

Civilization Leap Resource Pool Complete Design

Master Text

P05-RESOURCE-003 | V2.2-R2 | Current Continuity-Control Master Text

Resource-capability mapping, real-world support, maintenance and redundancy, recovery, and future options: a professional master text

Capabilities must be supported by real resources, and resource consumption must produce genuine capabilities and civilizational value commensurate with that consumption. The Resource Pool's task is not to make every resource “available,” but to let civilization know what it truly possesses, what it can sustain, what it must retain, and how it can begin again after contraction.

The Resource Pool is the resource-capability map and real-world support layer; Shared World carries, verifies, expresses, and circulates lawfully established use-right relationships; the Nebula Real-World Coordination Layer generates combinations that are feasible in reality. No layer acquires governance sovereignty through its interface capabilities.

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C1-R1 Resource Pool family rebaselining note: P05-RESOURCE-003 formally assumes the role of professional master text for the complete Resource Pool design. V2.2-R2 and V2.2-I1 share the same permanent asset ID, serving respectively as the continuity-control main track and the parallel three-layer interface track. The two tracks are checked in parallel, are not automatically merged, and do not accumulate authority.

B5 W1 controlled revision note: This file is the P0 controlled incorporation result for POOL. It adds only the minimum sufficient T-10 boundaries, adds no authority, and changes no Protocol, Schema, state machine, interface, frozen parameter, or existing real-world effect.

T-10 Resource Eligibility, Basic Rights, Scarcity Allocation, and Exit Boundaries (EMB-3 / EMB-4)

Basic boundary: Continued existence is civilization's bottom line. Basic survival, basic care, and personal dignity do not depend for eligibility on contribution value, capability, meaning scores, degree of obedience, or algorithmic predictions. The Resource Pool manages resources; it does not define people's value.

Separation of resources and rights: Resource facts, available capabilities, eligibility for use, allocation priorities, public decisions, and basic rights are registered separately. Resource visibility does not imply permission to call upon it; technical allocability does not confer allocation authority.

Scarcity conditions: When resources are insufficient, temporary priorities may be formed according to real-world conditions that are public, challengeable, and reviewable. The objectives, evidence, affected parties, alternatives, time limits, review points, and recovery paths must be stated. Temporary scarcity rules must not be made permanent.

Contribution-value interface: Contribution records may serve as limited references within a specified jurisdiction and for a specific purpose. They must not monopolize resource eligibility, much less determine personhood, life's meaning, basic survival rights, or general political eligibility in reverse.

AGI and responsibility: AGI may sense resources, make predictions, compare plans, and schedule within authorization, but acquires no sovereignty over public resources. Responsibility for final decisions, execution, harm, correction, compensation, and recovery must be anchored to real actors and institutions.

Appeals, exit, and stepping back: Affected parties have routes to information, objections, appeals, correction, and exit. When authorization expires, conditions change, risk exceeds boundaries, or the task is completed, authority to call upon resources is withdrawn and reconsidered. As system capabilities mature, unnecessary centralization and overt intervention should diminish.

Future scenarios and absence of effect: Interstellar or extremely long-term resource scenarios are research only and must not feed back into current institutions. This section changes no existing interface, state machine, parameter, or real-world authorization. Sources: T-10 Consolidated Volume on Interdisciplinary Theoretical Upgrades V1.0; T-10 Master Register of Derived Fields for Six Categories of System Components, by Object, Version, and Stage, B3 V1.0; T-10 Master Audit Register of File-by-File, Version-by-Version, and Stage-by-Stage Incorporation for Six Categories of System-Component File Families, B4 V1.0.

Control Page | V2.2-R2 Version Positioning, Three-Layer Interface Continuity Revisions, and Frozen Boundaries

Nature of the File

V2.2-R2 synchronizes the T-10 eligibility, rights, scarcity, and appeal boundaries on the basis of the controlled version-continuity revisions in V2.2-R1. V2.2 has already frozen the Resource Pool's ontology as the "resource-capability map and real-world support layer," the candidate-to-effective boundary, result feedback, and independent correction interfaces. R1 synchronized adjacent versions and interface continuity. R2 adds only the minimum sufficient boundaries for eligibility, basic rights, scarcity allocation, responsibility, disputes, appeals, and exit. It adds no Resource Pool power and changes no state machine, interface, frozen parameter, or real-world authorization.

V2.2-R2 fully retains all professional content of V2.2, R1's three continuity revisions, and the seven controlled-interface conclusions. The current additions only prevent resource facts, schedulable capabilities, contribution records, or model-generated plans from being misrepresented as eligibility for use, public decision-making authority, or real-world permission. They do not change the formation of use rights or add scheduling or execution responsibilities.

The Resource Pool answers: What exists, where is it, who owns or controls it, what are its current state and capabilities, what does it depend on, what must be retained, and how is it maintained

and recovered? Shared World answers: How are use-right relationships formed by authorized actors, lawful public rules, or corresponding professional procedures carried, verified, expressed, circulated, withdrawn, and returned? The Nebula Real-World Coordination Layer answers: Given the purpose, constraints, and currently effective rights, what feasible combinations, externalities, outcomes, and conditions for reconsideration exist?

Twenty-Four Core Judgments Frozen in V2.1 (Frozen in V2.2, Inherited by R1, and Retained in R2)

1. The Resource Pool is not an ownership pool, central warehouse, resource trading market, or sovereign scheduler of use rights. It is first a common map of resource facts, capability support, dependencies, maintenance, redundancy, and recovery.
2. Resource registration changes no ownership, management rights, use rights, or rights to returns, and creates no automatic obligation to share.
3. Its core objects are not “idle resources,” but all resources, conditions, dependencies, responsibilities, and future value relevant to real civilizational capabilities.
4. Book inventory does not equal safely usable resources; nominal capability does not equal capability available in reality.
5. Every critical resource must answer “Which functions and capabilities does it support?” Recording only quantity, price, and location is insufficient.
6. Resource-capability judgments must not aim to maximize utilization. Necessary redundancy, recovery resources, strategic reserves, long-term research, and future options may have low utilization but high value.
7. The Resource Pool should distinguish ownership/control, management, use, benefit, and responsibility, but only records and verifies these relationships; it does not itself transfer rights.
8. Shared World's use of candidate resource facts and statements/conditions of authorizability supplied by the Resource Pool does not mean a current permission exists. Authorizable does not mean authorized. The Resource Pool must not record candidate conditions as effective use rights.
9. The Nebula Real-World Coordination Layer, Nebula, or AGI may use Resource Pool facts to generate plans, identify risks, and project consequences. A plan is not a decision; prediction is not authorization; ability to execute does not confer execution sovereignty.
10. Guarantees for basic survival, life safety, basic medical care, and minimum dignity precede contribution logic. Contribution value must not determine their closure or protection priority.
11. Possessing resources is not contribution; registering resources is not contribution. Only real maintenance, repair, replenishment, or release of use rights that generates verifiable value may constitute contribution.
12. The Resource Pool must include human time, attention, professional maintenance capacity, and depletion of agency in real costs, but must not objectify people themselves as schedulable resources.
13. Resource decline should first change capability claims and operating levels, rather than preserve an illusion of “unchanged capability.”
14. Where local degradation is possible, the whole must not be shut down. Degrade before suspending; suspend before closing. Every contraction must protect recovery capability and the space for future options.
15. Entry into a risk state and restoration of normal operation must use different thresholds and observation windows to avoid repeated stop-start cycles.
16. Private domains, public domains, and civilizational subdomains are governance boundaries, not resource-protection tiers. Protection priority depends on actual functions, dependencies, substitutes, recovery, and effects on rights.
17. Different initiating actors, such as states, businesses, cities, and communities, may form different early Resource Pools. Common definitions, rights boundaries, and resource-capability logic must remain unchanged.
18. The current phase remains calibration of design completeness. This text freezes no specific inventory thresholds, scheduling proportions, procurement parameters, sharing prices,

contribution-value interface parameters, pilot population or duration, or engineering implementation.

19. The Resource Pool must be constrained by G0 and G1-G10: it supplies resource-capability facts, evidence, constraints, and unknowns, without acquiring authority over purposes and rules, professional judgment, or execution.

20. Important outputs must keep nine layers separate: facts, evidence, inferences, causal hypotheses, value judgments, rules, decisions, execution, and results. Model conclusions or overall optimality do not automatically acquire decision-making effect.

21. Domain states of resources, data, rights, capabilities, professional judgments, execution, and contribution records must be identified separately. Seeing a domain state does not confer authority to change it. The Resource Pool must not establish an automatic domain-transfer algorithm.

22. Raw data should remain in its original domain wherever possible. Across domains, prioritize minimum facts, aggregated results, proofs, derived conclusions, restricted interfaces, or necessary capability calls. Resource visibility does not imply permission to call upon it.

