

Nebula Real-World Coordination Layer

A civilizational-scale framework for coordinating needs, resources, capabilities, responsibilities, and operations

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The whole is sufficient to safeguard continued existence without engulfing individuals; coordination reaches reality without turning people into instruments of efficiency; as options become more accurate, permission boundaries must become clearer still.

Control page | V1.4 positioning, relationships of effect, and controlled write-back boundaries

This edition takes V1.3, the formal naming and ontological correction edition, as its main-text baseline. It does not reopen the name, ontology, three goals, governance G0/G1–G10, domains D0/D1–D12, six forms of cross-domain drift, anti-manipulation, or system withdrawal of the Nebula Real-World Coordination Layer. V1.4 performs only four controlled write-backs already frozen in Review of the Resource Pool–Shared World–Nebula Real-World Coordination Layer Three-Layer Interface Loop and Second System-Wide Continuity Audit V1.0: effective use-right inputs, specific executors' responsibility, three-layer result synchronization, and a unified correction interface.

The direct interface baseline is updated to Resource Pool V2.2, Shared World V1.2, and Nebula Real-World Coordination Layer V1.4. Nebula General Framework V1.3 continues to provide boundaries for making overall facts, causality, externalities, options, and unknowns visible. Governance V3.0 continues to handle decisions on legitimate purposes and rules, professional judgment, execution, and independent correction. No interface upgrade creates new ownership, authorization sovereignty, professional sovereignty, sovereignty over public purposes, or default execution sovereignty.

Controlled write-back item	Formal V1.4 write-back	Explicitly unchanged
Effective use-right inputs	Separate candidate resource facts from currently effective use rights; connect execution only after lawful decisions, explicit authorization, and currently valid conditions are established	The Resource Pool does not authorize; Shared World does not authorize itself; options do not create permission
Specific execution responsibility	The Real-World Coordination Layer only connects authorized tasks to specific executors; executors, stopping, takeover, deviation reporting, and responsibility must be explicit	Interface orchestration capability does not create execution sovereignty
Three-layer result synchronization	Write the same real-world result back separately to resource facts, use-right relationships, and causal options, and into governance / independent correction	No layer acquires exclusive authority to interpret results
Unified correction interface	Incorporate the nine-step correction chain into the formal text; any layer may raise an alert, but none may monopolize evidence, review, circuit-breaking, or termination	The correction layer does not become the routine decision-maker on public purposes

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Chapter 0 | Governance, domain interfaces, and system-wide principle write-back

Coordinate reality without taking it over; generate options without generating sovereignty.

0.1 The first general principle, causal chain, and three goals

Civilization Leap does not eliminate self-interest; it changes the default path through which self-interest realizes itself. The Real-World Coordination Layer enters the civilizational causal chain by organizing real needs, available resources, actual capabilities, responsibilities, risks, and consequences into understandable, selectable, correctable conditions, rather than adding external control, so subjects and communities can coordinate more autonomously. Institutions →

behavior → real experience → habits → internalization → intergenerational reproduction → civilization is the ultimate causal test for every operational design in this manuscript.

The Real-World Coordination Layer must separately make visible effects on freedom from survival insecurity, happiness in life, and more meaningful life, explaining who benefits, who bears costs, present and long-term consequences, resource costs, effects on rights, future choices, and uncertainty. These three goals are not a unified civilizational utility function and must not be compressed into a single domain total, uniform meaning score, or single civilizational optimum.

0.2 Ontological positioning: A civilizational-scale Real-World Coordination Layer

The Nebula Real-World Coordination Layer is a civilizational-scale framework for coordinating needs, resources, capabilities, responsibilities, and operations. It connects real needs, resource facts, authorized use rights, actual capabilities, time, location, maintenance, responsibilities, risks, and results, forming multiple feasible options, alternative paths, and the conditions under which answers hold, fail, or require reassessment. Only after professional judgment, lawful decisions, and explicit authorization does it connect corresponding execution, feedback, and repair. It is not a unified brain or will, a civilizational master console, a resource owner, a public-purpose decision-maker, a professional sovereign, or a default executor.

People are not factors of production, organizations are not property of system nodes, and Sparks are not agents owned by the coordination layer. Knowing more needs and resources does not authorize expanded calls on them; more accurate prediction does not permit changing subjects' behavior itself to become an optimization objective.

ERP is no longer this layer's formal name. Traditional ERP, MES, SCM, and similar systems enter only as authorized connections to existing-system interfaces. They are not the theoretical prototype of the Nebula Real-World Coordination Layer, nor do they extend enterprise planning, unified data hubs, or centralized scheduling into principles of civilizational operation.

0.3 Governance V3.0 interface: Coordination does not replace the three powers

This manuscript fully carries forward governance G0 and G1–G10, but writes back only the interfaces the Real-World Coordination Layer itself must undertake. Authority to decide purposes and rules, authority of professional judgment, and executive authority are three institutional functions. Oversight, auditing, appeals, review, circuit-breaking, repair, and termination constitute an independent correction layer spanning all three. The coordination layer must not acquire any of these powers merely because it can generate options, predict, or provide interfaces.

Institutional function	What the Real-World Coordination Layer may provide	Prohibited overreach
Authority to decide purposes and rules	Problems, facts, externalities, alternatives, costs, and unknowns	Treating feasibility, efficiency, or overall optimization as public purposes and rules
Authority of professional judgment	Evidence, models, constraints, points of conflict, and applicable boundaries	Replacing accountable judgments by professionally responsible subjects with model outputs
Executive authority	After lawful decisions, effective use rights, and explicit execution authorization are established, provide task decomposition, interface orchestration, status feedback, and stopping and takeover conditions	Treating option generation, prediction, matching, or interface capability as call-up permission; making the Real-World Coordination Layer the default executor
Independent correction layer	Complete logs, evidence, versions, anomalies, and pause interfaces	Becoming its own sole auditor or sole stopping channel

All important outputs must maintain nine-layer separation: facts → evidence → inference → causal assumptions → value judgments → rules → decisions → execution → results. Preserving why an option holds is more important than preserving a recommended answer.

0.4 Domain states and seven-dimensional separation

The Real-World Coordination Layer follows D0 and D1–D12. A domain is a current governance state, not a subject's identity. Private domains are the norm; public domains are limited, revocable, and traceable; civilizational subdomains are professional governance states, not expert sovereignty. Subjects, roles, domains, rights, authorization, responsibility, and facts must be identified separately. Accounts, organizational identities, resource states, professional capabilities, or system inferences cannot automatically establish one dimension from another.

