CELESTRA

Space Economy Services Network · Protocol & Economic Model Design White Paper

Bringing Space-Based Capabilities into Everyday Economic Productivity

Token Name	CELESTRA Token
Token Symbol	CELA
Maximum Supply	1,000,000,000 CELA
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This document describes the project's protocol and economic model.
It does not constitute investment advice or a promise of returns.

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01 Executive Summary

The space economy is turning the capabilities of space infrastructure into productive tools for industries on Earth. Satellites provide observational data, communications networks connect remote areas, and positioning and timing systems support the operation of billions of devices. What businesses actually pay for are the results these capabilities deliver: more timely information, broader coverage, more efficient analysis, and standardized services that can be embedded in business workflows.

Yet a complex delivery chain still separates space resources from business outcomes: resource discovery, data authorization, task decomposition, algorithmic processing, quality verification, and settlement among multiple parties. CELESTRA is being built as a distributed collaboration network for this delivery chain.

CELESTRA connects data providers, computing service providers, algorithm developers, and industry service organizations through a unified order system. With standardized services, clear acceptance criteria, verifiable delivery records, and transparent fulfillment rules, it organizes fragmented space-based capabilities into commercial products that can be purchased, delivered, and used sustainably.

The project enters the market through regional-change monitoring, initially prioritizing recurring monitoring needs in infrastructure, energy facilities, and land-asset management, before expanding to additional applications for space data.

Table 1. CELESTRA: Core Design Overview

Design Area	Key Points
Token System	CELA is the native protocol token. Its four core functions are participation guarantees, verificaction responsibilities, contribution allocation, and protocol governance.
Economic Structure	A two-layer structure: business services use stable-value pricing and settlement, while CELA carries network-level responsibilities.
Initial Market Focus	Regional-change monitoring services for infrastructure, energy facilities, and land assets.
Network Mission	A space-economy services network coordinated by real orders, professional delivery support, and public protocol rules.

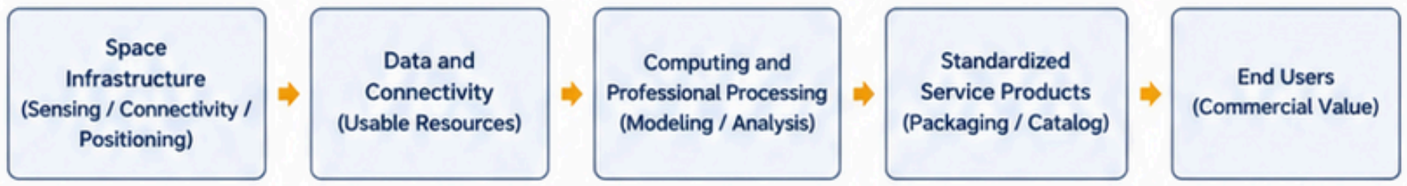
Source: CELESTRA White Paper, Chapters 1 and 8.

02 The Fundamentals of Space Economy Value

2.1 From Space Resources to Sustainable Services

The commercial value of the space economy follows a clear path: the capabilities of space infrastructure provide the foundation, and data and connectivity make resources usable. Computing and professional processing turn these resources into understandable products, and industry applications ultimately deliver value to end users through payments and completed outcomes.

Figure 1 Value Chain of the Space Economy: From Resource Capabilities to Commercial Outcomes



CELESTRA: A collaborative network for service organizations and industry applications, built on a unified order system and open protocol standards.

Source: Compiled from CELESTRA White Paper, Section 2.1.

In this process, the capabilities of infrastructure determine the supply limit, and the capabilities of service organizations determine how efficiently the resources are used. CELESTRA connects service organizations with industry applications through unified procurement, payment, and collaboration rules, enhancing the commercial usability of existing space resources without the need to build new satellites.

2.2 Five Sources of Economic Value in Space Services

Table 2 Five Sources of Economic Value in Space Services

Value Dimension	Business Value Explanation
Broader Information Coverage	Space assets cover large areas at a relatively low marginal cost. Space-based observations provide comprehensive information, helping to identify high-risk areas and support on-the-ground operations.
Continuous Monitoring	Repeated imagery and near-real-time monitoring enable time-series data collection, supporting subscription-based and ongoing service models.

Value Dimension	Business Value Explanation
Shorter Decision-Making Cycle	Clients can directly obtain analysis results (such as changes in location, extent, and trends) without the need for raw satellite data, enabling faster and more informed decision-making.
Cross-Regional Collaboration	A unified standard for coordinates, time, and output formats allows different regions and organizations to work together based on the same set of spatial information.
Build Reusable Software Capabilities	Standardized processing workflows, algorithm modules, and industry interfaces can be reused to serve multiple clients, and can be scaled up to support a larger customer base, continuously reducing delivery costs.

Source: Compiled from CELESTRA White Paper, Section 2.2.

2.3 Why Focus on Downstream Services

Building space infrastructure requires high entry barriers and long investment cycles, while downstream services can be launched using existing resources, allowing for faster validation of real customer demand. CELESTRA follows a clear, phased approach:

First, onboard data and processing capabilities from authorized providers;

Second, package underlying capabilities into standardized, sellable products;

Third, validate market demand through real paid orders;

Fourth, continuously improve cost and quality through repeated delivery;

Fifth, scale up upstream resource access as order volume grows.

