

AGI-COS Technical and Governance Blue Paper 1.4

Formal Edition | Consolidated Architecture Edition | 2026

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Formal Edition · Consolidated Architecture Edition

Underlying Architecture, Data Protocols, and a Wave-Based Implementation Blueprint for the Contribution Value System (CVS)

Positioning: Civilizational collaboration infrastructure, contribution records, and a governance protocol layer for the AGI era

Version note: Building on the 1.3 milestone open-source edition, this edition consolidates the architecture and distinguishes the mandatory core layer, optional enhancement layer, and advanced mutual-recognition layer.

Release characteristics: Suitable for public communication, separable into pilot components, and available for continued iteration as a master implementation reference.

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Executive Summary

AGI-COS 1.4 does not seek to overturn the boundaries, protocols, or technical direction established in 1.3. It preserves those core achievements while consolidating the architecture for public communication

and pilot implementation. Version 1.4 explicitly positions AGI-COS as civilizational collaboration infrastructure, contribution records, and a governance protocol layer for the AGI era. At the current stage, its principal functions are supplementary records, trusted collaboration, allocation of opportunities, unified consolidation, and long-term memory. It is not intended to replace existing statutory systems of basic distribution and public governance as a whole today.

This edition makes four major revisions. First, it separates the mandatory core, optional enhancements, and advanced mutual recognition so that the entire technology stack is not made an initial requirement. Second, it narrows the role of PY (person-year) from the main basis for frontline execution to a unified long-term reference anchor. Third, it further strengthens the requirements for domain relevance, consequence relevance, and time decay in U5, the decision-reference tier. Fourth, it establishes the Unified External Contribution Record Platform as the institutional hub of the second wave, so that the consolidated-reward tier genuinely bridges rewards within platforms and long-term consolidation.

Version 1.4 retains the following principles: AGI-COS is not an oppressive aggregate-scoring system; the U6 baseline prohibition tier must not be breached; evidence precedes evaluation; the common foundation is unified while local implementations may differ; the state machine, circuit breakers, and rollback must exist in practice; keeping data within its domain while deploying algorithms across multiple parties is the long-term direction; and pilots must proceed from small closed loops to larger systems, and from low risk to higher complexity.

This edition can therefore serve both as a public blue paper and as a master reference for subsequent minimum viable implementation, model platform, pilot protocol, and technical interface editions.

Part I System Positioning and Architectural Boundaries

1.1 System Positioning

The primary task of AGI-COS is not to create an all-encompassing system covering every social resource and right. It is to provide a new institutional structure in the AGI era for contributions that older structures have long overlooked, consumed once and discarded, or reset to zero within platforms. It is, first and foremost, civilizational collaboration infrastructure, contribution records, and a governance protocol layer. It turns negentropic contributions such as care, maintenance, repair, connection, innovation, and institutional support into digital assets that can be recorded, traced, audited, and remain effective over the long term.

1.2 What the System Is Not

AGI-COS is not an oppressive centralized aggregate-scoring system, a comprehensive replacement for statutory basic-distribution arrangements at the current stage, or a universal profiling system that extends platform records into comprehensive social control. It rejects linking contribution values to basic subsistence guarantees, basic education and healthcare, or baseline civil rights. It also rejects converting strong local records within a platform into unlimited authority across domains.

1.3 Core Boundaries The U1-U6 Use Tiers

U1 supports recognition, display, and commemoration; U2 supports training, assistance, and capability development; U3 supports project admission and priority access to resources; U4 supports collaborative matching across platforms and among multiple actors; U5 provides limited decision references within specialized subdomains. U6 is the system red line: contribution values must never be linked to basic subsistence guarantees or baseline rights. Higher use tiers require stronger evidence, governance, and rollback constraints.

1.4 Special Constraints on U5

U5 must simultaneously satisfy three hard constraints: domain relevance, consequence relevance, and time decay. It can operate only within closely related specialized subdomains, and only where those receiving decision weight are directly tied to the actual responsibility they bear. Historical contributions must not create quasi-governing advantages that remain undiminished over time. U5 provides bounded reference information for highly complex collaboration; it does not give high-contribution actors a route to authority beyond their domain.