Domain states of rights, data, resources, capabilities, professional judgment, execution, and contribution records are made visible separately. Seeing a domain state does not authorize changing it. Substantive cross-domain movement requires renewed identification, explanation, and authorization. The Real-World Coordination Layer must not establish automatic domain-transfer algorithms. Developmental stages, environmental phases, and task process states must also remain separate; stage names cannot substitute for actual permissions.

0.5 Minimum necessary facts and currently valid permissions

Whole-system coordination does not mean collecting all data. Raw data should remain in its original domain wherever possible. Cross-domain work prioritizes minimum facts, aggregated results, proofs, derived conclusions, restricted interfaces, or necessary calls on capabilities. Expand the factual scope only when the purpose is explicit, the permission source is established, and the task cannot be completed using a smaller object.

Historical authorization and execution facts may be retained, but historical traceability does not mean current access, resource, or execution permissions remain valid.

Being discovered does not mean being public; being public does not mean being callable; being callable does not mean being decidable; resource visibility does not mean call-up permission; an executable option is not an authorized option.

0.6 Responsibility separation points with neighboring systems

System / master manuscript	Proper responsibility	What the Real-World Coordination Layer must not replace
Resource Pool V2.2	Make visible resource–capability facts, candidate authorization conditions, dependencies, maintenance, redundancy, recovery, and future choices	Ownership, call-up rights, current permission, or resource sovereignty
Shared World V1.2	Carry, verify, express, and circulate lawfully formed use-right relationships and their withdrawal, return, and closure	Authorization sovereignty, requisition rights, automatic allocation, or treating candidate conditions as current permission
Contribution Value V1.8.2	Actual contribution histories and facts about current relevance	Using CV to purchase permissions, rank personhood, or generate governance sovereignty
Nebula General Framework V1.3	Make visible overall facts, causality, externalities, options, and unknowns	Turning overall optimization directly into resource obligations
Spark system	Subjects' meaning, capabilities, and authorized extensions	Possessing Sparks, replacing subjects' judgments, or producing behavioral obedience
Governance V3.0	Structures for legitimate purposes, professional judgment, execution, and independent correction	Upgrading coordination interfaces into the three powers or audit sovereignty

System / master manuscript	Proper responsibility	What the Real-World Coordination Layer must not replace
Real-World Coordination Layer	Under given purposes, constraints, and authorization, form feasible real-world combinations, execution-interface conditions, results, and reassessment conditions	Ownership, authorization sovereignty, decisions, professional sovereignty, default execution rights, or permanent execution rights

0.7 V1.4 three-layer loop: Candidates, effectiveness, execution, results, and correction

V1.4 adds no new power structure. It incorporates already frozen interface separation points into the formal text. Resource Pool V2.2 provides candidate resource–capability facts and authorization conditions. Shared World V1.2 carries, verifies, expresses, and circulates currently effective use-right relationships formed by subjects with authority, lawful public rules, or corresponding professional procedures. Only after legitimate purposes, professional conditions, formal decisions, and effective use rights are established does the Real-World Coordination Layer connect task orchestration and execution interfaces. Specific executors bear real-world execution responsibility. Results return separately to the three layers and enter governance and independent correction. Candidate facts ≠ current permission; options ≠ decisions; decisions ≠ execution authorization; execution capability ≠ execution sovereignty; historical authorization ≠ currently valid permissions.

1. Positioning and basic definition

The Nebula Real-World Coordination Layer is a civilizational-scale coordination framework connecting humanity's existing enterprise, city, industry, public-service, and agent systems. It understands real needs, resource facts, authorized use rights, capability states, responsibility relationships, operating risks, and real-world results, generating feasible options, alternative paths, and explanations of conditions. Only after professional judgment, lawful decisions, and explicit authorization may it connect corresponding planning, execution, feedback, and repair.

“Real-world coordination” means understandable, combinable, accountable connections among real needs, resource facts, authorized use rights, capabilities, tasks, responsibilities, risks, and results, rather than defining every person as a production factor. Traditional ERP, MES, SCM, and similar systems enter only as existing-system interfaces, not as this layer's theoretical prototype. Stronger coordination capability requires clearer permission sources, responsibility separation points, exit, and independent correction.

2. Scope of existing-system integration

Existing system	Capabilities that can be integrated	Coordination-layer interfaces (do not automatically generate permissions)
Enterprise ERP / MES / supply chains	Orders, capacity, inventory, equipment, procurement, quality	Authorized cross-enterprise supply and demand, public risks, resource facts, and responsibility interfaces
Smart cities / digital government	Population services, transport, public facilities, government services, emergencies	Cross-department semantics, legitimate purposes, subject authorization, affected-party feedback, and exit
Intelligent industry	Equipment prediction, automated production, quality control	Cross-industry capability facts, ecological and long-term resource constraints, professional responsibility
Intelligent agriculture	Weather, soil, planting, irrigation, agricultural machinery, supply	Food-security facts, regional externalities, ecology, and farmers' rights
Intelligent energy	Generation, storage, load, trading, maintenance	Continuity facts, cross-regional redundancy, disaster recovery, and permission sources

Existing system	Capabilities that can be integrated	Coordination-layer interfaces (do not automatically generate permissions)
Smart healthcare	Health data, diagnosis and treatment, medicines, beds, remote services	Private domains as the norm, civilizational-subdomain professional judgment, cross-institution continuity of care, and scarce-resource procedures
Smart education	Learning resources, capability identification, curriculum coordination	Subjects' direction, happiness, cultural diversity, minimum facts, and lifelong learning
Intelligent logistics	Transport, warehousing, routes, last-mile delivery	Authorized emergency coordination, use-right interfaces, and cross-domain responsibility

3. Core objects of the Real-World Coordination Layer

- Purpose: What is the current problem, who raises it, what change is sought, and why does it need coordination?
- Demand: Who needs what, with what urgency, timing, location, quality, irreplaceability, and consequences of inaction?
- Resources: What exists, where, who owns and manages it, when is it available, and what are its maintenance costs and restrictions?
- Capabilities: Which subjects, organizations, equipment, models, and agents have which capabilities, applicable boundaries, and dependencies?
- Relationships: What are the subjects, roles, domains, rights, contracts, authorizations, responsibilities, affected parties, and dependency chains, separately?
- Risks: Failures, shortages, concentration, irreversible harm, cross-domain cascades, power spillover, and uncertainty.
- Feedback: Actual results, user experiences, harm, waste, repair, long-term consequences, and effects on the three goals.
- Unknowns: What facts are missing, when do models fail, and which conclusions must be reassessed?