23. The Resource Pool may monitor six kinds of cross-domain drift, but cannot be its own sole auditor. Correction entry points, evidence access, and suspension capabilities must be independent of the audited interface or operator.

24. The Resource Pool must not turn utilization, sharing rates, civilizational optimality, public need, or contribution maximization into pressure on actors' behavior. Greater predictive power entails a greater duty to explain and less permission to manipulate.

Seven Newly Frozen Controlled-Interface Conclusions in V2.2 (Inherited by R1 and Retained in R2)

1. The third layer's official name is standardized as "Nebula Real-World Coordination Layer," abbreviated "Real-World Coordination Layer." The former names "Nebula intelligent ERP / intelligent ERP / intelligent coordination layer" are retired from current theoretical and system naming. Traditional ERP, MES, and SCM remain only existing enterprise/production/supply-chain interfaces connected with authorization.

2. Candidate resource facts must be separated from currently effective authority. The Resource Pool may record who can authorize, possible scope, prerequisites, explicit prohibitions and restrictions, and status. These are only candidate resource facts; they create no permission for calls, occupation, execution, or crossing domains.

3. Effective use rights can be formed only by authorized actors, lawful public rules, or corresponding professional procedures. Shared World carries, verifies, expresses, and circulates those relationships. The Resource Pool receives only factual updates concerning their effects on resource states, commitments, responsibility, and available capability.

4. The Nebula Real-World Coordination Layer connects task decomposition and execution interfaces only after professional conditions, lawful decisions, and explicit authorization are established. Identified executors bear responsibility for specific digital or physical execution. The Real-World Coordination Layer acquires no default execution sovereignty.

5. Real results must feed back separately by layer: the Resource Pool updates resource states and capability facts; Shared World updates use-right relationships and return states; the Nebula Real-World Coordination Layer updates causal models, plan effectiveness, and externalities; governance/independent correction updates decision review, responsibility, repair, suspension, termination, or reauthorization.

6. All three layers may issue warnings, but none may be its own sole auditor, sole custodian of evidence, or sole point of termination. Correction follows a unified sequence: local freezing, minimum evidence preservation, independent review, return of resources/data/capabilities/authority, repair and responsibility tracing, version updates, and reauthorization/recovery/termination.

7. The fact gate, rights gate, and execution gate are conditions for validity, not a unified score, weighting formula, or automatic threshold. Passing the fact gate permits only entry into planning and professional judgment; passing the rights gate permits only formation or verification of effective use rights; only passing the execution gate allows an identified executor to act within the authorized scope.

Version Relationships, Migration of Responsibilities, and V2.2-R1 → R2 Controlled Continuity Revisions

Former V1.1 content	Treatment in V2.0	Current responsibility
“The Resource Pool is a mechanism for restructuring use relationships”	Structural replacement	Resource Pool = resource-capability map and real-world support layer
Authorizable, combinable, schedulable	Separation of responsibilities	Shared World carries, verifies, expresses, and circulates lawfully formed use-right relationships; the Nebula Real-World Coordination Layer develops combination plans
Resource use and scheduling	Reduced to an interface	The Resource Pool supplies resource facts, capability constraints, states, and dependencies; authorized actors/professional systems decide
“Idle/inefficient resources enter more effective settings” as the central narrative	De-emphasized	Only identification of ineffective idleness is retained; functional idleness and strategic retention must be protected
Entry methods such as sharing, rental, entrustment, and joint operation	Retained as relationship facts	Specific use-right relationships are carried by Shared World/contracts/public institutions
Overall cost-effectiveness, maintenance, redundancy, and long-term costs	Retained and strengthened	Included in whole-life-cycle resource-capability judgments
Launch/transition/stable stages plus former operating phases	Unified coordinates	Development stage + environmental phase + task process state; former “phases” map to process states
Pilot orientation	Deferred	At present, only principles, specifications, and application-adaptation interfaces are established

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Chapter 0 Governance, Domain Interfaces, and System-Wide Principles Incorporated

The Resource Pool makes reality visible; it does not create sovereignty over resources. Knowing about resources does not confer authority to call upon them.

0.1 The first overarching 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 Resource Pool's role along this path is to make resources, capabilities, dependencies, maintenance, redundancy, and future options verifiable real-world conditions, rather than force behavioral change through resource control. Institutions → behavior → lived experience → habits → internalization → intergenerational reproduction → civilization is the causal chain through which resource institutions enter civilizational change.

The Resource Pool must explain separately how a resource arrangement affects freedom from survival insecurity, happiness in life, and greater meaning in life. It must separately make visible who benefits, who bears costs, current and long-term consequences, resource costs, effects on rights, future options, and uncertainty. The three goals are not a unified utility function. The Resource Pool must not establish a unified civilizational utility function, aggregate domain score, or meaning score.

0.2 Governance V3.0 interface: the fact layer acquires none of the three powers

The Resource Pool fully takes up Governance G0 and G1-G10, without reproducing the governance master text in full. In engineering terms, it supplies only resource-capability facts, evidence, constraints, unknowns, and visibility into consequences. Possession of the resource map gives it no authority over purposes and rules, professional judgment, or execution.

Institutional function	Legitimate bearer	Resource Pool boundary
Authority to decide purposes and rules	Established by the corresponding actors, public institutions, or lawful governance structures	Supplies resource constraints and facts about affected parties; does not decide public purposes
Authority of professional judgment	Relevant, responsibility-bound, reviewable professional structures	Supplies states, dependencies, and evidence; does not replace domain judgment
Execution authority	Executors with explicit purposes, scope, resources, data, duration, and stopping conditions	Records available states and execution results; does not call upon resources itself
Independent correction layer	Structures for supervision, audit, appeal, review, circuit breaking, repair, and termination	Opens necessary evidence and suspension interfaces; cannot be its own sole auditor

All important outputs must keep nine layers separate: facts → evidence → inferences → causal hypotheses → value judgments → rules → decisions → execution → results. The Resource Pool may record decisions and execution, but cannot disguise facts, model inferences, or “overall optimality” as decisions.

0.3 Domain Specification V1.0 interface: seeing a domain state does not mean changing it

The Resource Pool is constrained by D0 and D1–D12. A domain is a governance state, not an actor's identity. The private domain is the normal state; the public domain is a limited, revocable, traceable state of public action; a civilizational subdomain is a state of professional governance, not expert sovereignty. The Resource Pool must separately record the current domain states of resources themselves, rights, data, capabilities, professional judgments, execution authority, and contribution records.

Object	What the Resource Pool may record	What must not be inferred automatically
Resource itself	Existence, location or logical location, state, dependencies, maintenance, and redundancy	Entry into the public domain or open access for calls
Rights	Currently effective states of ownership/control, management, use, benefit, and responsibility	Transfer of the entire bundle of rights
Data/facts	Raw data, derived facts, aggregated results, proofs, and visibility scope	Discovered = disclosed = reusable
Capabilities	Functions resources can support, limits, recovery, and future options	The best-suited actor is obliged to undertake the task
Professional judgment	Source, applicable field, evidence, responsibility, and uncertainty	Professional facts acquire sovereignty over public purposes
Execution	Authorized scope, actions, stopping, takeover, results, and return of authority	Executable = authorized to decide
Contribution records	Historical facts of actual maintenance, replenishment, repair, and use results	Governance power, purchasing power over resources, or personality rank

Being discovered does not mean being disclosed; being disclosed does not mean being callable; being callable does not mean having authority to decide. Resource visibility does not imply permission to call upon it. Substantive cross-domain action requires renewed identification, explanation, and authorization. The Resource Pool must not establish an automatic domain-transfer algorithm.

0.4 Minimum necessary facts and the resource-fact life cycle

Raw data should remain in its original domain wherever possible. In cross-actor, cross-system, or cross-domain coordination, prioritize minimum facts, aggregated results, proofs, derived conclusions, restricted interfaces, or necessary capability calls. Expand the scope of data or resource facts only when the purpose is explicit, the source of rights is valid, and the task cannot be completed using a smaller object. Separate historical cross-domain facts from currently effective authority: traceable history does not keep old access rights alive.

Important resource outputs must at least retain the current question, original purpose, goals, facts, evidence, inferences, key causal hypotheses, alternatives, the option of inaction, affected actors, resource costs, unknowns, effects on the three goals, conditions of validity, conditions of invalidity, and conditions for reassessment. Preserving “why this resource judgment holds” matters more than preserving a static recommendation or inventory conclusion.