1.5 Anti-Monopoly Measures and Weight Caps

The system uses logarithmic growth to prevent monopoly: increases in contribution value do not produce linear increases in decision weight, and every individual actor is subject to a hard cap within a subdomain. Access to U5 is limited to actors whose contribution performance ranks highly in that subdomain and who have satisfied multiple governance requirements. No actor may hold more than 5% of the subdomain's total weight. Exceeding the cap triggers system review and circuit-breaking.

Part II Common Foundation and Minimum Compatibility Protocol

2.1 Why the Common Foundation Must Be Unified First

AGI-COS permits diverse nodes, platform types, and development paths to start in parallel, but diverse starts must not mean lasting fragmentation. The system must first unify its common foundation: goal anchors, main-domain/subdomain mappings, contribution-unit classifications, evidence levels, state systems, and minimum compatibility interfaces. Only when semantics and interfaces are unified first can unified consolidation, limited mutual recognition, and long-term effectiveness become possible.

2.2 Minimum Compatible Field Specification

Every standard contribution object should contain at least a record identifier; an actor identifier and type; main-domain/subdomain mappings; an evidence level; a lifecycle state; value-anchoring fields; privacy-proof fields; and source-platform and version information. Platforms may add local fields, but they must not undermine the compatibility logic of the common foundation.

2.3 Actor Objects and Contribution Objects

The system must support individuals, teams, organizations, platforms, communities, regional units, and other types of actors. Each contribution record must state not only who did what, but also the context in which the contribution occurred, its main domain and subdomain, the evidence supporting it, and its lifecycle stage.

2.4 Main-Domain and Subdomain Mapping

A five-domain structure is recommended: security of survival; happiness in life; meaning in life; system building and innovation; and trustworthy collaboration and public trust. Nodes may refine subdomains to suit local conditions, but each must map back to a common main domain so that platforms can understand records consistently.

2.5 Versioning and Compatibility

AGI-COS manages three kinds of versions: rule versions, platform versions, and interface versions. Every node upgrade must preserve the ability to read historical records, map key fields back to the common structure, and translate states between systems. Forward iteration must not sacrifice the capacity for unified consolidation.

Part III Trusted Records, Evidence Chains, and the State Machine

3.1 Records Before Evaluation

The system follows the principle that evidence precedes evaluation and records precede scoring. A contribution cannot enter the core ledger without credible evidence, and it cannot enter higher-intensity use tiers without stable records. AGI-COS first establishes an order of trusted records, not an order of aggregate scores.

3.2 Evidence Chain Levels L1-L5

L1 is statutory or formal confirmation; L2 is a project or platform audit trail; L3 is confirmation through feedback from multiple parties; L4 is externally observable outcomes; and L5 is an actor's self-report and supplementary explanation. L5 may provide context only and must not independently support higher-tier entry into the ledger. The best evidence combinations differ by main domain and subdomain, but all must map back to the common evidence-level system.

3.3 Protecting Contributions of Presence at L3

For contributions such as end-of-life companionship, psychological support, and long-term care, which are difficult to verify through intensive monitoring, the system permits trusted community nodes, sample reviews, and feedback from multiple parties to confirm the existence and continuity of contributions of presence. The aim of this mechanism is to protect privacy and dignity while avoiding the technical bias that a contribution does not exist unless it has an impersonal digital log.

3.4 The S0-S11 Lifecycle State Machine

All records must follow controlled lifecycle transitions. States such as draft, awaiting validation, awaiting recognition, awaiting supplementary evidence, entered in the ledger, dynamically updated, deferred evaluation, under dispute, frozen, rolled back, and archived must be clear and traceable. States are not merely labels: they are core constraints on whether a record can be used, mutually recognized, or invoked at a higher tier.

3.5 Protecting Long-Cycle Innovation Through S6

Basic research, conceptual innovation, institutional innovation, and some long-cycle ecological restoration must not be crudely settled according to immediate results. The system protects them through S6, the deferred-evaluation state: contributions enter the record first, and weight is released in stages according to long-term citations, independent adoption, external reuse, institutional effects, and other conditions. This protects long-term innovation while preventing short-lived attention from displacing genuine long-term value.