4. Overall architecture

Layer	Responsibility
Purpose and rule input layer	Receive purposes, boundaries, applicable rules, and review conditions already lawfully confirmed; the coordination layer does not set its own purposes
Subject, domain, and authorization layer	Separate subjects, roles, domains, rights, authorization, responsibility, and facts; ensure authorization is revocable, expirable, and auditable
Semantics and minimum-facts layer	Understand objects, services, tasks, capabilities, and risks through mapping; prioritize transmission of minimum necessary facts over centralized data
Sensing and state-visibility layer	Produce views of actual states, sources, confidence, forecasts, unknowns, and externalities
Option generation and comparison layer	Form multiple options, an inaction option, resource costs, dependencies, benefits and burdens, and conditions for validity and failure
Professional-judgment interface	Submit domain facts, model outputs, and responsibility questions to qualified, accountable professional-judgment subjects

Layer	Responsibility
Decision and effective use-right input interface	Receive lawful decisions, currently effective use rights carried by Shared World, applicable conditions, and review requirements; the Real-World Coordination Layer does not create permission itself
Execution connection and responsibility interface	Connect specific executors, tasks, and interfaces only after decisions, effective use rights, and explicit execution authorization are all established; retain stopping, takeover, deviation reporting, and responsibility anchors
Result synchronization and learning layer	Record actual execution, deviations, results, harm, and effects on the three goals; synchronize these separately with resource facts, use-right relationships, causal models, and governance correction; do not silently rewrite rules or authorization
Independent correction interface	Open evidence and stopping channels to independent oversight, auditing, appeals, review, circuit-breaking, repair, and termination mechanisms

5. Demand and supply coordination

The Real-World Coordination Layer cannot understand demand merely as orders and willingness to consume. Nebula's needs include at least basic survival, public services, specialist production, care, culture, happiness, dreams, research, and civilization's long-term risks. Supply is not merely goods; it also includes space, time, knowledge, relationships, organizational capability, computing capacity, data, equipment, ecological carrying capacity, and public trust.

Coordination analysis may distinguish categories such as “can be met,” “may receive priority,” “must be guaranteed by law or rules,” and “must not enter execution even when demand exists.” These are explanations of facts, rules, and options, not priority rights automatically generated by the coordination layer. Basic provision, free choice, prohibitions and restrictions on major harm, and scarce-resource allocation must return separately to lawful rules, professional judgment, affected subjects' rights, and formal decisions.

6. Optimization, efficiency, and redundancy

Efficiency is an important capability of the Real-World Coordination Layer, but not the highest value. An overall optimum may exist as an analytical result; it cannot automatically become a decision, individual obligation, professional authorization, or cross-domain sovereignty. Every optimization must separately make visible the three goals, subjects' rights, ecology, necessary redundancy, beneficiaries, burden bearers, and long-term risks.

Object of analysis	Must not consider only	Must also make visible
Cost	Purchase price	Life cycle, maintenance, failure, alternatives, rights costs, and environmental costs
Speed	Completion time	Safety, dignity, quality, affected parties' rights, and future choices
Resource utilization	Vacancy rate	Ownership, authorizability, necessary redundancy, recovery capability, and space retained by individuals
Production capability	Output	Actual needs, happiness, ecology, long-term meaning, and capability degradation
Algorithm performance	Average accuracy	Bias, rare risks, unknowns, failure conditions, and irreversible errors

Object of analysis	Must not consider only	Must also make visible
Overall option	A single total score	Who benefits and who bears burdens, current and long-term effects, and an inaction option

7. Data, authorization, and interoperability

- Private domains are the norm. Raw data should remain in its original domain wherever possible; cross-system access should prioritize the minimum facts, proofs, or capability interfaces necessary for the task.
- Authorization cannot expand automatically because systems interconnect. Crossing subjects, tasks, jurisdictions, or entering a new civilizational subdomain requires renewed identification, explanation, and authorization.
- Semantic data interoperability does not mean data centralization, still less merger of personhood, resources, professional judgment, and execution permissions.
- Model judgments must identify sources, evidence, confidence, inference, key causal assumptions, unknowns, conflicts of interest, and conditions for validity and failure.
- Agent identities must be verifiable; proxy roles, called objects, execution scope, and responsibility must be traceable; temporary permissions must be revocable and actually returned.
- Affected subjects must be able to see relevant purposes, key facts, main consequences, permission sources, and objection and appeal channels.
- Being discovered, being public, being callable, and being decidable are four separate states. The Real-World Coordination Layer must not establish automatic domain-transfer algorithms.

8. Stage interfaces and deferral of startup matters

1. The original manuscript's map of existing systems and interfaces is retained as a question for future derivation, not a unified startup plan at the present stage.
2. Real subjects separately derive specific systems, industries, and connection sequences from real problems, statutory responsibilities, resource conditions, risks, and technical maturity.
3. Experimental scope, participating subjects, organizational relationships, and host areas are designed after the real application subjects are identified. This manuscript presupposes no city or complete social-operating area.
4. Every startup arrangement must retain support from existing institutions, professional responsibility, manual stopping channels, auditing, rollback, and exit.
5. Resource Pool catalogs, Shared World use rights, and cross-domain call-ups enter tasks only after renewed authorization. Small scale, emergencies, or validation do not lower boundaries.

9. Transition-stage boundaries and deferral of migration matters

The transition stage does not presuppose migrating all identity, authorization, resources, tasks, responsibility, risk, and feedback to one common foundation. Developmental stages, environmental phases, and task process states must be judged separately. Real subjects derive whether old and new systems run on dual tracks, which objects are mapped, which facts remain in their original domains, and which interfaces open from jurisdiction, responsibility, necessity, and technical conditions. Every migration must retain rollback points, responsible subjects, evidence, return of permissions, and review of real-world results.

10. Capability conditions and governance boundaries: Capability does not automatically generate power

The stable stage may have greater automation and coordination capabilities, but does not presume AGI automatically acquires routine scheduling, cross-domain allocation, or exception-handling authority. Capability can be shown usable only in specific tasks. Permissions can come only from legitimate purposes, rules, professional responsibility, formal

decisions, and explicit authorization. Growth in technical capability does not change the three-power structure or create a competition over so-called “humanity-AGI decision-making weights.”