This approach keeps network development aligned with real customer needs and helps avoid the common pitfall of pursuing technology for its own sake, disconnected from the market.

2.4 How Business Value Is Calculated

The economic value of services for a single customer can be evaluated using the following framework:

Customer Net Value = Reduced Labor Costs + Value of Better and More Timely Information + Value of New Business Capabilities – Procurement and Integration Costs

Specific amounts are calculated using actual customer business data and real-world usage outcomes. CELESTRA does not compete by making broad claims about market size. Every product launched must have a clearly defined customer, use case, purchasing rationale, and measurable acceptance criteria.

03 Project Positioning and Competitive Strategy

3.1 Core Network Positioning

CELESTRA is a collaborative delivery network for space data and professional computing services, with five core responsibilities:

Table 3. CELESTRA Network's Five Core Responsibilities

No.	Core Responsibility	Description
1	Unify Service Descriptions	Standardize service definitions and catalog management to eliminate information gaps in procurement.
2	Coordinate Tasks	Organize and schedule complex tasks across multiple parties.
3	Manage Delivery Evidence	Store and track delivery evidence for verification and traceability.
4	Coordinate Acceptance and Settlement	Coordinate acceptance workflows and handle settlement among multiple parties.
5	Maintain Shared Protocols	Establish and maintain the network's shared protocol rules.

Source: Compiled from Section 3.1 of the CELESTRA White Paper.

3.2 Initial Market Entry

The initial business offering focuses on regional-change monitoring services for infrastructure, energy facilities, and land-asset management. This use case has three characteristics that make it a good starting point:

Table 4. Three Key Criteria for Selecting the Initial Market

Selection Criteria	Description
Essential Need	Recurring business needs that require repeated monitoring over time.

Selection Criteria	Description
Customizable Orders	Define orders by region, update frequency, output format, and quality standards.
Scalable	Can be extended from simple image processing to in-depth, cross-industry analysis.

Source: Compiled from Section 3.2 of the CELESTRA White Paper.

3.3 Four Core Competitive Advantages

Table 5. Four Core Competitive Advantages

Competitive Advantage	Detailed Explanation
Transparent Procurement	Fully disclose coverage, timeliness, data rights, pricing, delivery format, and quality limits before an order is placed, eliminating information gaps.
Complete Delivery	Deliverables include result files, data source information, processing version records, and business documentation.
Traceable Collaboration	Track the status of multi-party tasks at every step, with clear responsibilities and deadlines — fully traceable from start to finish.
Reusable Services	Standardize proven delivery processes into a product library, reduce duplicate development, and gradually lower marginal costs.

Source: Compiled from Section 3.3 of the CELESTRA White Paper.

The network's competitive advantages are not based on broad concepts, but are gradually built through delivery quality, repeat purchases, and improved efficiency and cost performance.

04 Four Core Product Offerings

4.1 CELESTRAMarket | Standardized Service Marketplace

The service marketplace provides a unified product catalog. The following services must include the required information for each listing and cannot be published as standard products without it.

Table 6. Required Information for Marketplace Listings

Required Field	Field Description
Service Scope	Target customers, imagery types, and use cases.
Data Specifications	Data sources, geographic coverage, time range, and access/authorization scope.
Input Requirements	Customer inputs such as coordinates, area of interest, and file or business parameters.
Delivery Contents	Result files, output formats, and a list of deliverables and supporting materials.
Service Timeline	Standard delivery time and description of exceptions.
Acceptance Method	Automated validation plus expert review.
Pricing	Pricing structure and any additional fees.
Liability Terms	Scope of service coverage and external risk disclaimers.

Source: Compiled from Section 4.1 of the CELESTRA White Paper.

4.2 CELESTRA Flow | Intelligent Task Orchestration Engine

Complex business orders can be automatically broken down into multiple independent tasks and executed according to a standardized workflow:

Table 7. Standard Workflow for Intelligent Task Orchestration

Stage	Description
Data Acquisition	Access authorized space data.
Data Preprocessing	Clean, calibrate, and standardize the data.
Business Analysis and Processing	Execute order-specific algorithms and professional analysis.
Expert Review and Quality Check	Conduct expert review and validate analysis quality.
Result Aggregation and Delivery	Consolidate results and deliver the final outputs.

Source: Compiled from Section 4.2 of the CELESTRA White Paper.

Each sub-task specifies the service provider, deliverables, timeline, and settlement allocation ratio. If a preceding task does not meet the acceptance criteria, subsequent tasks will be paused automatically, and the exception will be recorded in detail to avoid wasted resources.

4.3 CELESTRA Verify | Multi-Level Delivery Verification Module

Table 8. Three-Layer Delivery Verification Mechanism

Verification Level	Verification Criteria
Completeness Check	Confirm all files are present and compare file hashes against the summary records.
Specification Check	Confirm the geographic area, time range, output format, and fields match the order requirements.
Professional Quality Check	Assess whether the analysis results meet the agreed professional and business standards.

Source: Compiled from Section 4.3 of the CELESTRA White Paper.

