication tools.
    - Direct asset transfers through chats.

Q3 2025: Messenger Features Implementation

- **Messenger Enhancements:**
- **DeFi Earnings:** Access to farming, staking, and other financial instruments.
- **Walme Education:** Modules for learning Web3, blockchain, and fintech.
- **AI Market Analytics:** Integration of AI-powered analytical tools.
- **Alert/Trading Bot:** Market monitoring, trend notifications, and asset analysis.

Long-Term Strategy (3–5 Years)

Q4 2025: Advanced Financial Features Rollout

- **Financial Services Expansion:**
- **Lending and Borrowing:**
    - Loans secured by crypto assets.
    - Preferential terms for **WLM** token holders.
- **Messenger Payments:**
    - Integration of in-messenger payments for seamless fund transfers.
- **Gamification Features:**
- **Raffles and Bets** leveraging **WLM** tokens.

2026: Ecosystem Expansion and Innovation

- **Wallet Insurance:**
    - Programs to protect user assets against potential losses.
- **Walme Mini Apps:**

    - A platform for integrating third-party applications and services.
    - Ecosystem expansion with practical mini-apps.
- **Product Development:**
    - Scaling existing solutions.
    - Innovating in fintech and Web3.

Key Roadmap Objectives

1. **Sustainable Ecosystem Growth:**

Gradual introduction of new features and services to attract both individual users and businesses.

2. **Transparency and Trust:**

Commitment to international security and licensing standards.

3. **Web3 and Fintech Leadership:**

A unique blend of crypto and traditional financial tools, enhanced by a secure messenger.

4. **Innovation and Market Adaptation:**

Rapid response to market changes and integration of cutting-edge technologies.

Walme's vision is to become a leading platform in Web3 and fintech by combining convenience, security, and a wide range of functionalities for users worldwide.

XI. Team and Partners

The **Walme ecosystem** is built on the expertise and dedication of a strong team of founders, technical experts, and reliable partners. The team comprises industry leaders with in-depth knowledge of Web3, fintech, and product management, while partners provide essential services to ensure the platform's reliable operation.

Team

The **Walme team** includes three co-founders with extensive experience in creating and managing innovative projects, alongside key specialists driving the platform's successful development.

Co-Founders

Oleh Mishchenko – CEO (Chief Executive Officer)

- **Experience:**
  - Over 11 years of building and managing companies with a focus on product design and development.
  - Expert in product design, project management, and launching successful startups.
- **Key Achievements:**
  - Leading multi-team projects and launching successful products.
  - Advising startups on growth and scaling strategies.
- **Portfolio Projects:**
  - Ajax, Tetracode.

Yurii Bulakh – CTO (Chief Technology Officer)

- **Experience:**
  - Over 17 years in software development.
  - Specialist in blockchain solutions, financial systems integration, and scalable architectures.
- **Key Achievements:**
  - Developing crypto platforms and decentralized applications.
  - Implementing technologies in complex technical projects.
- **Portfolio Projects:**
  - Spokk, Raters.

Valeriy Zhilchikov – COO (Chief Operating Officer)

- **Experience:**
  - Over 20 years in operational management.
  - Expert in process optimization, business scaling, and team management.
- **Key Achievements:**
  - Leading large international projects.
  - Optimizing business processes for efficiency improvement.
- **Portfolio Projects:**
  - Skoda, Kedric.

Key Experts

Maks Diland – Chief Architect

- **Experience:**
  - Over 11 years in mobile development.
  - Expert in application architecture and scalable solutions.
- **Key Achievements:**
  - Architectural design for complex mobile platforms.
  - Integrating Web3 functionality into fintech products.
- **Portfolio Projects:**
  - Plus500, SD Solutions.

Yevgeny Shevchenko – CBDO (Chief Business Development Officer)

- **Experience:**
  - Over 6 years in Web3 and venture building.
  - Proven track record with venture funds, startups, and analytical products.
- **Key Achievements:**
  - Developing growth strategies for crypto projects.
  - Implementing analytical solutions in Web3.
- **Portfolio Projects:**
  - Linity, ICEO, Everstake.