Operating matter	What the coordination layer may provide	Lawful permission sources and separation points
Routine inventory, equipment, and routes	State visibility, alternative plans, anomaly alerts, and authorized task orchestration	Rules of owners / managers, professional responsibility, and explicit execution authorization
Cross-domain resource reallocation	Externalities, alternatives, benefits and burdens, effects on permissions, and return conditions	Reidentify domains, explain again, and reauthorize; an option is not a call-up
Major public projects	Facts, causality, resource constraints, alternatives, inaction options, and long-term effects	Legitimate public purposes, professional judgment, formal decisions, execution responsibility, and independent correction
Civilizational continuity and irreversible matters	Make risks, unknowns, redundancy, recovery paths, and failure conditions visible	The coordination layer must not decide or execute independently; statutory governance and stricter correction apply

11. Safety, acceptance, and independent correction

- The system must not sacrifice particular subjects' basic rights in pursuit of overall optimization, resource efficiency, or public needs.
- It must not create a single point of failure, a single data monopoly, a sole audit channel, or irreplaceable central intelligence.
- All critical plans must have alternative paths, stopping conditions, disconnected operation, human takeover, circuit-breaking, and rollback capabilities.
- When model or interface errors cause real harm, algorithmic complexity, dispersed supply chains, or automation cannot excuse organizational and professional responsibility.
- Ongoing red-teaming, stress testing, and cross-subject auditing may produce correction evidence only; they cannot justify expanded data and control permissions.
- The Real-World Coordination Layer may record and monitor anomalies, but cannot be its own sole auditor. Appeals, review, pause, repair, and termination must have independent channels.

Continuous carrying forward of valid V1.1 content

Valid V1.1 content on transition incentives, subject definitions, interface relationships, capability conditions, and semantic mapping is retained. V1.2 conclusions on governance, domain interfaces, lifecycle, drift monitoring, independent correction, anti-manipulation, and deferral of parameters remain fully effective. V1.3 only corrects the formal name and ontological positioning; it does not silently change principles already frozen in V1.2.

12. Interfaces with the Resource Pool, Shared World, Dream Garden, and governance layer

The Real-World Coordination Layer is a civilizational-scale framework for coordinating needs, resources, capabilities, responsibilities, and operations. It neither owns the Resource Pool nor decides whether dreams deserve realization. Resource Pool V2.2 provides resource–capability facts, candidate authorization conditions, and real-world capacity to support activities. Shared World V1.2 carries, verifies, expresses, and circulates effective use-right relationships formed by subjects with authority, lawful public rules, or corresponding professional procedures. The Happiness Ladder and Dream Garden reveal needs relating to life, creation, and meaning without automatically generating resource obligations. The Real-World Coordination Layer compares combinations of needs, capabilities, time, costs, maintenance, risks, and responsibilities, connecting execution interfaces only after decisions, authorization, and effective use rights are

established. Governance V3.0 handles legitimate purposes, professional judgment, decisions, execution, and independent correction. Actual results return to update each system according to its distinct ontology.

The Resource Pool answers “What exists in reality, in what condition, and which conditions are merely candidates?” Shared World answers “What use rights have been formed from lawful sources, are they currently effective, and how are they withdrawn and returned?” Dream Garden answers “What do subjects truly want to do?” The Real-World Coordination Layer answers “What feasible combinations exist, when are execution conditions met, and how do actual results change the original causal understanding?” Governance answers “How are purposes established, who has authority for professional judgment and decisions, who specifically executes, and who corrects independently?”

13. Cross-system semantic mapping and minimum necessary facts

1. Establish a minimum common catalog: Model subjects, roles, domains, rights, authorization, resources, capabilities, demand, tasks, risks, responsibilities, and unknowns separately; do not infer one automatically from another.
2. Map rather than forcibly replace: Retain the original systems' internal semantics and responsibilities; use adapters to create minimum fields understandable across systems.
3. Real subjects determine initial scenarios, industries, and loops according to actual problems, jurisdiction, responsibility, resource conditions, and technical maturity. This manuscript presupposes no uniform priority order.
4. Establish professional and human review interfaces: Models must not automatically merge semantic conflicts, unclear subjects, unclear domain states, or high-consequence facts.
5. Develop versioned standards: Every expansion records purpose, compatibility, factual scope, affected objects, permission changes, failure conditions, and rollback paths.
6. A common ontology can be derived progressively only after validation across multiple subjects and scenarios. Shared understanding does not mean centralized data, unified ownership, or unified scheduling sovereignty.

14. Capability-condition triggers and authorization boundaries

Stable-stage intelligent coordination does not unconditionally presume future technical autonomy. A system may undertake corresponding controlled functions only after demonstrating, within specific tasks, reliability, applicability, anomaly identification, stopping capability, independent audit, subject takeover, responsibility tracing, and return of permissions. Capability triggers functions, not power. Every new cross-domain call-up, professional responsibility, or execution scope still requires independent legitimacy and authorization. When capability is insufficient, remain at factual assistance, option generation, or controlled execution; do not force technology beyond its level through stage goals.

15. Complete lifecycle from options to decisions, effective use rights, and specific execution

Real problem / need → original purpose → goal → candidate facts and evidence → key causal assumptions → options and alternatives → inaction option → affected subjects and rights → professional judgment → formal decision → explicit authorization / effective use rights → specific executors and execution interfaces → actual results and externalities → three-goal review → return / repair / reassessment / termination.

Separation point	Minimum output from the Real-World Coordination Layer	Prohibited crossing of layers
Problem and purpose	Proposing subject, real problem, original purpose, goal, and consequences of inaction	Reverse-engineering public purposes from system capabilities or existing options
Facts and evidence	Sources, versions, quality, domain states, unknowns, and conflicts of interest	Treating inference, scores, or preferences as facts
Option generation	Multiple options, alternative paths, resource costs, benefits and burdens, validity and failure conditions	Treating recommendations, feasibility, or optimality as decisions

Separation point	Minimum output from the Real-World Coordination Layer	Prohibited crossing of layers
Professional judgment	Present evidence, model boundaries, disagreements, and unknowns to responsible subjects	Acquiring professional sovereignty through algorithmic accuracy
Formal decision	Receive lawful decisions, rules, scope of applicability, and review conditions	Automatic decisions from matching results, CV, or resource advantages
Explicit authorization / effective use rights	Authorization source, object, purpose, scope, conditions, responsibility, withdrawal, return, current validity, and evidence of Shared World relationships	Treating authorizability, matching, options, or historical authorization as current permission; allowing a single authorization to be inherited across subjects, tasks, domains, or time

Separation point	Minimum output from the Real-World Coordination Layer	Prohibited crossing of layers (continued)
Specific execution	Specific executor, execution qualifications / role, action scope, resource and capability interfaces, stopping, takeover, deviation reporting, and result write-back responsibility	Making the Real-World Coordination Layer the default executor; interface orchestration feeding back to change purposes, rules, or authorization scope
Results and correction	Actual results, deviations, harm, externalities, resource / capability changes, use-right status, repair, responsibility, and effects on the three goals	Substituting plan-completion rates for actual results; any layer monopolizing result interpretation or correction conclusions

15.1 Candidate interfaces and effective use-right inputs must remain separate

Option generation may read the minimum necessary resource–capability facts, domain states, visibility scope, candidate authorization conditions, dependencies, risks, and unknowns provided by the Resource Pool. These inputs serve only feasibility assessment, comparison of options, and identification of professional judgments, decisions, and authorizations still needed. Candidate interfaces create no current permission and must not occupy resources, call on capabilities, or automatically cross domains.