Each of the three verification layers is recorded independently, preventing the assumption that "a file upload means the service is complete." If any layer fails, the delivery is deemed noncompliant and the remediation process is triggered.

4.4 CELESTRA API | Industry-Standard Integration Gateway

Table 9. External API Capabilities

Capability	Description
Task Management	Create and retrieve business tasks
Quote Retrieval	Retrieve service quotes
Status Checks	Check task execution status in real time
Result Downloads	Download authorized business deliverables
Event Notifications	Receive notifications about regional changes
Quota Checks	Check service quota usage

Source: Compiled from Section 4.4 of the CELESTRA White Paper.

The API uses strict version control. Major breaking changes include a complete migration and transition period to help ensure uninterrupted operation of enterprise client systems.

05 Commercial Launch Product Matrix

Table 10. Four Commercial Launch Products

Product	Use Case	Key Features

Product	Use Case	Key Features
Regional Change Report	One-time project studies and phased asset review	Target a specific geographic area and time range, deliver change analysis results, and include a detailed explanation of spatial data files and processing methods.
Recurring Monitoring Subscription	Ongoing tracking of regional asset changes	Deliver continuous monitoring reports on a contractual schedule, with clear data availability, update frequency, anomaly handling, and pricing plans.
Large-Scale Batch Processing	Enterprises and developers	Standardized image preprocessing, multi-temporal comparison, format conversion, and tiered pricing based on task volume, compute resources, and service levels.
Enterprise Integration	Internal client systems	Account permissions, results API, task management, and automated reporting; separate pricing for one-time integration and ongoing service fees.

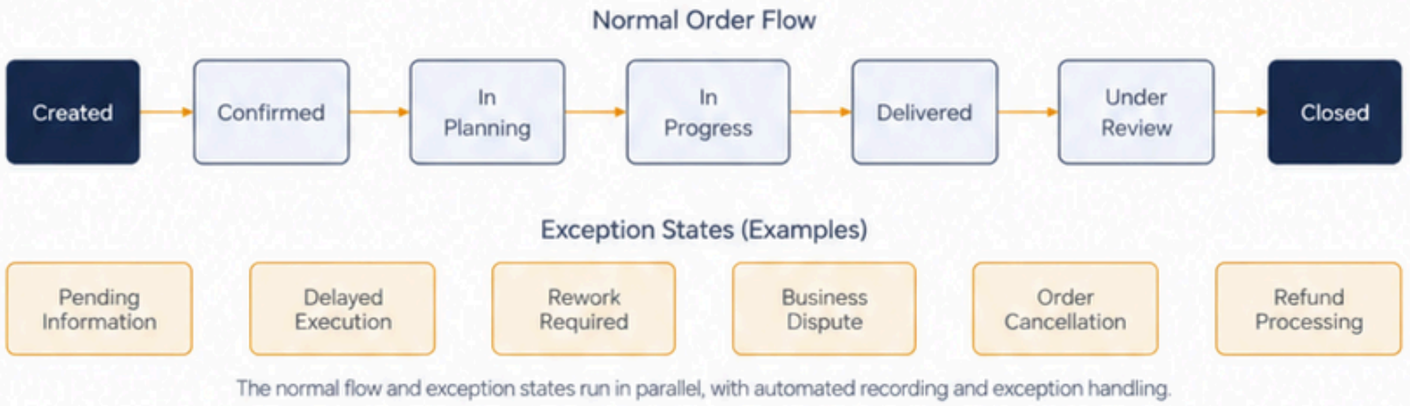
Source: Compiled from Chapter 5 of the CELESTRA White Paper.

06 Order Lifecycle and Settlement Mechanism

6.1 Order Status Engine

Orders progress through the following status flow, with separate handling and recording for any exceptions:

Figure 2. Order Normal Flow and Exception States



The normal flow and exception states run in parallel, with automated recording and exception handling.

Source: Compiled from Section 6.1 of the CELESTRA White Paper.

6.2 Order Activation Confirmation Requirements

Before an order is officially activated, the following items must all be confirmed, and none can be missing:

Table 11. Order Activation Confirmation Checklist

No.	Confirmation Item
1	Service scope and data authorization boundaries
2	Deliverables list and acceptance criteria
3	Pricing and payment terms
4	Delivery timeline and key milestones
5	Provider participation and commitment requirements
6	Dispute resolution process

Source: Compiled from Section 6.2 of the CELESTRA White Paper.

6.3 Service Acceptance Rules

Table 12. Key Service Acceptance Rules

Item	Rule
Default Acceptance Window	Standard products are accepted automatically 7 calendar days after delivery; custom projects follow separate terms in the order.
Default Acceptance Criteria	Delivery notification sent, results accessible, all automated checks passed, no objections from the client, and product terms allow auto-acceptance. All five conditions must be met.
Dispute Handling	If a dispute is raised, corresponding payments are paused; the order (or relevant portion) follows the standard settlement process.

Source: Compiled from Section 6.3 of the CELESTRA White Paper.

6.4 Modifications, Refunds, and Penalty Handling

If the delivery results do not meet the order requirements, the service provider must prioritize remediation. If the issue cannot be resolved, or delivery is significantly delayed or canceled, a partial or full refund will be issued, and the provider's contractual penalites will be assessed accordingly.