3.6 Permitted and Prohibited Transitions

Drafts must not enter the ledger directly. Records awaiting supplementary evidence must not enter higher-tier use. Records under dispute must not continue into highly sensitive uses. Frozen records must not participate in mutual recognition. Records without a rule version must not enter unified consolidation. No platform may bypass the state machine to produce high-weight outcomes directly.

Part IV Use Tiers, Reward Mechanisms, and Value Anchoring

4.1 The Chain from Records to Use, Rewards, and Long-Term Effectiveness

AGI-COS treats recording as the entry point to institutional transformation, not its endpoint. Records provide the foundation; use creates value; rewards provide motivation; and long-term effectiveness gives the institution its appeal. Only a complete chain prevents the system from becoming a static archive or a short-term points tool.

4.2 A Three-Tier Reward Mechanism

The first tier provides immediate rewards, focusing on use rights, priority rights, access to opportunities, and collaboration rights within a platform. The second tier provides consolidated rewards: unified external contribution records turn dispersed records into a trusted record of contributions that can be displayed with authorization and accessed for specified purposes. The third tier provides long-term rewards through unified consolidation and long-term memory, allowing genuine contributions to remain effective across platforms, stages, and locations.

4.3 The Unified External Contribution Record Platform

This platform is neither a public overall ranking nor a new social profiling system. It is the core vehicle for consolidated rewards. Authorized display, targeted access, and access logs convert internal platform records into value that is visible beyond the platform. By connecting immediate rewards with long-term consolidation, it serves as a key hub for the second implementation wave.

4.4 Value Anchoring with PY Person-Year

PY is a common reference anchor representing the combined resources required to secure one ordinary person's subsistence for one year. Version 1.4 makes clear that, at the current stage, PY primarily supports long-term reference, alignment across domains, and common comparison at a civilizational scale. It does not require every local platform and every setting to settle immediate rewards directly in PY. Under the common anchor, local nodes may use local operational value baskets and exchange-rate pools, subject to public disclosure, version governance, and risk-control constraints.

4.5 Boundaries on the Use of PY

PY should not become the main reward unit for local platforms in the first wave. Operational use within a platform should prioritize use rights, priority rights, opportunity rights, eligibility to collaborate, and bounded reward arrangements. PY should gradually assume a stronger common-reference role only at the level of regional mutual recognition and long-term consolidation.

Part V Risk Control, Anti-Fraud Measures, Privacy, and Governance Foundations

5.1 Sybil Resistance and Identity Anchoring

Actors participating in mutual recognition at U3 or above must gradually adopt stronger forms of identity anchoring. This must proceed in waves: costly identity protocols must not be made a first-round launch condition for every node. Proof of real social relationships, SBTs, and stronger identity mechanisms are better introduced gradually after the second wave.

5.2 Detecting Coordinated Fraud Networks

The system may use graph databases to analyze high-frequency, closed, or anomalous networks of reciprocal evaluations, identify potential coordinated-fraud clusters, and automatically route them into dispute, weight-reduction, or freezing procedures. This is an important safeguard against groups of actors inflating one another's scores and eroding the trusted-record system.

5.3 A ZKP Protocol for Privacy-Preserving Access

Cross-platform access should, wherever possible, prove that a requirement is met without exposing the underlying details. The purpose of ZKP is not to display technical sophistication. It is to protect the privacy boundaries of service recipients, care recipients, and contributors so that access from outside a platform does not create comprehensive surveillance.

5.4 Circuit Breakers and Rollback

AGI-COS must support circuit-breaking at the record, subdomain, use-tier, platform, and interface levels. When an anomaly occurs, the first goal is to contain harm rather than conceal it. Rollback should preserve historical traces and audit logs. It reduces a record's active effect without erasing its historical existence.