The Real-World Coordination Layer may connect authorized execution interfaces only after legitimate purposes / decisions, explicit authorization, currently effective use rights carried by Shared World, current resource states, professional conditions, responsibility, stopping, return, and correction channels are all established. Effective inputs must explain who authorizes, for which matter, over what objects, within what scope and conditions, whether authorization remains currently valid, and how withdrawal and return work.

Interface	Minimum input to the Real-World Coordination Layer	May produce	Must not produce
Candidate interface	Minimum necessary resource–capability facts, domain states, visibility scope, candidate authorization conditions, dependencies, risks, unknowns	Feasibility assessments, option comparisons, professional-judgment needs, decisions and authorizations still required	Current permission, resource occupation, call-up rights, automatic cross-domain movement

Interface	Minimum input to the Real-World Coordination Layer	May produce	Must not produce
Effective use-right input	Legitimate purpose / decision, authorization source and evidence, object, scope, conditions, responsibility, current validity, withdrawal, return, stopping and correction channels	Currently valid use-right relationships that can be connected and authorized execution interfaces	Purpose sovereignty, a cross-domain pass, permanent permission, execution sovereignty

15.2 The three gates are conditions for validity, not uniform thresholds

The fact gate verifies currency, evidence, relevance to purpose, domain state, dependencies, and unknowns. The rights gate verifies subjects with authority, lawful public rules or corresponding professional procedures, and the currently valid scope. The execution gate verifies professional conditions, lawful decisions, explicit authorization, current resource states, specific executors, and stopping / return / correction. If any gate is not satisfied, “a better overall outcome” cannot supply missing downstream permissions. The three gates prescribe no uniform scores, proportions, or automatic thresholds.

15.3 Specific executors' responsibility cannot be absorbed by interface capability

Every digital or physical execution entering reality must have a specific executor. Executors may be natural persons, organizations, lawfully operating automated systems, controlled agents, robots, or other real-world execution vehicles. Their execution qualifications, authorization sources, task scopes, resource and data permissions, professional responsibilities, operation / maintenance responsibilities, stopping and takeover arrangements, anomaly reporting, and result write-back must be anchored in accountable structures.

The Real-World Coordination Layer provides task decomposition, interface orchestration, and status feedback. Connecting interfaces does not make it the default executor; AGI, models, or automated systems cannot become gaps in responsibility. When harm occurs, responsibility should be traced separately through authorization, decisions, professional judgment, design, operation, maintenance, oversight, and specific execution, rather than ending the chain with “the system executed automatically.”

Important coordination records retain at least: the current problem, original purpose, goal, candidate facts, evidence, inference, key causal assumptions, value judgments, applicable rules, alternatives, inaction option, affected subjects, rights, resource costs, unknowns, professional judgment, decisions, authorization, effective use rights, specific executors and responsibilities, execution, results, effects on the three goals, validity conditions, failure conditions, return status, and reassessment conditions.

16. Domain states, cross-domain lifecycle, and return of permissions

The Real-World Coordination Layer must make domain states visible at the object level rather than assigning permanent domain labels to subjects. One task may involve private-domain facts, public-domain rules, and professional judgment in civilizational subdomains simultaneously, but each object's rights, visibility, call-up, and responsibility must be confirmed separately.

Cross-domain object	Minimum necessary movement	Must not be inherited automatically
Rights	Specific bundle of rights needed for this use and channels for refusal, withdrawal, and appeal	Ownership, all personality rights, or general cross-domain rights
Data / facts	Aggregated results, proofs, local computation, derived conclusions, or restricted queries	Complete raw data, permanent access, or cross-purpose reuse

Cross-domain object	Minimum necessary movement	Must not be inherited automatically
Resources	Specific use rights already lawfully opened, capacity, conditions, and maintenance responsibilities	Resource ownership, unlimited call-up, or public requisition

Cross-domain object	Minimum necessary movement	Must not be inherited automatically (continued)
Capabilities	Necessary task interfaces, available scope, dependencies, stopping and recovery conditions	Subjects' time, labor, relationships, and entire capabilities
Professional judgment	A qualified, accountable, reviewable judgment for this instance	Public-purpose decision-making authority or expert sovereignty
Execution	Authorized objects, actions, scope, temporal conditions, and stopping channels	Permanent autonomy, onward delegation, or cross-task execution authority
Contribution records	Actual historical facts relevant to this responsibility or experience	Use rights, decision-making rights, governance sovereignty, or personhood evaluations

The unified cross-domain lifecycle is: identify current domains and subject relationships → explain the original purpose and minimum necessary objects → verify rights, rules, and responsibilities → reauthorize → controlled execution and anomaly monitoring → task completion, expiry, withdrawal, or disappearance of conditions → actual return of data, resources, capabilities, and execution permissions → retain historical facts while closing current permissions.

17. The three goals, overall optimization, and cross-domain externalities

Option comparisons by the Real-World Coordination Layer must make the three goals visible separately. One total score cannot replace value judgments. Overall optimization may provide grounds for reassessment only; it cannot automatically require a subject to obey, open a private domain, supply resources, undertake tasks, or surrender future choices.

Review dimension	Must make visible	Prohibited substitutes
Freedom from survival insecurity	Basic provision, vulnerable subjects, continuous services, redundancy, recovery, and consequences of inaction	Total capacity, minimum cost, or average supply alone
Happiness in life	Autonomy, dignity, relationships, time, experience, diversity, and subjects' choices	Satisfaction, retention, obedience, or consumption behavior
More meaningful life	Subjects' recognition, genuine participation, capability growth, carrying forward value, and future possibilities	Uniform meaning scores, contribution rankings, or a system-defined good life
Shared externalities	Who benefits, who bears burdens, present and long-term effects, effects on rights, resource costs, and uncertainty	Overall optimization automatically generating individual obligations

Key externalities include local scheduling's effects on other subjects; one civilizational subdomain's effects on another; present benefits compressing future choices; resource consumption and capability degradation; necessary redundancy and recovery capability; major public externalities from private-domain choices; public actions intruding back into private domains; and cross-domain power spillover created by interface capabilities.