07 Technical Architecture and Governance Framework

7.1 Core Architectural Principles

CELESTRA adopts an on-chain execution and on-chain record architecture. Large volumes of raw data and intensive computing tasks run in a high-performance off-chain environment, while the status of assets, guarantees, governance, and key business commitments are written to the blockchain, combining high performance with verifiable trust.

7.2 On-Chain Business Execution System

The on-chain system includes data storage, task scheduling and compute, access control, full operation logs, and a client API gateway. A key principle is that no raw sensitive business data is stored on-chain—only hash digests and the necessary proofs are kept.

7.3 Core On-Chain Protocol Modules

Table 13. Core On-Chain Protocol Modules

Module	Key Functions
CELA Native Token Contract	Token issuance and basic status management
Asset Escrow and Custody Contract	Asset custody, locking, and release
Service Participation and Guarantee Contract	Service provider and validator participation and staking
Order Fund Custody Module	Escrow and settlement of order funds
Public Fund Multi-Signature Management	Multi-signature management for public funds
Governance and Timelock Module	Decentralized governance and timelock for execution

Source: Compiled from Section 7.3 of the CELESTRA White Paper.

The initial phase will be deployed on a single chain. Cross-chain expansion will require separate security assessments and audits.

7.4 Contract Upgrade Boundaries and Constraints

Table 14. Contract Upgrade Boundaries and Constraints

Constraint	Rule

Constraint	Rule
Total supply cap	The maximum CELA supply cannot be increased through the contract. The total supply is permanently capped at 1 billion.
Protocol upgrades	Business logic modules can be upgraded through governance proposals, with a standard upgrade timelock of 72 hours.
Emergency authority	Only allows pause function in emergencies. No authority to transfer user custodial assets at any time.

Source: Compiled from Section 7.4 of the CELESTRA White Paper.

7.5 On-Chain Evidence and Liability Boundary

On-chain storage keeps only a hash of the sensitive content, which proves the corresponding file record exists. The actual business data, accuracy of professional analysis, and the legality of data authorization are jointly the responsibility of the business evidence, service providers, and the professional review process. On-chain evidence does not serve as a backing for business outcomes.

08 Native Token CELA Design and Core Roles

8.1 Two-Layer Separated Economic Structure

Table 15 Two-Layer Separated Economic Structure

Layer	Operation Model	Value Asset	Core Functions
Business Settlement Layer	Real commercial transactions with end customers	Stable-value currency	Clients purchase services, and service providers earn rewards; clients can use the network without holding CELA.
Protocol Participation Layer	Network participants stake and commit	CELA token	Service providers, validators, and governance participants stake CELA and are responsible for network security.

Source: Compiled from Section 8.1 of the CELESTRA White Paper.

Key advantage: Customers can purchase services without being affected by CELA token price volatility, while the protocol layer maintains a commitment mechanism for participants.

8.2 CELA's Four Core Uses

Table 16 Four Core Uses of CELA

Use	Specific Function
Service Participation and Assurance	Encourages service providers to operate in compliance with network rules
Validation and Accountability Assurance	Requires validators to participate in network validation and business reviews
Ecosystem Contribution Rewards	Allocates a limited ecosystem development budget and rewards meaningful contributions
Protocol Governance	Enables voting on network rules, budgets, and parameter changes

Source: Compiled from Section 8.2 of the CELESTRA White Paper.

8.3 How CELA Participation Assurance Differs from Single-Order Assurance

Single-order assurance applies to an individual service contract, uses a stable-value currency to assess risk, and is used to compensate customers for orders. CELA participation assurance applies to participants' long-term behavior across the network and helps prevent identity misuse, fake contributions, review manipulation, and repeated violations. The two serve different purposes. CELA is not used as a volatile-price token to cover all customer order-compensation obligations.

8.4 How Token Demand Is Generated

Demand for CELA follows this path: more qualified participants → greater participation-assurance scale → expanded validation and governance activity → continued growth in protocol network usage. The level of demand depends on the number of genuine network participants, staking and lockup rules, and participants' actual behavior.

Important note: CELA does not promise fixed returns or price appreciation. Business growth and the secondary-market price of the token do not have a fixed conversion ratio.

09 Service Provider Onboarding, Staking Assurance, and Penalty Mechanisms

9.1 Complete Service Provider Onboarding Requirements

Table 17 Service Provider Onboarding Checklist

No.	Onboarding Review Items
1	Identity verification of the entity and responsible person
2	Review of resource and data access qualifications
3	Evaluation of sample delivery and testing
4	Confirmation of service spedifications and documentation
5	Compliance and data processing review

Source: Compiled from Section 9.1 of the CELESTRA White Paper.

Staking CELA does not replace the service provider's own professional qualification review.