0.5 Responsibility handoffs with adjacent systems

System/layer	Primary responsibility	Prohibited overreach
Resource Pool	Makes visible resource-capability facts, dependencies, maintenance, redundancy, recovery, and future options	Resource-scheduling sovereignty, creation of use rights, automatic domain transfer

System/layer	Primary responsibility	Prohibited overreach
Shared World	Carries, verifies, expresses, circulates, withdraws, and returns lawfully formed use-right relationships	Changing ownership, acquiring authorization sovereignty, recording candidate relationships as current permissions
Nebula Real-World Coordination Layer	Generates feasible real-world combinations, externalities, execution interfaces, and result conditions under given purposes, constraints, and authorization	Recording feasible plans as decisions/authorization; acquiring default execution sovereignty
Governance V3.0	Structures for legitimate purpose decisions, professional judgment, execution, and independent correction	Pushing responsibilities back into system interfaces
Contribution value	Historical records of real contribution and currently valid relevance	Governance sovereignty, resource balances, personality and meaning scores
Spark	Understanding, explanation, and extension of capability under an actor's authorization	Inducing actors to open resources; treating non-refusal as consent
Nebula	Makes visible overall facts, causality, externalities, plans, and unknowns	Turning overall optimality into individual resource obligations

0.6 Six kinds of drift, anti-manipulation, and systems stepping back

The Resource Pool should help identify drift toward public-domain status, scope drift, visibility drift, professional-sovereignty drift, temporal drift, and interface-power drift, but must not be its own sole auditor. Abnormal states must be able to trigger local freezing, independent review, repair, termination, and genuine return of data, resources, capabilities, and authority.

The Resource Pool must not make changing actors' behavior itself an optimization objective in the name of utilization, sharing rates, civilizational optimality, public need, resource efficiency, or contribution maximization. Greater predictive power entails a greater duty to explain and less permission to manipulate. A truly mature Resource Pool does not control everything. It honestly makes shared capabilities visible without possessing all private domains, and gradually recedes as actors' autonomous capabilities grow.

Chapter 1 Why the Resource Pool Must Return to Real-World Support

1.1 Resource governance is first a question of capability authenticity

Every civilizational capability, including survival guarantees, medicine, industry, education, research, transport, remote Spark services, AGI computing, public services, and even future interstellar capabilities, must be continuously supported by energy, materials, space, equipment, computing, networks, maintenance, personnel, ecological capacity, institutional coordination, and time. If a system can no longer meet the real costs of maintaining a capability, it cannot continue to list that capability as available.

Capabilities cannot be detached from resources; resources cannot be detached from purposes.

1.2 The Resource Pool and Civilization Leap's underlying causal chain

Civilization Leap's fundamental process is “institutions change the real conditions of behavior → sustained behavior → lived experience → habits → internalized default logic of action → intergenerational transmission → a new civilization.” The Resource Pool does not directly shape human behavior, still less force actors to be “more altruistic” through resource control. Its role is to make real resources, capabilities, maintenance responsibilities, reserves, and future options visible, so shared benefit rests on real support rather than imagined supply.

When actors can see, without requisition or personality scoring, that “lawfully accessible shared capabilities exist beyond limited ownership,” and repeatedly experience mutual benefit in Shared World and real collaboration, resource relationships may develop beyond possession alone toward a more mature structure of stable ownership, use rights circulating according to law and agreement, and expanded shared capabilities. The Resource Pool supplies the real foundation for that change, not behavioral commands to actors.

1.3 From the former resource-scheduling system to the resource-capability map

The former Resource Pool text simultaneously handled resource registration, authorization, scheduling, sharing, returns, and exit. As Shared World, the actor-rights foundational layer, and the resource-capability control master text developed, this design produced overlapping responsibilities. V2.0 completely separated “seeing resources” from “being entitled to use them.” The current unified formulation further clarifies that the Resource Pool handles resource-capability facts and real-world support; Shared World carries, verifies, expresses, and circulates lawfully formed use-right relationships; the Nebula Real-World Coordination Layer proposes feasible combinations and consequences; and governance structures bear the corresponding responsibilities for legitimate purpose/rule decisions, professional judgment, execution, and independent correction.

Chapter 2 Formal Definition, Purposes, and Boundaries

2.1 Formal definition

Within Civilization Leap's core operating system, the Resource Pool is the resource-capability map and real-world support layer that continuously makes visible, verifies, and maintains continuity for real resources, resource states, rights/management relationships, supported functions and capabilities, dependency chains, maintenance responsibilities, necessary redundancy, recovery value, whole-life-cycle costs, and future option value.

It may be maintained separately by multiple states, regions, organizations, businesses, public systems, communities, and civilizational subdomains, with mutual recognition through minimum necessary interfaces. It does not require centralizing resources in one database or bringing every resource under unified management.

2.2 Five purposes

Purpose	Question answered	Must not deteriorate into
Capability authenticity	What can we genuinely sustain now?	Treating peaks, model predictions, or book inventory as real capability
Survival and resilience	Which resources, redundancy, and recovery capabilities must not be lost lightly?	Unlimited expansion of authority in the name of “safety”
Real-world accessibility	Which capabilities might different actors access under lawful authorization?	Resource visibility = callable by default
Long-term support	Can maintenance, regeneration, replacement, and future costs be sustained?	Considering only current purchase/operating prices
A shared future	Does today's use preserve future recovery and options?	Freezing all current use in the name of the future

2.3 What the Resource Pool is not

- It is not a pool of resource ownership, nor does it uniformly change property-rights structures.
- It is not a sharing platform or an authorizing or allocating actor. Shared World carries, verifies, expresses, and circulates use-right relationships formed by authorized actors, lawful public rules, or corresponding professional procedures.
- It is not a central scheduling authority. Intelligent systems may propose plans, but the Resource Pool itself does not approve calls upon resources.
- It is not a contribution-value wallet. Resource quantity, price, and scale of ownership do not directly equal contribution.
- It is not an “eliminate all idleness” system. Functional idleness, strategic reserves, and recovery resources may remain underutilized for long periods.
- It is not a single efficiency optimizer. Utilization, turnover, and minimum cost cannot individually become civilization's goal.
- It is not a resource market that makes human time, bodies, and attention freely callable by the system.

Chapter 3 Resource Classification Beyond Whether Resources Can Be Shared

3.1 Classification by actual function and effects on rights

Resource category	Typical content	Resource Pool focus
Basic survival resources	Food, water, basic housing, basic medical care, basic energy, and relief capacity	Safely available quantities, continuity, coverage, recovery; rights logic precedes contribution
Public foundational resources	Roads, networks, schools, public spaces, water supply, power grids, emergency capacity	Capacity, dependencies, accessibility, maintenance, redundancy, public responsibilities
Production and professional resources	Equipment, factories, laboratories, computing, data, professional tools	Professional condition, capability output, maintenance, substitutes, responsibility, safety
Happiness and experience resources	Culture, arts, sports, nature, travel, spaces for interests	Accessibility, diversity, capacity, protection; output is not the sole justification
Strategic and scarce resources	Critical minerals, major computing capacity, special facilities, strategic reserves	Long-term security, substitutability, irreversibility, state/civilizational responsibilities
Recovery and maintenance resources	Spare parts, black-start capacity, repair tools, disaster-recovery data, recovery personnel capabilities	Recovery value usually outweighs short-term utilization
Knowledge/data/information resources	Data, models, standards, knowledge bases, measurement records	Rights, quality, updates, usability, leakage/distortion risks
Natural and ecological support	Water sources, land, ecological capacity, environmental absorptive capacity	Regeneration limits, irreversible harm, intergenerational and future options

3.2 Human capabilities are not inventory resources

Human time, professional skills, caregiving capabilities, creativity, and attention are indeed important parts of real civilizational capabilities. But natural persons are first actors, not resource objects the Resource Pool may schedule freely. It may record what human/professional capabilities a task requires, whether sufficient support exists, and whether overload risks arise. Whether particular actors participate, how authorization is given, and what responsibilities they undertake must be handled through the corresponding actor, contractual, organizational, Shared World, or public-institutional relationships.

Chapter 4 The Resource-Function-Capability-Dependency Map

4.1 Every critical resource must explain what it supports

Resource → function → available capability → effective capability → dependent actors/systems → consequences of failure → alternative paths → minimum sustainable form → recovery conditions.

Simply knowing “how much electricity, computing capacity, or equipment exists” is insufficient for civilizational judgments. The same resource may have very different criticality in different functions; the value of the same equipment may change between ordinary conditions and a crisis. The Resource Pool must develop from an inventory into a resource-capability dependency map.