5.5 Governance Foundations

Before entering higher-tier uses or higher-level mutual recognition, every node must demonstrate that it can support appeals, reviews, audits, circuit-breaking, and rollback. These governance foundations are not optional extras. They are a prerequisite for the trustworthiness of the entire system.

5.6 Risk Warning Indicators

A warning system should track the rate of record anomalies, appeal rates, the probability of fraud networks, rates of out-of-bounds use, and the number of privacy-risk incidents. Risk control without observable indicators remains a statement of principle.

Part VI Wave-Based Implementation and the Minimum Viable Configuration

6.1 Why Implementation Must Proceed in Waves

AGI-COS should begin with the most controllable closed loop, rather than the most complete system. Validate institutional arrangements before layering on technology; validate governance before expanding mutual recognition; begin with low-risk actors before moving to highly complex settings.

6.2 Wave One A Closed Loop Between Records and Use

Initial nodes should focus on campus and community platforms. They need only implement common fields, evidence uploads, a state machine, audit logs, and an export interface. A centralized database is acceptable at the outset. Only U1/U2 should be opened, to test the stability of records, immediate rewards within platforms, and the viability of basic governance.

6.3 Wave Two Consolidated Rewards and Trusted Access

The second wave is suitable for the public-benefit spillover aspects of enterprises and intermediary city platforms. Its central task is not to build a consortium blockchain first, but to establish the Unified External Contribution Record Platform. It should archive records from multiple platforms and support

actor-authorized display, targeted access, and access logging. Tamper-evident preservation of key evidence and stricter permission-controlled access may be added as enhancements.

6.4 Wave Three Unified Consolidation and Long-Term Mutual Recognition

Only after the first two waves are stable should the system enter high-density experimental zones, multi-city networks, and more mature cross-domain collaboration. At this stage, DID, federated learning, cross-domain identity mapping, and cross-chain mutual recognition may be introduced gradually, with limited U5 trials inside strict boundaries.

6.5 Minimum Viable Implementation Configuration

The minimum first-wave configuration comprises a centralized database, common fields, a state machine, evidence uploads, audit logs, an appeals entry point, and an export interface. The enhanced second-wave configuration adds a unified external record platform, tamper-evident preservation of key evidence, authorized access, and limited mutual recognition. Only the advanced third-wave configuration adds DID, ZKP, federated learning, cross-chain mutual recognition, and advanced graph-based risk control.

Part VII Open Collaboration, Release Notes, and the Road Ahead

7.1 Distinguishing the Public and Implementation Editions

The public edition emphasizes boundaries, principles, protocols, and the wave-based roadmap. The implementation edition emphasizes the minimum configuration, version governance, risk indicators, and specific constraints. The two must be distinguished to avoid public misunderstanding and mistaken assessments of internal entry requirements.

7.2 Boundaries for Open-Source Collaboration

Open source does not mean access without boundaries. A node joining AGI-COS must first accept the common foundation and the system's boundaries, then demonstrate minimum governance capabilities. Interface compatibility and commitment to the rules are prerequisites for open collaboration.

7.3 The Best Uses of the Current Edition

The formal 1.4 edition is best used as an architectural blueprint, a master reference for pilot protocols, a text for discussion of technical governance, and the overall master reference for later implementation editions. It should not be mistaken for a finished manual that every node must implement in full at once.

7.4 Directions for Further Iteration

Later work may branch into a minimum viable implementation edition, a model platform edition, a pilot protocol edition, and a technical interface edition. This preserves a common master reference without forcing all the complexity into one document.

7.5 Conclusion

AGI-COS 1.4 does not attempt to supply every final technical implementation at once. It clarifies the common foundation, system boundaries, the order of evidence, the state machine, risk-control protocols, and a wave-based implementation path. The most important task for nodes today is not to deploy every advanced capability immediately. It is to use a minimum viable institutional arrangement under a common protocol to validate the basic records-use-rewards loop, then gradually add

consolidated rewards, unified consolidation, tamper-evident preservation of key evidence, and higher-level mutual recognition.