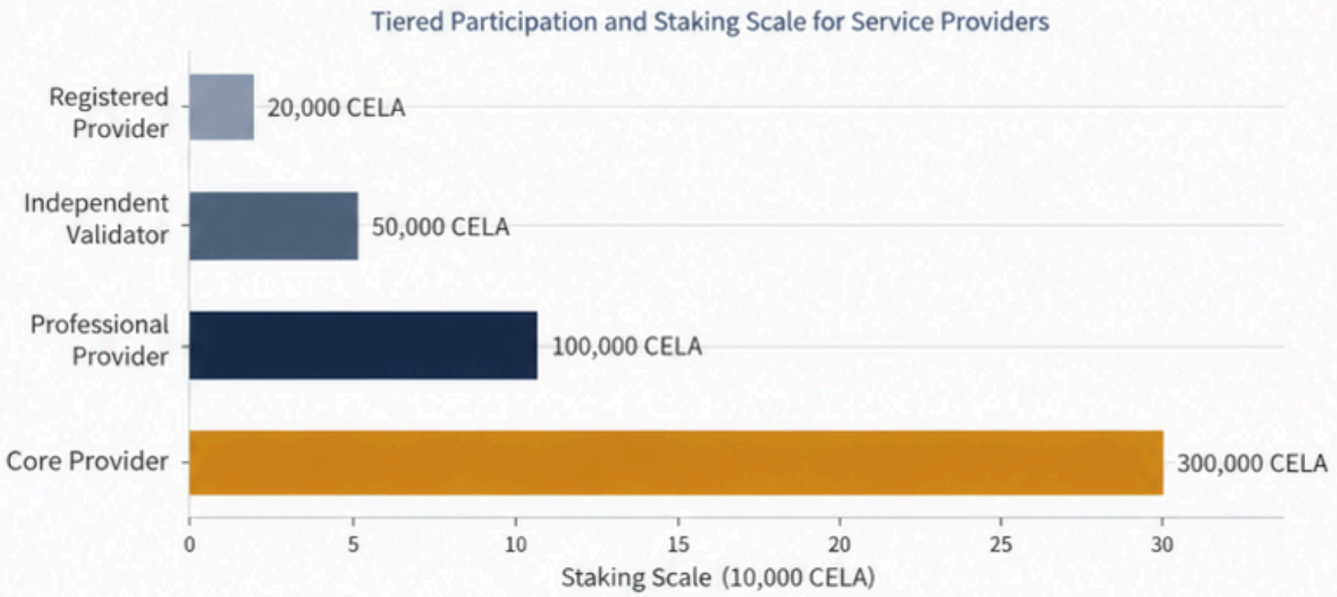
9.2 Tiered Participation and Staking Requirements

Table 18 Tiered Participation and Staking Requirements

Service Provider Tier	Minimum CELA Stake	Applicable Scope
Registered Provider	20,000 CELA	Basic standardized services after review
Professional Provider	100,000 CELA	Multiple product lines, long-term service projects
Core Provider	300,000 CELA	Multi-stage complex collaboration, high-value service reliance
Independent Validator	50,000 CELA	Validation and review work after professional vetting

Source: Compiled from Section 9.2 of the CELESTRA White Paper.

Figure 3 Tiered Participation and Staking Scale for Service Providers



Source: Compiled from Section 9.2 of the CELESTRA White Paper.

Staking levels do not directly correspond to the number of orders. When onboarding orders, we also consider the participant's historical performance, hardware resources, and independent risk limits. To increase a level, you need to proactively apply, and any parameter changes will only take effect for new orders, without affecting existing ones.

9.3 Participant Exit Rules

If a participant has not fulfilled their responsibilities or is involved in a dispute, they can apply to exit and have their stake refunded. The standard exit process has a 30-day cooling-off period. If there is a business dispute, only the portion of the stake that matches the disputed amount will be frozen; the rest of the staked assets will not be affected.

9.4 Violation Handling and Penalties

Table 19 Violation Levels and Penalties

Violation Level	Penalty Measures
General Violation	Warning, time-limited correction, suspend new tasks
Serious Violation	Deduct part of staked CELA, restrict network access
Systemic Fraud	Permanent ban from the network, confiscate staked assets according to the rules

Source: Compiled from Section 9.4 of the CELESTRA White Paper.

Penalties apply only to objectively verified malicious violations. The full list of penalties and their limits will be published in the rules in advance, and no new penalty clauses will be added retroactively.

10 Total Token Supply and Initial Allocation

10.1 Fixed Total Supply, No Additional Issuance

The maximum total supply of CELA is 1,000,000,000 CELA, and there is no additional issuance at the contract level. Tokens allocated to completed budgets are held in a public account and will be released automatically according to the schedule, without manual intervention.