Object	Apparent state	Real capability significance	Risk of misjudgment
Hospital backup power	Low long-term utilization	Maintains life support and medical continuity during outages	Lending it out or removing it because utilization is low

Object	Apparent state	Real capability significance	Risk of misjudgment
Public data center	High energy consumption	May support medicine, transport, and research, as well as deferrable tasks	Shutting down an entire facility without separating loads
Household energy storage	Low utilization in a private domain	Household emergency response, survival, and autonomous recovery	Default requisition during public-domain shortages
Critical business spare parts	Low inventory turnover	Prevents prolonged production-line stoppages	Cutting inventory to zero for efficiency
Basic science facilities	High investment and uncertain long-term output	Future knowledge, technology, and options	Closure based solely on short-term returns

4.2 Minimum fields for the dependency map

Field	Minimum requirement
Resource inputs	Type, source, normal quantity, minimum quantity, peak quantity, timeliness, alternative sources
Core functions	The specific functions directly supported; no abstract slogans as substitutes
Real capabilities	Which available/effective capabilities can be stably produced
Dependent actors/systems	Who depends on it; whether life, safety, or basic rights are involved
Consequences of failure	Immediate, delayed, cascading, and irreversible consequences
Substitutability	Whether alternatives exist, switching time, extra costs, and capability loss
Minimum sustainable form	Minimum set of functions retained during contraction
Recovery conditions	Resources, equipment, personnel, data, authority, and safety conditions
Responsible actors	Who maintains, verifies, proposes changes, explains, and reviews

Chapter 5 Actors, Rights, Responsibilities, and Resource Facts

5.1 A resource actor is not necessarily its user

Relationship	Question answered	Resource Pool responsibility
Ownership/belonging	To whom does the resource ultimately belong, or who lawfully controls it?	Records facts and their basis without changing ownership
Control/management	Who maintains, operates, safeguards, and manages it day to day?	Records management scope, state, and responsibilities
Use	Who may currently use it under law and agreement?	Records currently effective states; new use rights arise through Shared World/institutions
Returns/benefit	Who receives returns, services, or outcomes?	Records agreements and interfaces for real results
Responsibilities and obligations	Who bears wear, maintenance, accidents, and recovery?	Retains responsibility anchors and fulfillment status

5.2 Resource facts and rights states must be layered

“A resource exists,” “who owns it,” “currently available,” “currently authorizable,” “already committed to a task,” and “may be released in future” are different facts. The Resource Pool must not record a model’s inference of “possibly idle” as “already callable,” or platform visibility as public authorization. Historical facts are retained through append-only records. Current states may be updated with versioning as new facts, maintenance, authorization, faults, or rule changes arise.

5.3 Visibility of private-domain resources is also a rights issue

Private homes, vehicles, energy storage, equipment, data, and operating capabilities do not automatically enter public resource maps because technology can perceive them. The Resource Pool should support graduated visibility: non-indexable/visible only to the actor, existence visible, visible for conditional matching, restricted professional visibility, and public visibility. Rights and authorization determine visibility scope, not the system's “need for more complete data.”

Chapter 6 Resource States, Availability, and Safely Available Quantities

6.1 Resource states cannot be reduced to present or absent

State	Meaning	Automatic inclusion in current allocation?
Present on the books	Asset/inventory records show it exists	No
Technically available	Technical condition permits use	No; rights, responsibilities, and commitments still matter
Safely available	Can be used steadily after deducting obligations, reserves, maintenance, redundancy, and buffers	Possibly, but authorization/allocation is still required
Committed responsibilities	Already bears contractual, public-service, maintenance, or project responsibilities	No, unless released under rules
Functional idleness	Not currently called upon, but serves backup, peak, disaster-recovery, or future needs	No
Strategic retention	Retained for major future risks, research, infrastructure, or options	Protected in principle
Under maintenance/recovery	Under inspection, repair, calibration, or restoration	No
Degraded/unavailable	Affected by faults, quality, safety, or statutory restrictions	No

6.2 Safely available resources

Directional judgment: safely available resources = resources obtainable in reality – committed responsibilities – necessary reserves – maintenance needs – safety redundancy – uncertainty buffers.

This expression is an engineering judgment framework, not a system-wide formula. Electricity, computing, water, hospital beds, critical minerals, space, data, and professional personnel have entirely different physical properties. Each civilizational subdomain should establish its own conventions. The Resource Pool keeps those conventions explainable, traceable, and mappable to real capabilities.

Chapter 7 The Full Life Cycle, Maintenance, Replenishment, and Exit

7.1 Resource life cycle

Discovery/registration → verification of ownership and state → capability mapping → identification of dependencies and criticality → maintenance/replenishment/updating → recording state changes → retirement/recycling/replacement → continuity of history and responsibility.

This life cycle deliberately excludes “authorize use-call upon-return” from the Resource Pool's own main workflow, because those belong to Shared World, contracts, public institutions, or professional systems. The Resource Pool records only the relevant facts and their effects on resource states and capabilities.

7.2 Whole-life-cycle costs

Cost layer	Main content
Direct costs	Purchase, rental, construction, transport, connection
Operating costs	Energy, computing, personnel, logistics, routine services
Maintenance costs	Repairs, spare parts, updating, calibration, data governance, safety
Substitution/opportunity costs	Other uses forgone when resources are occupied
External costs	Ecology, pollution, governance complexity, depletion of relationships and attention
Future costs	Technological lock-in, long-term maintenance liabilities, irrecoverable consumption, reduction of future options

7.3 Maintenance and replenishment are first-class resource activities

Civilizational systems readily reward “new construction” and “additional output” while overlooking maintenance, repair, updating, replenishment, and retirement. The Resource Pool must make maintenance debt and replenishment capability visible. Without maintenance, nominal resources gradually degrade; without replenishment, today's use may merely convert future capabilities into present consumption. The real contributions of maintainers, repairers, and replenishers should enter the contribution-fact interface.

Chapter 8 Resource Value: Current Use, Continuing Regeneration, and Future Options

8.1 Three temporal forms of value

Value type	Core question	Institutional implication
Current use value	What can it solve today?	Supports real use, without implying that higher utilization is always better
Continuing regeneration value	Can it continue to be used, restored, and regenerated?	Maintenance, lifespan, ecology, and replenishment must enter judgments
Future option value	Does retention preserve paths for unknown needs, technologies, and risks?	Allows reserves, redundancy, buffers, and withholding release for now

8.2 No unified total resource score

Procurement costs, lifespan, and energy consumption can be quantified precisely; substitutability, supply risks, and repairability can be compared. Human dignity, long-term ecology, cultural diversity, irreversible harm, and future options often can only serve as directional constraints. V2.0 continues to use the three-layer tool of “precise quantification + comparative judgment + directional baselines,” without permanent unified weights.

8.3 Separate underlying resource value from realized value

The Resource Pool may describe the resource itself and facts about its capability support, such as capacity, condition, lifespan, location, scarcity, substitutability, and maintenance requirements. The value realized through a specific use must instead be made visible jointly through context, use, results, and time. Realized value is not a fixed attribute conferred by the Resource Pool before use, still less something directly equivalent to contribution value.

Chapter 9 Redundancy, Reserves, Idleness, and Retention

9.1 Four easily confused states of low utilization

Type	Definition	Treatment
Ineffective idleness	No actual use, explicit future need, safety function, or reasonable retention purpose	May become a candidate for further Shared World matching, but authorization is still required
Functional idleness	Not currently called upon, but serves backup, peak, safety, maintenance, or future needs	Must not be released merely because utilization is low
Strategic retention	Retained for major risks, research, infrastructure, or state/civilizational options	Reviewed periodically, but not removed for short-term efficiency
Committed responsibilities	Not currently operating, but already bears contractual, public-service, maintenance, or recovery obligations	Must not be released without rearrangement by an authorized actor

Idleness creates no obligation to share. Only authorizable use capability constitutes potential Shared World supply.

9.2 Necessary redundancy is not waste

Hospital backup power, disaster-recovery networks, black-start equipment, critical spare parts, safety stocks, and local autonomous capabilities often see little use in ordinary times. If they provide emergency response, peak capacity, recovery, or safety buffers, they are part of real capability. Civilization cannot eliminate tomorrow's recovery and options to improve today's utilization.

Chapter 10 Resource-Capability Consistency and Capability Authenticity

10.1 Four layers of capability

Capability layer	Definition	Typical misjudgment
Nominal capability	Capability claimed by parameters, peaks, designs, or models	Treating laboratory/peak conditions as normal
Available capability	Can be called upon steadily, safely, and sustainably under real conditions	Ignoring maintenance, personnel, supply chains, and failure rates
Effective capability	Actually solves real problems and produces verifiable results	More output without improvement in the problem
Civilizational capability	Increases survival, happiness, actors' capabilities, collaboration, resilience, knowledge, and future options	Equating expansion of scale or technical displays with civilizational progress

10.2 Six resource-capability questions

1. What real resources must be consumed?
2. What real capabilities did these resources originally support?
3. What additional available, effective, or civilizational capabilities will result?
4. Is there an alternative path with lower resource costs and similar capabilities?
5. Does this consume necessary redundancy, ecological capacity, recovery capability, or the space for future options?
6. If operation continues for ten years, will this resource-capability relationship still hold?