17.1 The same real-world result must return through four distinct layers

A result occurs only once in reality but must be written back according to distinct ontologies, preventing any layer from owning all interpretive authority. Each layer preserves state changes relevant to its responsibilities and maintains evidence continuity for the same event through traceable links. Linking does not mean a centralized database or require copying all raw data.

Return destination	Must update	Must not overwrite
Resource Pool V2.2	Facts about resource states, actual capabilities, consumption, maintenance, dependencies, redundancy, recovery, and future choices	Independent records of ownership / control relationships, domain states, and evidence sources
Shared World V1.2	Use-right states, actual use, fulfillment of responsibilities, withdrawal, return, repair, and closure of relationships	Authorization sources, evidence of historical changes, and independent verification of current validity
Nebula Real-World Coordination Layer V1.4	Causal models, option validity, deviations, externalities, failure conditions, and reassessment conditions	Lawful decisions, professional judgments, and authorization themselves
Governance / independent correction	Decision review, responsibility, repair of harm, pause, termination, or reauthorization	Independence of resource-fact layers, professional facts, and historical evidence

The continued existence of historical facts does not mean old permissions continue. On task closure, resources, data, capabilities, proxy qualifications, and temporary control must actually return. New facts may be appended; current permissions must be reverified.

18. Six forms of cross-domain drift, the unified correction interface, and independent audit

Drift type	Typical Real-World Coordination Layer risk	Minimum response
Public-domain expansion drift	Connection to the coordination layer continuously brings more life, resources, and data into public systems	Make the basis for added public-domain status visible; immediately contract unsupported portions
Scope drift	Facts, models, or authorization for purpose A extend to purposes B/C	Stop added uses, explain again, and reauthorize
Visibility drift	Information visible only to subjects or professionals gradually becomes public, copied, or aggregated by default	Restore minimum visibility, preserve access records, and review harm
Professional-sovereignty drift	Professional advice or model recommendations gradually become public commands and subjects' obligations	Restore the separation between professional judgment and purpose decisions; escalate governance when necessary

Drift type	Typical Real-World Coordination Layer risk	Minimum response (continued)
Temporal drift	Temporary permissions, emergency interfaces, and task roles remain effective after their conditions disappear	Review at expiry, revoke permissions, and return permissions, resources, and capabilities
Interface-power drift	Platforms acquire de facto decision-making authority by controlling semantic, data, and scheduling interfaces	Freeze power expansion, verify permission sources, and retain alternatives and independent stopping channels

Unified correction chain: make anomalies, conflicts, or harm visible → locally freeze relevant interfaces → preserve minimum evidence and versions → inform relevant responsible parties → independent review → return or contract resources / data / capabilities / permissions → repair and trace responsibility → update states, rules, and model versions → reauthorize, restore in stages, or terminate permanently.

All three layers may discover anomalies, but none may become its own sole auditor, sole evidence custodian, sole rule interpreter, or sole termination channel. The Real-World Coordination Layer makes option deviations, causal failure, externalities, and interface drift visible and provides minimum necessary evidence and stopping interfaces to independent correction. It must not override lawful decisions with model optimality or confirm for itself that permissions remain valid while under review.

Within unified correction, “reidentifying current domains, purposes, authorization, and continuation conditions” belongs to independent review and reauthorization, not self-completion by the original system. Restoration is not the default result. Staged restoration is permitted only after relevant factual, rights, professional, decision, authorization, execution, and repair conditions are reestablished. Otherwise, remain paused, contract, or terminate permanently.

19. Anti-manipulation, success criteria, and system withdrawal

The Real-World Coordination Layer must not make changing subjects' behavior itself an optimization objective in the name of civilizational optimality, public needs, resource efficiency, contribution maximization, cost reduction, successful coordination, or system safety. Stronger predictive capability means greater explanatory duties and less permission to manipulate.

Proper criterion	What should be visible	Prohibited proxy indicators
Real-world feasibility	Whether lawful options can connect real needs with actual capabilities	Number of connected systems, generated options, or calls
Integrity of rights	Whether refusal, withdrawal, exit, appeals, return of permissions, and repair are genuinely available	Default-consent rate, authorization coverage, or exit friction
Resource resilience	Whether necessary redundancy, maintenance, recovery, dependencies, and future choices are retained	Maximum utilization, minimum vacancy, or inventory compression
Complete responsibility chain	Whether responsibilities for purposes, professional judgment, decisions, execution, oversight, and repair are traceable	Automation rate, response speed, or plan-completion rate
Subject autonomy	Whether subjects and communities can better understand facts, take responsibility for choices, and coordinate autonomously	Behavioral obedience, platform retention, contribution rankings, or uniform satisfaction
System withdrawal	Whether, after maturity, lawful local and intersubject coordination can occur with less system-driven intervention	Growth in system-call duration, control scope, or intervention count

A truly mature Real-World Coordination Layer does not increasingly decide, schedule, and persuade on subjects' behalf. Without possessing all private domains, holding resource sovereignty, or replacing professional functions and governance, it makes real-world coordination clearer, more accountable, and more repairable, gradually stepping back as subjects' autonomous capabilities grow.

20. Current engineering status, version governance, and the next handoff

20.1 Results of this edition

Treatment category	V1.4 treatment	Effect
Retained in full	V1.3 formal name, ontology, governance / domain interfaces, lifecycle, six forms of drift, anti-manipulation, system withdrawal, and conclusions on deferring parameters	Remains effective
Formal renaming	Completed in V1.3: Nebula Intelligent ERP → Nebula Real-World Coordination Layer; ERP removed from higher-level theory and the formal system name	V1.3 governs
Ontological correction	Frozen in V1.3: A civilizational-scale real-world coordination framework for real needs, resource facts, lawful use rights, capabilities, responsibilities, risks, and results	Formally frozen
Retained interfaces	Traditional ERP, MES, SCM, and similar systems remain only existing-system interfaces, not this layer's theoretical prototype	Remains effective
Effective use-right inputs	Candidate and effective interfaces formally separated; current permission must come from lawful decisions, explicit authorization, currently effective Shared World relationships, and their conditions	Formally frozen
Specific execution responsibility	The Real-World Coordination Layer only connects execution interfaces; specific executors, stopping, takeover, deviation reporting, and responsibility anchors must be explicit	Formally frozen
Three-layer result synchronization	Resource facts, use-right relationships, causal options, and governance correction are written back separately, creating no sovereignty over result interpretation	Formally frozen
Unified correction interface	Nine-step correction chain incorporated into the text; any layer may alert, none may monopolize audit, evidence, circuit-breaking, or termination	Formally frozen
Continued deferral	Initiating subjects, connection sequence, scope, participant counts, proportions, durations, thresholds, autonomy levels, data retention, specific field protocols, and scheduling parameters	Derive after real subjects are identified

20.2 Matters not entered at present

- Do not choose actual countries, cities, enterprises, industries, communities, or public institutions as predetermined experimental subjects.
- Do not set connection scale, participant counts, voting proportions, professional seats, operating cycles, emergency-permission durations, or data-retention periods.