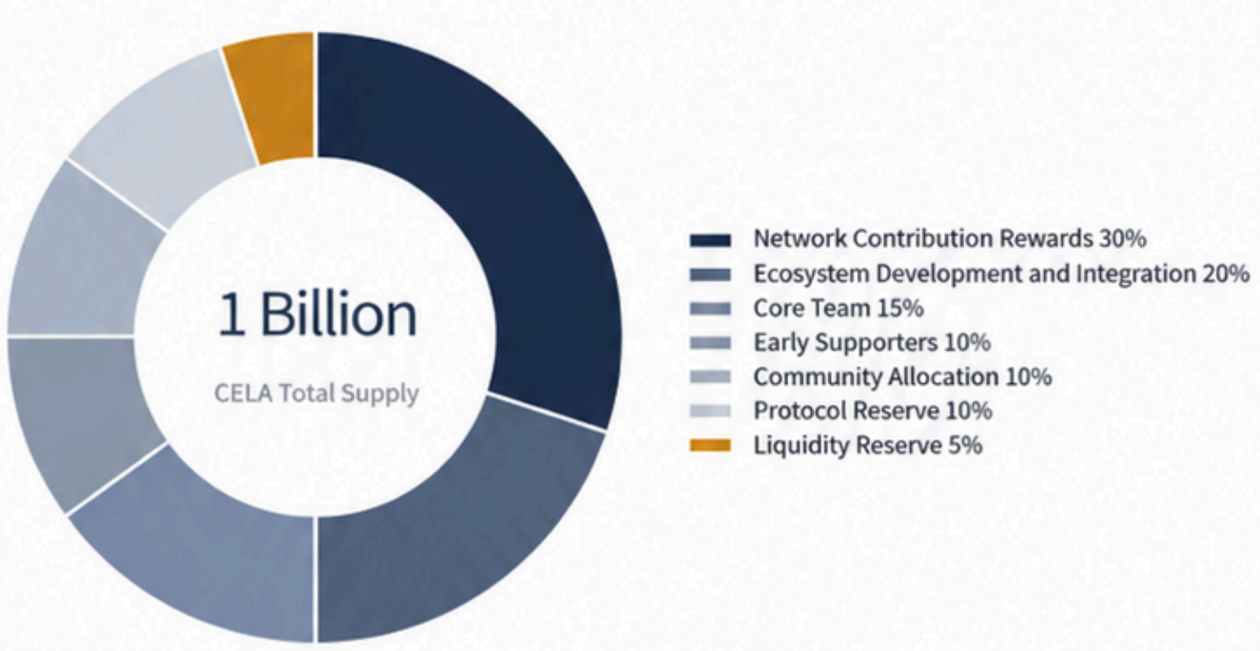
10.2 Token Allocation Structure

Table 20 CELA Token Allocation Structure

Allocation Category	Share of Total Supply	Token Amount (CELA)
Network Contribution Rewards	30%	300,000,000
Ecosystem Development and Integration	20%	200,000,000
Core Team	15%	150,000,000
Early Supporters	10%	100,000,000
Community Allocation	10%	100,000,000
Protocol Reserve	10%	100,000,000
Liquidity Reserve	5%	50,000,000
Total	100%	1,000,000,000

Source: Compiled from Section 10.2 of the CELESTRA White Paper.

Figure 4 CELA Token Allocation Structure (Total Supply: 1 Billion)



Source: Compiled from Section 10.2 of the CELESTRA White Paper.

10.3 Public Purchase Allocation Plan

Table 21 Public Purchase Allocation Plan

Item	Details
Token Ticker	CELA

Item	Details
Total Supply	1,000,000,000 CELA
Issuance Price	XX.00 USDT
Estimated Listing Price	XX.00 USDT
Issuance Method	Public subscription + on-chain VRF verifiable random allocation
Purpose of Issuance	To establish a decentralized space economy service agreement on ALCHchain and attract core ecosystem contributors
Subscription Start Time	9:00 AM, XX XX, 2026 (US Eastern Time)
Subscription End Time	12:00 AM, XX XX, 2026 (US Eastern Time)
Allocation Results Announcement	12:00 AM, XX XX, 2026 (US Eastern Time)
Token Distribution Time	12:00 AM, XX XX, 2026 (US Eastern Time)
Subscription Eligibility	Complete registration and KYC verification; account must have sufficient USDT balance
Subscription Rules	Submit an application through a smart contract, strictly enforce one identity per account, and prevent Sybil attacks
Allocation Logic	On-chain VRF verifiable random numbers with automatic allocation via smart contract
Unallocated Tokens	Full refund of USDT, no fees of any kind
Key Features	Fair allocation, fully transparent on-chain, and auditable
Risk Disclosure	Token price may be volatile. Investors should make independent decisions. No fixed return guarantee.
Compliance Statement	Not available to residents of restricted regions. Participants must comply with the local laws and regulations in their jurisdiction.

Source: Compiled from Section 10.3 of the CELESTRA White Paper. "XX" indicates information to be determined.

11 Token Unlock and Release Schedule

11.1 TGE Initial Circulating Supply

At the TGE, the total initial circulating supply across the network is 50,000,000 CELA, which represents 5% of the maximum total supply.

Table 22 TGE Initial Circulating Supply

Category	TGE Release Amount (CELA)
Ecosystem Development and Integration	10,000,000
Community Allocation	20,000,000
Liquidity Reserve	20,000,000
Total	50,000,000

Source: Compiled from Section 11.1 of the CELESTRA White Paper.

At the TGE, allocations for the team, early supporters, and protocol reserves are all locked and will not be part of the circulating supply.