10.3 Human agency is also a condition of real-world support

A plan that saves material resources but continuously consumes people's attention, judgment, time, privacy, autonomy, and relationships, making actors increasingly dependent on the system, cannot simply be regarded as successful resource optimization. Human time and attention may be made visible as costs, but actors themselves do not enter the Resource Pool's list of resources at its disposal.

Chapter 11 R0–R5 States, Minimum Civilizational Capabilities, and Orderly Contraction

11.1 R0–R5 resource-capability states

State	Meaning	Resource Pool's first action	Does not mean
R0 Normal	Safe margins exist	Maintain the map, redundancy, and stress observation	Unlimited expansion is allowed
R1 Warning	Margins or trends deteriorate	Increase monitoring, stop nonessential expansion, prepare alternatives	Automatically reclaiming private resources
R2 Constrained	Safety redundancy begins to come under pressure	Mark affected capabilities and maintenance/recovery risks	Reducing basic rights
R3 Load reduction / suspension	Not all capabilities can be maintained	Supply factual grounds for degradation/suspension by criticality	The Resource Pool decides who stops
R4 Core preservation	Minimum safe capabilities are threatened	Make visible minimum civilizational capabilities, recovery resources, and emergency dependencies	Unlimited emergency powers
R5 Failure / evacuation	Core capabilities cannot be safely maintained	Record orderly shutdown, transfer, substitution, and restart conditions	Historical responsibility disappears

11.2 Minimum civilizational capability units

A minimum civilizational capability unit is the smallest set of functions that should be retained as far as possible during severe resource contraction, together with its necessary resources, identities and authority, data recovery, human takeover, responsibility chain, and restart conditions.

Minimum civilizational capabilities are not a unified “minimum service package.” Medicine, electricity, cities, businesses, research, Spark, and different subdomains must define them separately according to actual functions. The common layer requires only that each critical system answer in advance: How will it survive after shrinking, how will recovery be preserved, and which rights cannot be degraded along with it?

11.3 Orderly contraction

Contraction should first reduce loads that are substitutable, deferrable, low in marginal real capability, resource-intensive, and easy to restore, while protecting basic survival, actors' rights, critical foundational capabilities, necessary redundancy, recovery capability, and future options. Closure is not the first action: first stop new expansion, then degrade, defer, substitute, reduce loads locally, or suspend. Close or evacuate only when safe maintenance is impossible.

Chapter 12 Recovery, Restart, and Resource Resilience

12.1 Recovery is not simply switching on when resources return

After prolonged shutdown or resource stress, equipment, personnel, data, dependency chains, maintenance states, authorization, and safety conditions may have changed. Restart requires renewed verification of real-world support. Restoring recovery capability itself should take priority over restoring noncritical services.

12.2 Five restart conditions

1. Safely available resources meet recovery conditions above the entry threshold and continue to meet them throughout the observation period.
2. Upstream dependencies have recovered, without shifting pressure onto systems still at high risk.
3. Necessary maintenance, spare parts, personnel, data, and safety checks are in place or complete.
4. Temporary emergency authority has been reviewed, and unnecessary authority withdrawn.
5. Necessary redundancy remains after restart; the system must not immediately return to full load as soon as resources recover.

12.3 Resource resilience does not mean more inventory is always better

Resilience comes from diverse sources, alternative paths, maintenance capability, recovery speed, distributed nodes, local autonomy, necessary reserves, and transparent responsibility, rather than simply piling up inventory. The Resource Pool should make “can it recover?” as visible as “how much is there now?”

Chapter 13 Boundaries with Shared World, the Nebula Real-World Coordination Layer, and Governance

13.1 The three layers' responsibilities must remain separate over the long term

Object	Unified role	May do	Must not do
Resource Pool	Resource-capability map and support layer	Register, verify, and make states / dependencies / redundancy / recovery visible	Transfer use rights itself; aim to maximize utilization
Shared World	Layer of lawfully formed use-right relationships	Carry, verify, express, and circulate use-right relationships; record conditions, responsibility, withdrawal, return, and closure	Change ownership; authorize/allocate on its own; treat candidate relationships as current permissions
Nebula Real-World Coordination Layer	Coordination layer for real-world plans, externalities, and results	Match, forecast, combine, generate alternatives/inaction options; connect execution interfaces after authorization	Automatically turn plans into decisions, use rights, or execution sovereignty
Governance/authorized actors	Legitimate purpose/rule decisions, professional judgment, execution, and corresponding sources of authorization	Form decisions, professional judgments, and explicit authorization; designate executors and bear corresponding responsibilities	Replace legitimacy with CV, efficiency, or model optimality alone
Independent correction layer	Correction and termination structures spanning the three powers	Obtain necessary evidence; supervise, audit, hear appeals, review, break circuits, repair, and terminate	Be monopolized by the Resource Pool, platform, or audited executor

13.2 How candidate resource facts enter the three-layer interfaces

The Resource Pool may record authorizability conditions, time windows, capacity, restrictions, domain states, dependencies, risks, and unknowns declared in advance by resource controllers or lawful rules. These constitute only a “candidate resource-fact interface.” Its outputs are feasibility judgments, facts needed for plan comparisons, needs for professional judgment, and decisions and authorizations still to be obtained. It creates no current permission and must not call upon, occupy, or automatically move resources across domains.

13.2.1 Feedback of effective use-right states

Once authorized actors, lawful public rules, or corresponding professional procedures have formed lawful decisions and explicit authorization, Shared World carries and verifies the currently effective use-right relationships. It feeds back to the Resource Pool current states relevant to resource facts: committed scope, actual occupation, responsibility, withdrawal, return, repair, and closure. The Resource Pool updates states and capabilities accordingly, but acquires neither authority to interpret authorization nor a continuing right to call upon resources.

Authorizable $\neq$ authorized; authorized $\neq$ executed; historical authorization $\neq$ current authority. The Resource Pool preserves only the traceable factual handoffs among these states.

13.3 A crisis does not turn the Resource Pool into a requisition system

During resource stress and crises, the Resource Pool may make private- and public-domain resource facts, dependencies, and alternative paths visible. But “seeing” does not mean “being entitled to call upon.” Lawful emergency mechanisms may change procedures and time limits, but must have a source, proportionality, duration, compensation/repair, audit, and automatic expiry.

13.4 Handoffs among the three powers and independent correction

The Resource Pool supplies the facts needed separately for purpose/rule decisions, professional judgment, and execution. The legitimacy and responsibility of each must be independently established. Specific executors must be determined by lawful decisions and explicit authorization. The Nebula Real-World Coordination Layer may connect tasks and interfaces only after authorization. Major resource decisions must also retain entry points for supervision, audit, appeal, review, circuit breaking, repair, and termination. Resource Pool operators must not control the sole interpretation of facts, sole logs, or sole power to stop.

Chapter 14 Interfaces with Contribution Value, Dream Garden, Spark, Nebula, and Conditions for Happiness

14.1 Contribution-value interface

The Resource Pool supplies verifiable facts to contribution value: who supplied or maintained which resources, the actual input, responsibilities undertaken, whether resources actually entered use, the capabilities and results produced, and any subsequent maintenance or externalities. Contribution value confirms contributions retrospectively. The Resource Pool does not directly calculate “more resources means greater contribution.”

Possessing resources is not contribution; registering resources is not contribution; high resource input does not automatically produce high contribution.

14.2 Dream Garden and conditions for happiness

Dream Garden identifies the resource/capability conditions required for specific wishes; the conditions-for-happiness layer identifies requirements for accessibility in life, diversity, and low barriers. The Resource Pool supplies real support and constraints. It does not alter resource facts because wishes are moving, meaning is profound, or users are articulate. Wishes cannot create resources, and resources cannot define happiness on an actor's behalf.

14.3 Spark

Spark may help actors understand what their plans consume, what they may depend on, what alternatives exist, and how their own future and shared resources may be affected. Understanding an actor better gives Spark no right to authorize resources automatically. Nor may it use public shortage or contribution as a reason to push actors to relinquish resources.

14.4 Nebula

Nebula may make resource-capability relationships across actors, subdomains, and time scales visible as a whole, revealing how local resource use affects other systems and the future. It may project the consequences of “preserving A and reducing B,” but overall optimality has no inherent legitimacy to dominate individuals or subdomains.

