ZERVA / OFFICIAL WHITEPAPER

INTELLIGENCE FOR THE DECENTRALISED ECONOMY

An AI-powered blockchain intelligence ecosystem



FIRST PRODUCT ZERVA TRACE

Evidence-led insight into public blockchain activity.

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Abstract

Blockchains make transaction records publicly accessible, but access to raw records does not automatically create understanding. Wallet activity is distributed across transactions, token movements, counterparties, protocols and time. Interpreting that activity requires context, careful data handling and a clear distinction between what the chain proves and what an analyst may infer.

ZERVA is an AI-powered blockchain intelligence ecosystem being developed to make decentralised activity easier to inspect, interpret and monitor. Its first product, **ZERVA Trace**, is focused initially on Solana Mainnet. It is intended to combine public blockchain data, deterministic analytics and AI-assisted explanations to help users understand wallet activity while keeping the underlying evidence visible and independently verifiable.

The central product principle is **evidence-based wallet intelligence**: explanations should be grounded in available blockchain records, calculated metrics should be reproducible, and uncertainty should be made explicit. ZERVA is an evolving product initiative. Features described as planned or proposed in this document should not be read as already released.

Document status

This whitepaper describes the project's current direction and intended product architecture as of November 2026. It is not an investment offer, token sale document, guarantee of product availability, or assurance of future performance.

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Important Notice

01 Introduction

Decentralised networks create transparent, shared records of digital value transfer and smart-contract interaction. Anyone with the right tools can inspect public activity, but the volume and technical structure of this information can make meaningful interpretation difficult.

ZERVA's objective is to build practical intelligence for the decentralised economy. Rather than treating a wallet page as a static list of transactions, the ecosystem is intended to help users explore activity over time, understand relevant changes and follow explanations back to source records.

ZERVA Trace is the first product in this direction. The initial focus on Solana provides a defined environment in which to develop wallet search, transaction interpretation, historical analysis and monitoring workflows before considering broader network coverage.

02 The Problem

Fragmented information

Wallet information is often spread across balances, token accounts, transaction signatures, program interactions, token metadata and external market data. Users may need to move between tools to assemble a coherent picture.

Technical records without context

A transaction record can show that an instruction was executed, but the raw data may not explain the practical significance of the event to a non-specialist. Labels and classifications can also be incomplete or ambiguous.

Misleading certainty

Wallet analysis can overstate what public records establish. A wallet address does not inherently reveal a real-world identity, motive or beneficial owner. A pattern may be observable without its cause being known.

Limited continuity

One-time wallet lookups do not necessarily help users recognise changes over time. Meaningful monitoring requires historical context, consistent calculations and alerts that distinguish important activity from routine noise.

03 The ZERVA Approach

ZERVA is designed around a layered approach: retrieve public blockchain data, validate and normalise it, calculate measurable wallet indicators, and then use AI to explain selected findings in plain language. The explanation layer must remain connected to the evidence layer.

Core principles

Evidence first: link claims to transaction signatures, timestamps, account data or reproducible calculations wherever possible.

Separate fact from interpretation: distinguish confirmed chain events, derived metrics, AI-generated explanations and unavailable information.

Make uncertainty visible: avoid definitive conclusions where records are incomplete, labels are ambiguous or the data does not support a conclusion.

Build for verification: provide explorer links and enough context for users to inspect important records independently.

Practical utility: prioritise useful wallet research and monitoring workflows over speculative features or token-led positioning.

04 ZERVA Trace

ZERVA Trace is the first product in the ZERVA ecosystem. Its initial network focus is Solana Mainnet. The intended experience begins with a public wallet address and presents an organised view of the available on-chain information.

Wallet overview

Proposed overview information includes address validation, SOL balance, estimated fiat value when a reliable price source is available, token holdings and selected activity indicators. Price values should display their source and retrieval time where practical; if pricing is unavailable, the interface should show the underlying token amount without inventing a valuation.

Transaction history

Trace is intended to present incoming and outgoing activity, transaction time, status, token and amount where decoded, relevant sender and receiver accounts, transaction type when confidently classified, and a link to the corresponding explorer record. Failed, partially decoded or ambiguous transactions should be labelled accordingly.

Wallet watchlists

A planned watchlist capability will allow users to save public wallet addresses for quicker access. Monitoring and notification functionality is a later roadmap item and should be clearly separated from the initial lookup experience.

Historical views

Where sufficient historical data is available, Trace may compare activity over 24-hour, 7-day and 30-day periods. These comparisons can include transaction frequency, net flows, token balance changes and recurring counterparties. Coverage limitations must be stated rather than silently treated as zero activity.

05 AI Wallet Intelligence

The AI Wallet Intelligence layer is intended to turn validated wallet data and deterministic metrics into concise, contextual explanations. AI should not be the source of truth for balances or transaction records; it should interpret structured information supplied by the data and analytics layers.