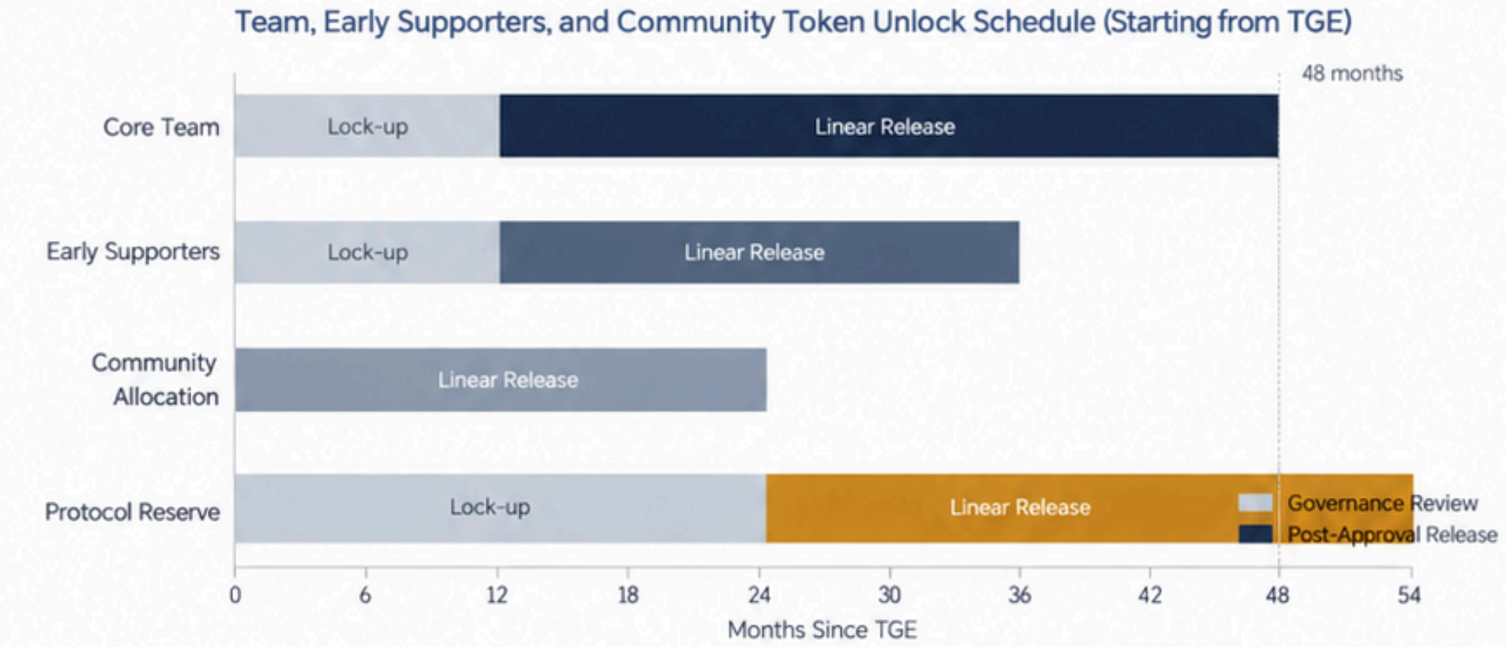
11.2 Team, Early Supporters, and Protocol Reserve Vesting Rules

Table 23 Vesting Rules for the Team, Early Supporters, and Protocol Reserve

Allocation Category	Lock-up Period	Vesting / Release Rules
Core Team	12 months	Released linearly over 36 months after the lock-up ends
Early Supporters	12 months	Released linearly over 24 months after the lock-up ends
Community Allocation (Post-TGE)	0	Released linearly over 24 months after the TGE
Protocol Reserve	At least 24 months	Released after the lock-up ends, subject to governance proposal approval

Source: Compiled from Section 11.2 of the CELESTRA White Paper.

Figure 5 Vesting Schedule for Core Team, Early Supporters, and Community Allocation (Starting from TGE)



Source: Compiled from Section 11.2 of the CELESTRA White Paper.

11.3 Annual Release Cap for Network Contribution Rewards

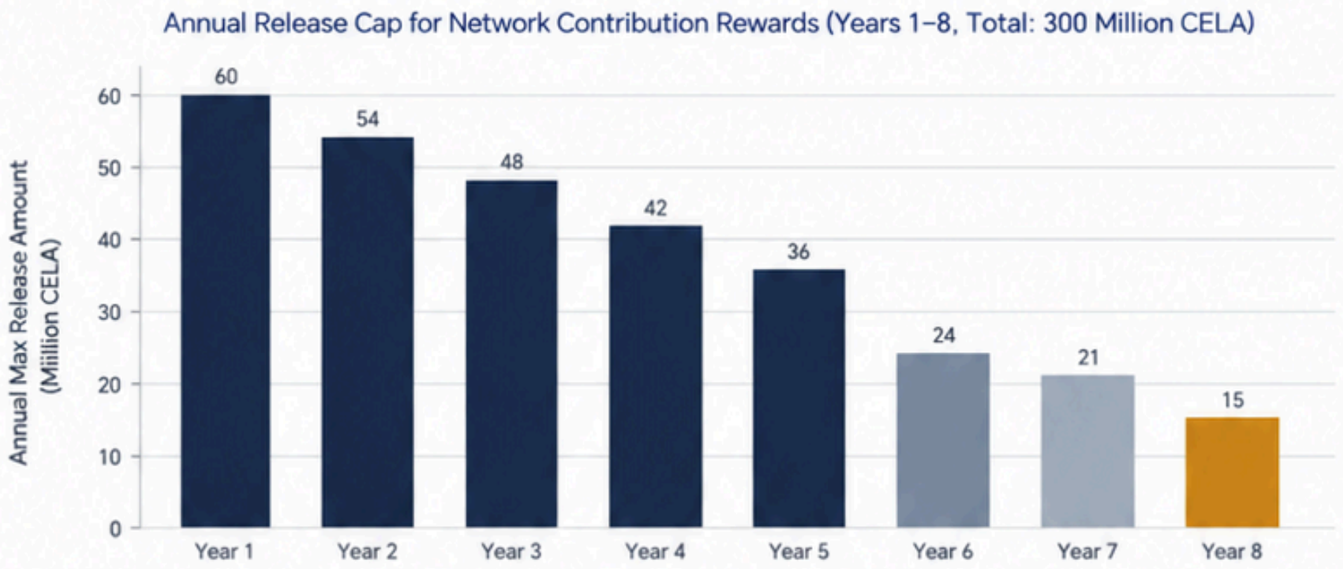
The following annual release caps are maximum limits, not a requirement to release the full amount. Any unused portion will carry over, and the next year's usage cannot exceed that year's cap.