Chapter 15 Development Stages, Environmental Phases, and Task Process States

15.1 Development stages

Stage	Resource Pool form	Focus
Launch	Connect existing assets, public catalogs, ERP, facilities, and resource ledgers; establish minimum resource-capability mapping	Reliable facts, little power, strong reversibility; no pursuit of comprehensive connection
Expansion	Gradual mutual recognition of resource semantics across organizations, regions, and systems	Interface consistency, dependency maps, maintenance, and state migration
Transformation	New and old resource governance, ownership/use relationships, and public institutions operate on parallel tracks	Continuity of rights, long-term responsibilities, version migration, and stability of both tracks
Stable	Multi-node resource-capability maps become normal infrastructure, with stronger automatic sensing and prediction	Resilience, generations, systems stepping back, long-term evolution

15.2 Environmental phases

Environmental phase	Resource Pool focus
Normal	Maintain maps, states, maintenance debts, and long-term resource trends with little disturbance
Construction	Make new inputs, construction resources, long-term maintenance, and exit costs visible
Exploration	Strengthen distinctions among unknowns, failure, resource intensity, and future value
Resource stress	Improve visibility of safely available quantities, dependencies, redundancy, alternatives, and load reduction
Crisis	Minimum civilizational capabilities, recovery resources, emergency dependencies, and authority boundaries
Recovery	Restore redundancy, maintenance, normal authorization, and space for future options

15.3 Task process states

“Silent, sensing, aggregation, execution, checking, contraction,” and similar terms in earlier Resource Pool texts are no longer called environmental phases; they are uniformly mapped to task process states. Across process states, the Resource Pool mainly updates facts, states, dependencies, maintenance, and consequences. Use agreements and real-world calls upon resources are handled through Shared World, professional systems, or governance processes.

Chapter 16 Early Operating Models for Particular Times, Places, and Initiating Actors

16.1 The principle of generating designs from real circumstances

Every early Resource Pool form should arise from a particular time, place, initiating actor, set of real problems, and existing institutional capabilities. It should not be a uniformly scaled-down version of the complete future Resource Pool.

Common principles can be unified; real applications cannot. Early Resource Pools first connect existing ledgers, ERP, infrastructure, equipment management, supply chains, maintenance systems, and public resource catalogs. They prioritize the actual actor's real problems of capability authenticity, maintenance, shortage, duplicate construction, recovery, and future options. Modules with no practical need retain interfaces only; they are not deployed simultaneously for “system completeness.”

16.2 Launch by a state actor

States first bear responsibilities for survival, security, public services, industrial development, regional coordination, and institutional continuity. Early state Resource Pools should fit national conditions and existing institutions. They should connect existing infrastructure, energy, food, water, medicine, transport, industry, strategic reserves, disaster response, and public-service systems. The focus is an interdepartmental resource-capability map and dependency graph, rather than a new centralized ownership or unified scheduling system covering every resource.

State launch focus	Early Resource Pool task
Basic survival and public responsibilities	Make minimum capabilities, safety margins, critical dependencies, and recovery resources visible
National security and strategic capabilities	Distinguish strategic retention, critical supply chains, substitutes, and irreversible risks
Industrial and regional development	Identify duplicate construction, capability gaps, upstream single points of failure, and regional complementarity
Institutional and statutory boundaries	Preserve sources of departmental/regional/actor authority; the Resource Pool supplies facts without overreach
Gradual evolution	Build interfaces around several high-value real problems, then gradually expand semantics and capabilities without a one-size-fits-all approach

16.3 Launch by a business actor

Businesses must begin with operations, customer value, core competitiveness, supply chains, asset efficiency, costs, risks, organizational capability, and long-term commercial sustainability. An early enterprise Resource Pool may build a resource-capability map around equipment, inventory, space, computing, data, suppliers, production capacity, repairs, service hours, and key personnel workloads. This helps identify real bottlenecks, maintenance debts, supply risks, and scalable capabilities.

Civilization Leap's ideas do not require businesses to disclose core assets or operating data, or to share externally. Entry into Shared World depends on the enterprise's contracts, commercial interests, risks, and authorization. Civilization's underlying logic gradually becomes visible through “real mutual benefit and expanded capability,” rather than requiring enterprises to sacrifice competitiveness first.

Business launch question	What the Resource Pool should answer
Business development	Which resources genuinely generate income, customer value, and long-term capability?
Core competitiveness	Which capabilities must be retained, maintained, and deepened over the long term rather than dismantled for short-term utilization?
Costs and efficiency	What is truly inefficient, and what is necessary redundancy, peak capacity, or service assurance?

Business launch question	What the Resource Pool should answer
Supply-chain risks	What are the critical single points of failure, alternative sources, recovery times, and inventory safety conditions?
Asset and capability expansion	Which capabilities can be obtained through lawful external networks rather than fully owned?
Organizational workload	Have human time, professional maintenance, and attention become hidden bottlenecks?

16.4 Cities, communities, research institutions, and other actors

Cities may start with maps of public-service and critical infrastructure capabilities; communities with public spaces, care, emergencies, and shared facilities; research institutions with experimental equipment, data, computing, samples, long-term maintenance, and failure costs; nonprofits with service capacity, supplies, channels, and beneficiary protection. The common approach is to solve real problems first and gradually form interfaces, rather than require every actor to replicate the same Resource Pool form.

16.5 Gradual capability activation U0-U4

State	Resource Pool meaning
U0 Reserved interfaces	Define resource/capability semantics and future interfaces without connecting real data
U1 Observation/assistance	Local registration, human verification, analysis and risk alerts only
U2 Limited real operation	Some resource states and capability mappings inform real decisions
U3 Cross-system coordination	Limited interconnection with Shared World, ERP, contribution value, Nebula, and others
U4 Stable normal operation	Becomes long-term multi-node infrastructure capable of autonomous maintenance, load reduction, and recovery

Chapter 17 Data, Visibility, Audit, and Anti-Monopoly

17.1 Minimum necessary data

The Resource Pool does not follow “the more complete the data, the better.” Resource facts should be minimized according to use. Resource existence and capability information can be separated from sensitive business data, private locations, complete transaction records, and personal relationship data. Cross-system sharing provides the necessary facts for resource-capability judgments, rather than copying raw data without boundaries.

17.2 Preventing de facto platform sovereignty

- Data monopoly: only one platform knows the “real resources,” and external parties cannot audit it.
- Interface monopoly: after registration, resources can be used or withdrawn only through that same platform.
- Semantic monopoly: the platform defines “available/idle/critical” for itself and thereby gains de facto power.
- Scheduling monopoly: the Resource Pool directly obtains allocation authority because it holds information.
- Exit lock-in: after an actor exits, resource facts, rights, and history cannot migrate.

A mature Resource Pool should be distributed, multi-node, interoperable, and portable. What is unified is minimum semantics, evidence, and boundaries, not every database, organization, and institution.

17.3 Six kinds of cross-domain drift and independent audit

The Resource Pool should monitor drift toward public-domain status, scope drift, visibility drift, professional-sovereignty drift, temporal drift, and interface-power drift. Monitoring provides only grounds for reassessment, freezing, or review, not automatic authority. The Resource Pool cannot be its own sole auditor. Cross-system audit must obtain the minimum necessary evidence and be subject to the same domain boundaries.

Chapter 18 Negative Feedback Loops, Circuit Breaking, and Taking Responsibility for Failure

18.1 The Resource Pool must be able to admit it saw things incorrectly

Resource states may be outdated, dependency graphs incomplete, models may overestimate substitutability, and maintenance records may be distorted. A mature Resource Pool must first make deviations visible, contestable, and correctable, rather than preserve the illusion of authoritative “unified resource truth.”

Anomaly/conflict → local freezing of relevant states or recommendations → evidence preservation → renewed verification → explanation of impacts and responsibilities → correction of states/dependencies → necessary repair → version update → recovery or long-term retention of the dispute.

18.2 Typical circuit-breaking signals

Signal	Problem	Direction of response
Utilization rises while redundancy keeps disappearing	Local efficiency erodes recovery capability	Stop further compression and restore safety redundancy
Resources decline but capability claims remain unchanged	Nominal capability is detached from real-world support	Require reassessment of capability states
Resource Pool visibility keeps turning into call permissions	The fact layer drifts into a power layer	Break the automatic chain and return to authorization/governance
Maintenance debt keeps rising	Present capability comes at the cost of future failures	Increase maintenance/replacement priority
Basic resources are ranked by CV or wealth	Resource Pool governance becomes monetized	Immediately remove the relevant weights and review
Emergency ends but resource/data permissions are not withdrawn	Temporary control becomes normal	Trigger expiry, revocation, and audit
Private-domain resources are repeatedly flagged red for “low utilization”	The Resource Pool creates implicit requisition pressure	Restore private-domain visibility/authorization boundaries

18.3 Differentiated feedback of three-layer results

A result occurs only once in reality but must be incorporated separately according to different ontologies, preventing any one layer from holding all interpretive authority. The Resource Pool updates states, actual capabilities, consumption, maintenance, dependencies, redundancy, recovery, and future options. Shared World updates use-right states, actual use, fulfillment of responsibilities, withdrawal, return, repair, and relationship closure. The Nebula Real-World Coordination Layer updates causal models, plan effectiveness, deviations, externalities, invalidity conditions, and reassessment conditions. Governance/independent correction updates decision review, responsibility, repair of harm, suspension, termination, or reauthorization.