- Do not set resource priorities or thresholds for automatic decisions, automatic domain transfer, automatic scheduling, circuit-breaking, risk, or autonomy.
- Do not entrench existing cases, product architectures, business models, or procedures from one jurisdiction as uniform civilizational-scale rules.
- Future options must be derived together from real problems, subject relationships, jurisdictions, resources, responsibilities, technical conditions, and support from existing institutions.

20.3 The sole next handoff

After completing controlled write-back for Resource Pool V2.2, Shared World V1.2, and Nebula Real-World Coordination Layer V1.4, the sole next handoff is Controlled Cleanup of Old ERP / Intelligent Coordination Layer Names and Three-Layer Interface Aliases in Related System-Wide Master Manuscripts, with Version Continuity Verification. Clean up only old names, outdated interface versions, and overreaching verbs in currently effective master manuscripts that still change the starting point of understanding. Align current references to Resource Pool V2.2, Shared World V1.2, and Nebula Real-World Coordination Layer V1.4. Do not retroactively alter historical versions, version mappings, or frozen specialist ontologies, or generate real-world implementation parameters.

Appendix A | Minimum coordination-record fields for the Real-World Coordination Layer

Field group	Minimum content
Problem and purpose	Proposing subject, actual problem, original purpose, goal, consequences of inaction
Subjects and domains	Subjects, roles, private / public / civilizational subdomains, affected subjects, responsibility relationships
Facts and evidence	Sources, versions, quality, visibility scope, evidence, inference, unknowns, conflicts of interest
Resources and capabilities	Ownership / management status, candidate authorization conditions separately listed from currently effective use rights, capacity, dependencies, maintenance, redundancy, recovery
Options	Alternatives, inaction option, time, location, costs, risks, benefits and burdens, validity and failure conditions
Professional judgment and decisions	Professional-judgment subjects, disagreements, formal decisions, rules, permission sources, review conditions
Authorization / effective use rights	Authorization sources, objects, purposes, scopes, conditions, current validity, stopping, withdrawal, return, onward-delegation restrictions
Specific execution	Executor / execution system, qualifications or role, action scope, resource / capability interfaces, stopping, takeover, deviation reporting, responsibility

Field group	Minimum content (continued)
Results and correction	Actual results, deviations, externalities, resource / capability changes, use-right states, effects on the three goals, harm, repair, responsibility, reassessment

Appendix B | Checklist of separation points from options to decisions, effective use rights, and specific execution

1. Is the current output a fact, inference, professional judgment, recommendation, decision, authorization, or execution record? Is it clearly labeled?
2. Does the option retain alternatives and an inaction option, explaining validity, failure, and reassessment conditions?
3. Do professional-judgment subjects have qualifications, responsibility, and reviewability? Are disagreements and unknowns retained?
4. Are the formal decision's purpose, rules, permission sources, affected subjects' procedural standing, and responsibility established?
5. Are candidate authorization conditions listed separately from currently effective use rights? Are authorization sources, objects, purposes, scopes, conditions, current validity, withdrawal, and return explicit?
6. Who is the specific executor? Are execution qualifications, action scope, resource / capability interfaces, stopping, takeover, deviation reporting, and responsibility explicit? Does the Real-World Coordination Layer remain merely an interface connector?
7. Is the same real-world result written back separately to the Resource Pool, Shared World, Real-World Coordination Layer, and governance / independent correction, without one layer overwriting other ontological records?
8. After anomalies occur, can the unified correction chain locally freeze interfaces, preserve minimum evidence, independently review, return permissions, repair, update versions, and decide reauthorization, restoration, or termination?

Appendix C | Quick check for six forms of cross-domain drift

1. Does connecting to the system continuously turn previously private-domain life, resources, or data into public-domain objects without new grounds?
2. Have facts, models, resources, or authorization for purpose A expanded to purposes B/C?
3. Is information visible only to subjects or professionals made public, copied, aggregated, or retained across systems by default?
4. Have professional advice, model recommendations, or interface convenience become public commands or subjects' obligations?
5. Do temporary permissions, emergency interfaces, and task roles remain effective after task completion, expiry, or disappearance of their conditions?
6. Has a platform acquired de facto cross-domain decision-making authority by controlling semantic, data, resource, and execution interfaces?

Appendix D | V1.1 → V1.2 governance and domain-interface write-back checklist

Original location	V1.2 treatment	Effect
Cover, contents, and positioning	Upgrade version; specify a civilizational-scale coordination layer, neither a central brain nor resource or governance sovereignty	V1.2 governs
Overall architecture	Add separation points for purposes and rules, professional judgment, formal decisions, authorized execution, and independent correction	Formally frozen

Original location	V1.2 treatment	Effect
Startup, transition, stable stages	Separate stage, phase, and process state; defer experimental, migration, autonomy, and scheduling parameters	Must not be fixed prematurely
Resource Pool and Dream Garden interfaces	Connect Shared World, Contribution Value, Nebula, Governance V3.0, and Domain Specification V1.0	Responsibility boundaries frozen
Semantic mapping and capability triggers	Minimum necessary facts; capabilities trigger functions, not power; cross-domain movement still requires renewed authorization	Remains effective and elevated
Valid V1.1 content	Retain in full existing-system integration, demand and supply, redundancy, safety, semantic mapping, and capability conditions	Remains effective

Appendix E | V1.2 → V1.3 formal naming and ontological correction checklist

Correction object	V1.2 wording	Formal V1.3 formulation	Effect
Formal name	Nebula Intelligent ERP	Nebula Real-World Coordination Layer	V1.3 governs
Full name	Civilizational-scale resource and operations coordination layer	Civilizational-scale framework for coordinating needs, resources, capabilities, responsibilities, and operations	Formally frozen
Ontological positioning	Easily understood from enterprise resource planning and centralized operating systems	A coordination framework connecting needs, resource facts, authorized use rights, capabilities, responsibilities, risks, and results	Formally frozen
ERP terminology	Serves as both this layer's name and an existing-system category	Retained only for traditional enterprise-system interfaces, historical names, and version-migration records	Must not be conflated
Content continuity	V1.2 systematic write-back of governance and domain interfaces	All valid content carried forward unchanged; this edition does not alter rights, authorization, responsibility, or correction boundaries	Remains effective
Neighboring interfaces	Resource Pool–Shared World–Intelligent ERP	Resource Pool–Shared World–Nebula Real-World Coordination Layer	Use consistently thereafter

Correcting the name creates no new system permissions. Knowing more does not authorize doing more; stronger predictive capability means greater explanatory duties and less permission to manipulate.