Appendix A Key Terms and Codes

Category	Code or object	Description
Main-domain mapping	Domains A-E	A Security of survival; B Happiness in life; C Meaning in life; D System building and innovation; E Trustworthy collaboration
Value anchor	PY	Person-year, a unified long-term reference anchor across domains, periods, and platforms
Evidence levels	L1-L5	Five evidence-chain levels from statutory confirmation to actor self-reporting; L5 must not independently support core ledger entry
State machine	S0-S11	The lifecycle structure from draft to archive; S8-S10 are key states for risk-control intervention
Use boundaries	U1-U6	Six use tiers from reward-related uses to baseline prohibitions

Appendix B The Overall Logic of Core Data Flows

Real-world actions first enter the evidence-capture layer and are assigned an L1-L5 evidence level. They then enter the evaluation and mapping layer, which determines their main domain, subdomain, and lifecycle position. Records meeting the minimum threshold enter S4, the recorded-in-ledger state; long-cycle innovation records may release weight gradually through the S6 deferred-evaluation path. Key records enter the ledger and unified-consolidation layers and, with authorization, pass through the Unified External Contribution Record Platform for targeted display and trusted access. If any stage triggers a dispute, fraud finding, or out-of-bounds use, the record enters dispute, freezing, and rollback procedures through S8, S9, and S10.

Appendix C Minimum Viable Implementation Checklist

Wave one minimum configuration: centralized database, common fields, evidence uploads, lifecycle states, audit logs, appeals entry point, and export interface.

Wave two enhanced configuration: Unified External Contribution Record Platform, tamper-evident preservation of key evidence, authorized access, and limited mutual recognition.

Wave three advanced configuration: DID, ZKP, federated learning, cross-chain mutual recognition, and advanced graph-based risk control.

Appendix D Terminology in the Public and Implementation Editions

Terminology dimension	Suggested public-edition wording	Internal implementation-edition wording
System positioning	Civilizational collaboration infrastructure, records, and a governance protocol layer	A layered technical-governance architecture that can be implemented
PY	A unified long-term reference anchor	A regional value anchor and object of exchange-rate governance
Wave two focus	Unified External Contribution Record Platform	Record platform + tamper-evident preservation of key evidence + limited mutual recognition
Advanced capabilities	Capabilities reserved for the long term	DID / ZKP / federated learning / cross-chain mutual recognition

Appendix E Risk Warning and Circuit-Breaker Indicators

Level	Example triggers	Response
Blue Observation	Rising record-anomaly rates; a significant increase in appeals; signs of artificial record inflation in a subdomain	Increase sample-audit frequency; limit higher-tier use; initiate a targeted review
Yellow Restriction	Distorted mutual recognition between platforms; widespread circumvention of rules; anomalies in key interfaces	Freeze affected subdomains or higher-tier uses; suspend mutual recognition; roll back the rule version
Red Circuit-breaking	Contribution values breach the U6 prohibition tier; a large-scale data breach; confirmed systemic manipulation	Immediately halt platform outputs through a circuit breaker; roll back to lower-tier use; initiate legal and institutional review

Current Controlled Reading Note

P05-AGICOS-003 | V1.4 | Overall Technical and Governance Explanation

The original version text is retained. This page explains only its current applicability, boundaries, and further reading; it does not silently rewrite the historical text.

What this track addresses

As a civilization-level safe-operating protocol stack, how should AGI-COS distinguish technical implementation, governance boundaries, and real-world actors?

What remains applicable

This is the current public explanatory text. It explains that AGI-COS is neither a single software product nor a governance system in which AI replaces real-world actors.

What is not automatically inherited

The explanatory layer cannot create new system powers. Engineering implementations must not rewrite civilizational goals or the boundaries of responsibility, authorization, and exit.

Continue reading

[AGI-COS Version Map](#) | Develop a fuller understanding of the controlled version family.

[One-Page Guide by Stage](#) | Select a version track according to the real-world problem.

[Human-COS Public Explanation](#) | Understand the interface boundaries between judgments about direction and operational safety.

General principle: AGI-COS has no highest version that covers every task. Versions may be used together; their authorities must not accumulate.

[Version family](#)

[One-Page Guide by Stage](#)