Sovereign AI Reference Architecture

Integrated Overview Diagram (English Version)

	Past	Present	Future
WHY Layer Philosophy & Principles	Past | Civilization History & Problem Awareness Structural Limits of Historical System Evolution As information systems evolved over decades, increasing complexity led to loss of explainability, over-reliance on individual expertise, and progressive black-boxing of social and technical decision processes.	Present | Core Principles & Design Philosophy Accountability-Centric Design Principles AI and data infrastructures are designed in direct integration with institutional systems, embedding accountability, sovereignty, and reproducibility as non-optional design requirements.	Future | Civilization OS Vision Civilization OS Framework An integrated civilizational framework that unifies technology, institutions, and language, enabling long-term autonomous and sovereign AI infrastructures for nations and citizens.
RULE / MONEY Layer Institutions, Economy & Law	Past | Existing Institutions & Constraints Legacy Institutional Constraints Legal, administrative, and procurement systems built on legacy assumptions create misalignment between responsibility boundaries, contractual structures, and modern AI-driven operations.	Present | Institutional Integration Core Institutional Integration Core A central architectural domain that integrates AI governance law, internal controls, auditing mechanisms, and contractual frameworks to ensure institutional accountability and explainability by design.	Future | Economic Circulation & National Strategy National Economic Circulation Model A strategic economic structure that treats AI as a sovereign asset, enabling domestic value circulation while maintaining international competitiveness.
HOW Layer Technology & Implementation	Past | Legacy Reality Non-Stoppable Legacy System Environment Mission-critical legacy systems and unnormalized data environments impose fundamental constraints on AI utilization and large-scale digital transformation.	Present | AI Implementation Platform Auditable AI Implementation Platform An AI infrastructure centered on normalized relational databases, combined with RAG architectures and comprehensive audit logging, supporting on-premises and hybrid deployment models.	Future | Extension & Evolution Autonomous System Expansion By progressively integrating AI agents and domestically developed LLMs, the platform enables controlled autonomous growth while remaining fully aligned with institutional, legal, and audit frameworks.

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