Intended analytical outputs

Potential outputs include a wallet activity summary, notable inflows and outflows, changes in transaction frequency, recurring counterparties, token holding changes, and repeated interactions with identifiable programs or protocols. Historical comparisons may highlight meaningful changes when the underlying dataset supports them.

Evidence-linked explanations

Each material statement should be traceable to one or more supporting records or calculations. For example, a statement about increased transaction activity should identify the comparison periods and the counts used. A statement about a large transfer should link to the transaction signature and explain the amount and asset involved.

Limits on interpretation

ZERVA should not infer a person's identity, ownership, intent or motive from an address alone. It should not label a wallet as malicious, fraudulent or suspicious without a defined, defensible methodology and supporting evidence. AI-generated observations should be framed as analysis, not certainty.

Output categories

On-chain fact: a value or event directly returned by a validated blockchain data source.
Derived metric: a calculation based on stated inputs and a defined method.
AI interpretation: a contextual explanation generated from facts and metrics.
Unknown: information that is missing, ambiguous or not supported by available records.

06 Technical Architecture

The proposed implementation uses Lovable for application development, Supabase for application data and server-side functions, and Helius as the primary Solana data provider. The exact production architecture should be confirmed against the deployed application before any implementation claim is published.

High-level data flow

1. A user submits a public Solana wallet address.
2. The application validates the address format and applies request limits.
3. A server-side function requests the required public blockchain data from the provider.
4. The ingestion layer validates responses, handles pagination and normalises records into a consistent internal structure.
5. Deterministic analytics calculate balances, flows, counts and time-based comparisons.
6. The AI layer receives only the structured facts and metrics required for a particular explanation.
7. The interface presents results with timestamps, uncertainty labels and explorer links.

Core components

Client application: wallet search, overview, transaction tables, watchlists and AI analysis presentation.

Server-side integration: secure provider requests, address validation, caching, rate limiting and error handling.

Data store: Supabase may hold saved wallets, user preferences, cached analytics and monitoring configuration. Retention rules should be explicit.

Solana data provider: Helius is proposed as the primary data source. Provider capabilities, plan limits and data coverage must be validated during implementation.

Analytics engine: deterministic functions for normalisation, classification, aggregation and historical comparisons.

AI service: produces bounded explanations from supplied structured data, with evidence references and explicit uncertainty.



Operational requirements include pagination, duplicate-signature handling, retry policies, provider rate-limit handling, caching, database indexing, monitoring and graceful degradation when metadata or price information is unavailable.

API keys and other secrets must remain server-side. Client requests should never expose provider credentials. The system should log operational errors without unnecessarily retaining sensitive user information.

07 Security, Privacy and Data Integrity

ZERVA Trace is intended to analyse public blockchain information. Public visibility does not remove the need for responsible handling of application data, account credentials, saved watchlists or usage information.

Security controls

Provider credentials should be stored in server-side secrets. Database access should follow least-privilege principles, with row-level security where user-specific records are stored. Authentication, if introduced, should use secure session handling and appropriate access controls.

Data integrity

Responses should be checked for expected structure and completeness. Transaction signatures should be used to prevent duplicate records. Failed transactions must not be presented as successful transfers. Token metadata and account labels should be treated as potentially incomplete or changeable.

Privacy and transparency

Users should be told what application data is stored, why it is stored and how it can be removed. Saved wallet addresses and monitoring preferences should be treated as user-associated data even though the underlying blockchain records are public.

Resilience

The product should handle provider outages, rate limits, missing metadata, delayed indexing and incomplete historical coverage. When data cannot be retrieved, the interface should show a clear status instead of implying that no activity occurred.

08 Product Development Roadmap

Phase 1 — Foundation and wallet search: establish the initial website and Solana wallet search foundation. The precise release status of each feature should be verified against the live product.

Phase 2 — Wallet analytics: develop structured wallet overviews, transaction presentation, normalised activity and core deterministic metrics.

Phase 3 — AI Wallet Intelligence: introduce evidence-linked summaries, contextual explanations and historical comparisons with explicit uncertainty handling.

Phase 4 — Monitoring and notifications: develop saved-wallet monitoring, configurable activity triggers and user-controlled notifications.

Phase 5 — Ecosystem expansion: evaluate additional chains, deeper DeFi analytics and further intelligence or research products based on user demand and technical feasibility.

Roadmap phases are directional. Dates, delivery commitments and feature availability should be published only after the team has validated scope, dependencies and development capacity.

09 Network Statistics and Measurement

Network statistics should describe measurable activity and product performance without implying more than the data supports. Candidate product metrics include supported wallet lookups, successful data retrieval rate, indexed

transaction coverage, median response time, watchlist activity and notification delivery reliability.

Any public statistics should include a measurement period, definition and source. Counts should distinguish unique wallets from lookup events, successful requests from failed requests, and indexed records from complete historical coverage. ZERVA should not publish fabricated adoption, volume or performance figures.

On-chain metrics may include transaction counts, token movements and program interactions, but each metric requires a documented calculation method and clear treatment of failed transactions, internal instructions, wrapped assets and incomplete data.