18.4 Unified nine-step correction chain

Make anomalies, conflicts, or harm visible → locally freeze relevant interfaces → preserve minimum evidence and versions → notify the relevant responsible parties → independent review → return or reduce resources/data/capabilities/authority → repair and trace responsibility → update state, rule, and model versions → reauthorize, restore in stages, or terminate permanently. The Resource Pool may issue warnings and supply evidence, but cannot monopolize any step.

Chapter 19 Success Criteria, Prohibited Proxy Metrics, and Systems Stepping Back

19.1 Resource Pool success does not mean using more resources

Correct criterion	Incorrect proxy metric
Greater capability authenticity: the gap between nominal and real capabilities narrows	Maximum registered inventory
Critical dependencies, single points of failure, and maintenance debts are found earlier	The higher the resource utilization, the better
Necessary redundancy and recovery capabilities are protected	The lower the idle rate, the better
Orderly degradation and recovery are possible when resources decline	Maximum service volume at full load
Actors' rights, private domains, and authorization remain protected under resource stress	Maximum sharing rate and external call count
Long-term resource costs and future options become more visible	Minimum short-term cost
Different actors can coordinate through common semantics while retaining autonomy	All resources enter one platform

19.2 Final check against Civilization Leap's underlying purpose

The Resource Pool must not turn “shared benefit” into coercion through resource control. It should gradually create a more truthful resource experience: actors know what they truly own and depend on, which resources must be maintained jointly, that shared capabilities accessible under law and agreement may exist beyond limited ownership, and that sharing and calls upon resources must respect boundaries. Only when this experience is repeated over the long term with Shared World, contribution value, Spark, and real collaboration can a new understanding of resources become habitual and enter civilization's default logic.

The more mature the Resource Pool becomes, the less it needs to prove success by having “all resources handed over to the system.” It should become quiet, trustworthy, auditable infrastructure for real-world support.

Chapter 20 Current Engineering Status, Version Governance, and Subsequent Incorporation

20.1 Matters not entered into at present

- No specific inventory thresholds, R-state percentages, or recovery windows are frozen.

- No real institutional onboarding, pilot population, duration, or implementation plans are designed.
- No procurement, rental, compensation, sharing prices, or CV parameters are prescribed.
- State, business, and private resources are not brought into one unified central ledger.
- No AGI automatic scheduling authority or resource-sacrifice algorithm is assumed.
- The restructuring of responsibilities in this text does not trigger a complete rewrite of all older texts at once.

20.2 Current Continuity-Control Status of V2.2-R2

Object	First-round incorporation focus
Resource Pool V2.2 (R2 main track; I1 parallel)	Current professional semantic baseline for the Resource Pool; R2 handles continuity control and overarching T-10 eligibility/rights boundaries, while I1 handles parallel three-layer interfaces. Neither changes the V2.2 professional ontology
Shared World V1.2	Forms the current paired interface with this text: the Resource Pool supplies candidate resource facts; Shared World carries, verifies, expresses, and circulates lawfully formed use-right relationships
Nebula Real-World Coordination Layer V1.4	Current Real-World Coordination Layer baseline; effective use-right inputs, specific executor responsibility, three-layer result synchronization, and unified correction interfaces have been completed
Contribution Value V1.8.2	Receives only facts of actual resource inputs, maintenance, repair, and results; does not equate resource input with CV or governance authority
Nebula General Framework V1.3 (R1)	Current overarching Nebula framework; R1 has unified the three-layer interface references to V2.2 / V1.2 / V1.4
Dream Garden/happiness special project	Uses Resource Pool facts without rewriting resource constraints according to the intensity of wishes
State/business and other application plans	Generate different early Resource Pool forms according to initiating actors, particular times and places, and U0-U4
Governance V3.0	Legitimate purpose decisions, professional judgment, execution, and independent correction; does not push governance authority into resource interfaces
Domain Specification V1.0	Unifies domain states, minimum necessary cross-domain action, reauthorization, return of authority, and six kinds of drift

20.3 The Single Next Handoff

Record of completed historical handoff: The task of bringing V2.2-R1, Shared World V1.2-R1, Nebula Real-World Coordination Layer V1.4, and Nebula General Framework V1.3-R1 into the third continuity audit has been completed. The sole current handoff is controlled by WP5-BATCH-C / C1-R1: freeze permanent asset ID P05-RESOURCE-003, convert P05-RESOURCE-001 to historical archive status, and migrate P05-RESOURCE-002 to a historical alias of P06-NEBULA-002. Closed tasks must not be revived from this text's historical "next handoff."

Appendix A Minimum Fields for Resource Records

Field group	Minimum fields
Resource identity	Resource ID/type/location or logical domain/source/version
Actors and rights	Owner or controller, manager, affected actors, visibility scope
Physical/technical state	Capacity, quality, lifespan, faults, maintenance, restrictions
Capability mapping	Supported functions, available capability, effective capability, dependencies
Responsibilities and commitments	Tasks undertaken, contractual/public responsibilities, maintenance responsibilities, conditions prohibiting release
Redundancy and recovery	Necessary reserves, recovery value, alternatives, black-start/recovery conditions
Temporal value	Current use, continuing regeneration, future options
Facts and evidence	Source, verification, time, disputes, uncertainty, version

Field group	Minimum fields
Sharing interface	Whether entry into candidate matching is allowed, conditions, time window, capacity; recorded only as declared facts
State	R0-R5 or professional state, reasons for change, recovery threshold

Appendix B Resource-Capability Mapping Template

Item	Entry
Resource/resource group	—
Core functions	—
Currently available capability	—
Actual beneficiaries/dependent actors	—
Upstream dependencies	—
Downstream dependencies	—
Necessary redundancy/reserves	—
Alternatives and switching time	—
Consequences of failure	—
Minimum sustainable form	—
Recovery resources and conditions	—
Future option value	—
Responsible actors	—

Appendix C Twelve Questions on Dependencies, Redundancy, and Future Options

1. What actual function does this resource support, rather than “what is it usually used for”?
2. Which actors, systems, or subdomains currently depend on it?
3. How soon after stoppage will consequences appear, and which are irreversible?
4. Is an alternative available, how long would substitution take, and how much capability would be lost?
5. Is current low utilization ineffective idleness, or does it serve backup, peak, safety, maintenance, or future needs?
6. Which resources are already committed by contracts, public responsibilities, maintenance, or recovery tasks?
7. What maintenance, personnel, and supply chains are needed to sustain the resource itself?
8. Is it necessary for other systems' recovery, repair, or black start?
9. Will current use substantially shorten lifespan, reduce ecological capacity, or create long-term maintenance debt?
10. Will closure foreclose important technological, knowledge, industrial, regional, or intergenerational options?
11. Should changes in resources bring corresponding changes to publicly claimed capabilities?
12. Who may change the resource state, who may contest it, and who is responsible for correcting errors?

Appendix D Resource Pool Adaptation Worksheet for Different Initiating Actors

Dimension	State actor	Business actor	Cities/communities and others
Real starting point	Public responsibilities, institutions, national conditions, strategy, infrastructure	Operations, customers, competitiveness, assets, supply chains	Public services, shared life, or professional mission
Priority resources	Survival, energy, food, water, medicine, transport, industry, strategic reserves	Equipment, inventory, space, computing, data, production capacity, suppliers, maintenance	Public spaces, service capacity, emergency response, professional facilities, etc.
Early purposes	Capability authenticity, national resilience, interdepartmental dependencies	Business capability, risks, costs, maintenance, expansion	Accessibility, continuity, shared capabilities
Boundaries	Statutory authority, regional/departmental responsibility, national security	Trade secrets, property rights, contracts, employee/customer rights	Local rules, member exit, public fairness
Shared World interface	According to law and rules, across actors/regions when necessary	Only where genuine commercial/contractual benefit exists	Voluntary authorization or public rules
Gradual approach	Local high-value problems → cross-domain semantics → long-term map	Inside enterprise → supply chain → external capability network	Project/community → wider network

Appendix E Resource Pool and Shared World Boundary Checklist

Does the Resource Pool only record and verify use-right and resource-state facts, without itself creating, interpreting, or extending effective use rights?