Appendix F | Minimum semantics of candidate interfaces and effective use-right inputs

Field group	Candidate interface	Effective use-right input
Problem / purpose	Current problem, original purpose, intended use of facts	Legitimate purpose / decision and its current scope of applicability
Resources / capabilities	Current facts, states, dependencies, redundancy, recovery, candidate authorization conditions	Authorized objects, scope, conditions, and current resource states
Domains and visibility	Objects' domain states, minimum visibility, possibilities for cross-domain movement	Substantive cross-domain movement has been reidentified, explained, and authorized
Rights / authorization	Who may have authority to authorize, prerequisites, prohibitions and restrictions	Actual authorization sources, evidence, current validity, withdrawal, and return
Professional judgment / execution	Required professional judgments, decisions, and execution conditions	Professional conditions established; specific executors, stopping, takeover, and responsibility explicit
Institutional effect	Creates no permission; no call-up, occupation, or automatic cross-domain movement	Connect execution only within purpose, object, scope, conditions, and responsibility; revocable, terminable, and subject to return

Appendix G | Quick check of execution responsibility, result synchronization, and unified correction

1. Is the current input a candidate fact or an already effective use right? Can the two be distinguished in records and interfaces?
2. Who formed the lawful decision, who granted authorization, who carries the use-right relationship, and who merely generates or connects options?
3. **Is the specific executor explicit? Does “automatic system execution” cause the responsible subject to disappear?**
4. Does the executor act only within current boundaries of purpose, object, scope, conditions, resources, data, and time?
5. Does the same real-world result separately update resource states, use-right states, causal options, and governance / correction without mutual overwriting?
6. Do historical facts remain traceable while current access, call-up, execution, and proxy qualifications are independently closed or reauthorized?
7. **Can an anomaly discovered by any layer trigger local freezing rather than directly expanding control?**
8. Can independent review obtain minimum necessary evidence, without the reviewed system controlling the sole evidence, rule interpretation, and termination channel?
9. After repair, are factual, rights, professional, decision, authorization, and execution conditions reverified rather than automatically restored?

Appendix H | V1.3 → V1.4 controlled write-back checklist

Write-back object	V1.3 status	Formal V1.4 treatment	Effect
Formal name and ontology	Naming and ontological correction completed	Retain in full without reopening	Remain frozen

Write-back object	V1.3 status	Formal V1.4 treatment	Effect
Neighboring versions	Resource Pool V2.1 / Shared World V1.1	Update to Resource Pool V2.2 / Shared World V1.2 and adopt their candidate / effective interface formulations	New versions govern current interfaces
Authorization-execution separation point	“Authorization and execution” still sometimes expressed jointly	Split into two separation points: effective use-right inputs and specific execution	Formally frozen
Specific execution responsibility	Execution-responsibility principles exist but interface anchors are insufficient	Specify executors, qualifications / roles, stopping, takeover, deviation reporting, result write-back, and responsibility tracing	Formally frozen
Result return	Systems update separately without a unified four-way formulation	Four-way layered synchronization across Resource Pool, Shared World, Real-World Coordination Layer, and governance / correction	Formally frozen
Correction chain	Independent correction and negative-feedback loops exist	Unify into a nine-step correction chain and clarify that restoration requires renewed satisfaction of conditions	Formally frozen
Implementation parameters	Continue to be deferred	Generate no thresholds, durations, proportions, field lengths, automation levels, or experimental parameters	Continue to be deferred

Conclusion | Stronger coordination must not let systems absorb sovereignty

The Real-World Coordination Layer's value is not in compressing civilization into a system for uniform computation and scheduling. It lies in more honestly understanding and connecting the needs, resources, capabilities, responsibilities, risks, and future choices dispersed across reality. It may make options clearer, but cannot decide on subjects' behalf what is worthwhile. It may make execution more reliable, but cannot engulf authorization in the name of reliability. It may make collective consequences more visible, but cannot turn overall optimization into individual obligations.

When the coordination layer truly matures, civilization gains not a machine that takes over the world, but a more capable, more boundary-respecting foundation for cooperation. The system knows when to make things visible, when to advise, when to await authorization, and when to stop. It also knows it must ultimately step back to where subjects can judge autonomously, decide together, and bear real results.

Reading guide and personalized further reading

P06-NEBULA-003 | V1.4 | Real-world coordination specialist master manuscript

What this manuscript covers

Forms feasible real-world combinations of civilizational-scale needs, resources, capabilities, and responsibilities; connects authorized execution interfaces; and carries forward three-layer result synchronization and unified correction.

Current stage

Startup / transition-stage real-world operation. Generating options is not authorization. It does not replace ownership, use rights, professional judgment, decisions on public purposes, or specific execution responsibility.

Naming note

Nebula Intelligent ERP, Intelligent ERP and the Civilizational Coordination Layer, and Intelligent Coordination Layer are historical aliases. The current formal primary name is Nebula Real-World Coordination Layer V1.4.

Continue reading

[1. Upward | Nebula General Framework | V1.3-R2 continuity track](#)

Review continuity boundaries of the Resource Pool–Shared World–Real-World Coordination Layer three-layer interfaces.

[2. Across | Nebula Startup Edition: Resource Pool](#)

Return to inputs of resource, capability, rights-bundle, and exit facts.

[3. Across | Civilization Leap Resource Pool Complete Design Master Manuscript](#)

Verify separation among resource visibility, ownership, use rights, and actual call-up.

[4. Toward governance | Framework of Civilizational Decision-Making Principles: A Constitutional Order of Three Separated Powers](#)

After options form, public purposes, professional judgment, execution, and correction must still be independently established.

[5. Toward validation | Nebula City-Scale Integrated Validation Plan](#)

Bring real-world combinations, execution responsibility, and result synchronization into city-scale stress tests.

[6. From the other side | Human-COS: Making What Is Seen Too Late Visible Earlier](#)

High-consequence coordination requires earlier visibility of direction, responsibility, objections, and affected subjects.

[Stable website entry](#)

[Nebula family entry](#)

[Complete library](#)