10 Business Model and Sustainability

ZERVA's commercial direction should follow demonstrated product utility. Potential future revenue sources include premium wallet intelligence, advanced monitoring and reporting, subscription access to selected features, professional analytics services and additional data or research products.

These are possibilities rather than confirmed pricing or revenue commitments. The initial priority is to build a reliable product, identify the workflows users value, test willingness to pay and ensure that paid features provide meaningful additional capability.

A sustainable model should account for data-provider costs, AI inference costs, infrastructure, customer support, security and ongoing product development. Pricing and feature limits should be transparent.

11 Token and Ecosystem Considerations

No token supply, allocation, distribution, utility, launch date or tokenomics is established in this whitepaper. ZERVA's current product direction is an AI-powered blockchain intelligence ecosystem, beginning with ZERVA Trace on Solana Mainnet.

A future token should not be introduced merely to create a narrative or imply utility that does not exist. Any future token proposal would require a genuine product use case, transparent distribution, sustainable economics, clear governance considerations and appropriate legal and regulatory review.

Any token design, if pursued, should be documented separately and should not be interpreted as a current offering or commitment.

12 Competitive Landscape

Blockchain intelligence is an established and active category. Users already have access to explorers, wallet analytics platforms, market-data services, entity-analysis tools and query-driven dashboards. ZERVA does not claim to be the first wallet tracker, blockchain analytics platform or AI-assisted wallet analysis tool.

Relevant market categories

Solscan: a Solana explorer providing transaction and account information, with account analytics and visualisations.

Nansen: wallet research capabilities including wallet labels, portfolio and performance analysis, and smart-money-oriented research.

Birdeye: market and token analytics with wallet-related data and portfolio-oriented features.

Arkham: blockchain intelligence and entity-oriented investigation capabilities.

Dune: query-driven blockchain analytics and custom dashboards for users who want to investigate and visualise on-chain datasets.

These products serve different user needs and their capabilities evolve. This overview is a high-level category comparison, not a complete feature audit or claim that one product is superior to another.

13 Differentiation and Development Priorities

ZERVA's intended differentiation is not wallet tracking or the use of AI in isolation. It is the combination of understandable wallet analysis, evidence-linked explanations, explicit uncertainty and a workflow designed to make on-chain activity easier to interpret.

Priority capabilities

1. Evidence-linked analysis: make it easy to inspect the records behind an explanation.

2. Clear analytical boundaries: show what is directly observed, calculated, interpreted or unknown.

3. Useful context over raw volume: prioritise changes and patterns that help users understand a wallet, rather than overwhelming them with unfiltered events.

4. Consistent historical comparisons: use stable definitions and disclose gaps in data coverage.

5. Reliable monitoring: make notifications configurable, timely and explainable.

These priorities are product hypotheses that must be validated through implementation, user testing and comparison with existing tools. Differentiation should be demonstrated by product quality and user outcomes, not asserted as a marketing slogan.

14 Long-Term Vision

ZERVA's long-term ambition is to develop a practical intelligence layer for the decentralised economy. ZERVA Trace is the first step: a focused product for understanding public wallet activity on Solana.

Over time, the ecosystem may expand into additional networks, deeper DeFi activity analysis, research workflows and other tools that help users navigate decentralised systems. Expansion should be guided by data quality,

technical feasibility, user demand and the ability to maintain consistent evidence standards.

The long-term objective is not simply to expose more blockchain data. It is to make relevant information easier to understand while preserving the user's ability to verify it.

15 Conclusion

Blockchain transparency creates the raw material for intelligence, but useful interpretation requires more than a transaction feed. It requires reliable data, reproducible metrics, context and restraint about what can be concluded.

ZERVA is being developed around that requirement. Through ZERVA Trace, the project aims to help users inspect Solana wallet activity, understand meaningful changes and connect explanations to public evidence. Its credibility will depend on the accuracy of its data, the clarity of its analysis and the discipline with which it communicates uncertainty.

Important Notice

This document is provided for general informational purposes and describes the current direction and proposed development of ZERVA as of November 2026. It is not financial, investment, legal, tax or other professional advice; it is not an offer to sell or a solicitation to buy any token, security or other financial instrument; and it should not be relied upon as the basis for an investment decision.

Product features, technical integrations, roadmap items and business models described as proposed, intended or planned may change, may be delayed or may not be delivered. References to third-party products are for market-context purposes only and do not imply affiliation, endorsement or partnership. Third-party services, APIs, data coverage, prices and terms may change.

Blockchain data can be incomplete, delayed, mislabelled or difficult to interpret. AI-generated analysis may contain errors and should be checked against underlying records. Public wallet activity does not by itself establish the identity, ownership, intent or motive of any person. Users should independently verify important information and exercise appropriate judgement.

ZERVA makes no guarantee of accuracy, completeness, availability, performance, future functionality or commercial outcomes. Any future token-related proposal would be subject to separate documentation and applicable legal and regulatory review.

ZERVA

Building Practical Intelligence for the Decentralised Economy