Is “authorizable” explicitly only a candidate declaration/rule condition, recorded separately from “authorized/currently effective”?

After a need appears, must authorized actors, lawful public rules, or corresponding professional procedures still form decisions and authorization, with Shared World then carrying the effective relationship?

Does the Resource Pool mistakenly record a “combination plan generated by the Nebula Real-World Coordination Layer” as a “scheduling decision” or “current permission”?

Are authorization, responsibility, and exit reconfirmed when crossing private domains, public domains, or subdomains?

Is there an implicit rule of “low utilization means sharing by default”?

After an actor withdraws sharing authorization, does the Resource Pool promptly update the current state without creating negative labels?

Could sharing algorithms mistakenly capture functional idleness, strategic retention, or committed responsibilities?

Appendix F V1.1 to V2.0 Incorporation Checklist

Original area	Treatment
Role and definition	Replace “mechanism for restructuring use relationships” with “resource-capability map and real-world support layer”
Resource classification	Retain and add support categories such as recovery/maintenance and ecology/nature; stop using “idleness and sharing” as the main classification

Original area	Treatment
Rights structure	Retain separation of ownership/management/use/returns/responsibility, but clarify that the Resource Pool only records and does not transfer rights
Resource acquisition	Change to resource formation/connection/registration and the full life cycle; no responsibility for sharing authorization
Entry, entrustment, and exit	Split responsibilities: resource registration/state exit stay with the Resource Pool; use-right authorization/return move to Shared World
Management and optimization	Rewrite around states, maintenance, capabilities, dependencies, redundancy, and recovery; remove utilization-centered logic
Use and scheduling	Reduce to cross-system interfaces; the Resource Pool supplies facts and constraints without allocation authority
Incentives and benefit distribution	Transfer sharing incentives to Shared World/contracts; the Resource Pool only makes maintenance, replenishment, and real results visible
Stages and phases	Change to development stage + environmental phase + task process state
Pilots and validation	Defer to future unified comprehensive experiments; this edition generates no real-world action
Overall cost-effectiveness	Retain and upgrade to a three-layer whole-life-cycle resource-capability judgment tool
Risk defense	Include R0-R5, minimum civilizational capabilities, orderly contraction, recovery, and anti-monopoly

Appendix G V2.0 to V2.1 Governance and Domain Interface Incorporation Checklist

Historical record

Treatment category	V2.1 treatment	Effect
Retain in full	V2.0's main content on resource-capability mapping, maintenance and redundancy, recovery, future options, R states, and application adaptation	Remains effective
Correct	Higher-level versions, governance legitimacy, domain semantics, contribution-value interfaces, and outdated handoff sequences	V2.1 governs
Add	Chapter 0; G0/G1-G10 interfaces; D0/D1-D12 interfaces; nine-layer records; six kinds of drift; independent correction	Formally frozen
Retire	Resource visibility as permission to call; model optimality as decision; Resource Pool self-authorization, self-audit, or automatic domain transfer	No reversion allowed
Continue deferral	Inventory thresholds, scheduling proportions, prices, durations, CV parameters, pilot scale, and automation intensity	Derived after actors are determined

Appendix H V2.1 to V2.2 Controlled Three-Layer Interface Incorporation and Naming Consistency Checklist

Control item	V2.2 frozen formulation	Resource Pool responsibility	Prohibited Resource Pool responsibility
Official name	Third layer uniformly named “Nebula Real-World Coordination Layer / Real-World Coordination Layer”	Use unified interface names	Treat traditional ERP as a civilizational theoretical prototype
Candidate interface	Authorizability conditions are candidate facts only, not current permission	Supply resource facts, domain states, dependencies, risks, and unknowns	Generate call rights, occupation rights, or cross-domain permissions
Effective interface	Following lawful decision + explicit authorization, Shared World carries effective use-right relationships	Receive factual updates on commitments, occupation, return, repair, and similar matters	Interpret authorization sovereignty or renew on its own
Execution responsibility	Specific executors are responsible; the Real-World Coordination Layer connects interfaces only after authorization	Record resource states and results	Become executor or approver
Result feedback	Update resources/use rights/causal plans/governance responsibilities separately	Update resource states, capabilities, maintenance, redundancy, and recovery	Overwrite other layers' historical and authority facts
Independent correction	Nine-step correction chain; no layer may monopolize its own audit	Warn, preserve minimum evidence, implement necessary state freezing	Monopolize evidence, rule interpretation, and termination entry points

H.1 Three gates

The fact gate verifies currency, evidence, purpose relevance, domain state, dependencies, and unknowns. Passing it permits entry only into planning and professional judgment. The rights gate verifies authorized actors/lawful public rules/professional procedures and currently effective scope. Passing it permits only formation or verification of effective use-right relationships. The execution gate verifies professional conditions, lawful decisions, explicit authorization, current resource states, and stopping/return/correction arrangements. Only after passing it may an identified executor act within scope. The three gates are not a unified score, weighting formula, or automatic threshold.

H.2 Current and Historical Versions

V2.2 remains the Resource Pool's professional semantic baseline. R1 is the historical controlled continuity revision of interfaces and version relationships; R2 is the current continuity-control master text, adding T-10 eligibility, rights, scarcity, responsibility, appeal, and exit boundaries; I1 is the parallel three-layer interface track. The original V2.2, V2.1, V2.0, and earlier versions are retained as version history and must not be silently overwritten. Where the old terms “intelligent ERP / intelligent coordination layer” appear in historical explanations, they serve only as version evidence. Current interfaces uniformly use “Nebula Real-World Coordination Layer / Real-World Coordination Layer.”

H.3 Controlled Continuity Revisions in R1 and R2

R1 completed three version-continuity revisions: updating third-layer references, confirming the current V1.4 interface, and unifying the next audit entry point. R2 adds the T-10 boundaries for separating eligibility and rights, the precedence of basic rights over contributions, challengeable scarcity allocation, AGI's lack of resource sovereignty, anchored responsibility, appeals, and exit. R2 does not change the Resource Pool's facts-layer ontology, candidate interfaces, mechanisms for forming rights, result feedback, correction rules, or real-world parameters.

Conclusion Real Resources Make Civilizational Capabilities Real

Civilization Leap cannot only design “how things should operate.” It must also know “how much the real world can actually support.” If resources, maintenance, redundancy, recovery, and future costs remain invisible, even the most advanced institutions and AGI may rest on overconsumption. If resource visibility is mistakenly recorded as a public right to call upon resources, actors and private domains will be eroded in the name of efficiency.

The Resource Pool is therefore not civilization's central warehouse, but an honest map of civilization's encounter with reality. It lets us know which capabilities truly exist and which are nominal; which resources may enter wider shared networks under lawful authorization and which must be quietly retained; which present uses enrich the future and which consume recovery and options.

The mark of a truly mature Resource Pool is not that it controls every resource. It is that civilization can accurately understand its real capabilities, dependencies, boundaries, resilience, and future without possessing every resource.

Reading Guide and Personalized Further Reading

P05-RESOURCE-003 | V2.2-R2 | Professional conceptual master text on bringing contribution value into resource provision

This Manuscript's Role in the System

Explains how facts about contributions from different sources enter resource provision and inform judgments together with resource and capability facts, ownership and control relationships, needs, scarcity, responsibility, maintenance, redundancy, and future options.

Special Note: Mainstream Social Behavior Is Not Excluded

Contribution value is not reserved for unpaid, inconspicuous, positionless, or powerless activity. It is not against markets, wealth, positions, or power. Market activity, professional work, earning income, public communication, holding office, organizational management, and responsible exercises of power during launch and transition may also create genuine contributions that can be recorded. What matters is actual value, responsibility, results, harm reduction, maintenance of shared systems, and long-term externalities. Making money, fame, office, and power are neither automatic proof of contribution nor grounds for exclusion.

Current Boundaries

Genuine contributions made through earning money, holding positions, social influence, or exercising power may also serve as limited inputs, but cannot automatically generate rights to use resources.

Continue Reading

Return to the foundation of value | Contribution-Value System White Paper

<https://www.civitas.top/en/documents/p05-cv-001/>

Toward the parallel interface track | V2.2-I1 Three-Layer Interface Supplement

<https://www.civitas.top/en/documents/p05-resource-003/>

Toward legitimate decisions | Framework of Civilizational Decision Principles: A Constitution Separating Three Powers

<https://www.civitas.top/en/documents/p05-three-001/>

Toward real-world settings | Nebula Launch Edition: General Framework

<https://www.civitas.top/en/documents/p06-nebula-001/>

Contributions differ in magnitude, not in admissibility by source. Record real value, responsibility, and consequences without prejudging by labels of wealth, fame, office, or power.