Ivan Kononenko – **Marketing Advisor**

- **Experience:**
  - Marketing expert with deep knowledge of Web3, DeFi, and blockchain.
  - Specialist in user acquisition and retention strategies.
- **Key Achievements:**
  - Executing successful marketing campaigns.
  - Developing sustainable growth strategies for Web3 products.
- **Portfolio Projects:**
  - CEX.IO, Tacans, Allbridge.

Partners

The **Walme ecosystem** is supported by strategic partners that provide critical services for the platform's reliable and secure functionality.

- **Quicko:**

Provider of instant payment solutions for P2P and P2B transactions, ensuring fast and secure transfers.

- **Breinrock:**

Licensed IBAN provider enabling SEPA transactions and integration with traditional banking services.

- **SUMSUB:**

Solutions provider for **KYC/AML**, ensuring safe and convenient user verification.

- **Matrix:**

Platform for implementing encrypted and decentralized messengers.

- **Kauri Finance:**

Custodial wallet and crypto card operator with MiCA licensing, offering secure asset storage and transaction processing.

Team and Partnership Advantages

- **Expertise:**

The team combines fintech, Web3, and operational management expertise to ensure a robust platform.

- **Technology:**

Partnerships with industry leaders provide a reliable infrastructure for Walme.

- **Sustainable Growth:**

The synergy of innovative ideas and professional execution makes Walme a competitive platform in Web3 and fintech.

XII. Conclusion

Walme is more than just a platform—it's a comprehensive ecosystem that combines cutting-edge technologies, robust security, and user-friendly functionality to build the future of Web3. In a world of rapidly evolving decentralized technologies, Walme stands out by seamlessly integrating blockchain capabilities, fintech solutions, and secure communications into a single platform.

Why Walme Is the Future of Web3

Multifunctional Ecosystem

- Walme consolidates previously separate functionalities: a decentralized messenger, multi-chain wallet, analytical module, and fintech services. This creates a new level of convenience and efficiency for users.
- The platform caters to both seasoned Web3 users and newcomers with its intuitive interface and extensive feature set.

Innovation and Advanced Technologies

- AI analytics, trading bots, and personalized signals empower users to make informed decisions in the Web3 space.
- Leveraging blockchain protocols and generative models (GPT-based) ensures access to professional-grade analytics and forecasts.

Trust and Security

- Full compliance with regulatory standards, including VASP and MiCA licenses, establishes Walme as a reliable choice for managing digital assets.

- Partnerships with trusted entities such as SUMSUB, Kauri Finance, and Breinrock enhance user protection at every interaction stage.

User-Centric Approach

- Designed to address community needs, Walme offers premium features, educational resources, and secure communication tools.
- DAO mechanisms allow users to influence platform development, making them an integral part of the decision-making process.

Vision for the Future of Web3

Walme aims to be the bridge between Web2 and Web3. By supporting traditional banking solutions (IBAN, bank cards) alongside advanced blockchain functionalities, Walme caters to both traditional and crypto communities.

- **Scalability and Flexibility:** The platform's design accommodates future integrations with emerging Web3 protocols and technologies.

Building the Ecosystem of Tomorrow

Walme welcomes collaboration with users, businesses, and developers who share the vision of a decentralized future.

For Users:

- Join Walme to experience the benefits of a multifunctional Web3 space.
- Manage your assets, conduct secure transactions, and actively participate in a community shaping the platform's evolution.

For Partners:

- Collaborate with Walme to integrate financial, blockchain, and analytical services into the ecosystem.
- Together, we can accelerate the adoption of decentralized technologies and deliver top-tier solutions to users.

For Developers:

- Contribute to the Walme ecosystem by developing innovative solutions and applications.
- The Walme Mini Apps platform offers a unique opportunity to create mini-applications accessible to a global Web3 audience.

For Investors:

- Walme is a platform with significant growth potential.
- We invite investors ready to support the development of an innovative ecosystem offering a unique experience to users worldwide.

Final Words

Walme is not just another Web3 product—it's an ecosystem reshaping the game. Our mission is to simplify the transition to a decentralized future, providing security, convenience, and innovation.

With Walme, you gain access to tools that empower you to manage assets, earn, interact, and build your future in Web3. Join us today and be part of the movement shaping tomorrow's decentralized world.

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