Table 24 Annual Release Cap for Network Contribution Rewards

Network Year	Maximum Annual Release Amount (CELA)
Year 1	60,000,000
Year 2	54,000,000
Year 3	48,000,000
Year 4	42,000,000
Year 5	36,000,000
Year 6	24,000,000
Year 7	21,000,000
Year 8	15,000,000
Total (8 years)	300,000,000

Source: Compiled from Section 11.3 of the CELESTRA White Paper.

Figure 6 Annual Release Cap for Network Contribution Rewards (Years 1–8)



Source: Compiled from Section 11.3 of the CELESTRA White Paper.

11.4 Ecosystem Fund Disbursement Mechanism

After the TGE, there will be 190,000,000 CELA remaining in the ecosystem development and integration fund. These funds will be released over at least 60 months in multiple tranches according to the project roadmap. The funds are divided into three categories—grants, investments, and milestone-based payments—and tokens will only be released once the corresponding delivery and verification conditions are met.

12 Network Contribution Reward Incentive Mechanism

12.1 Types of Eligible Contributions

Rewards are only granted for three types of real contributions, and are not distributed solely based on trading volume:

Provision of real commercial services and reliable validation/review work;

Development tools and system integration solutions actually adopted by the network;

Public technical development and security vulnerability contributions that have been verified.

12.2 Multi-Dimensional Contribution Scoring Model

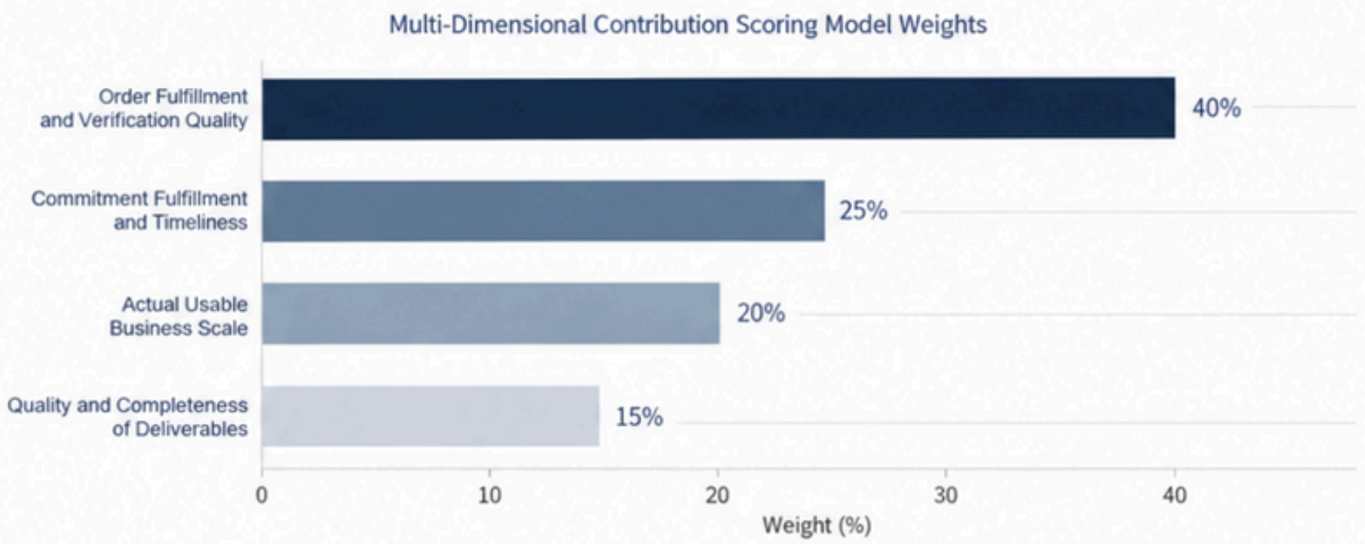
Table 25 **Contribution Scoring Model Weights**

Evaluation Dimension	Weight

Evaluation Dimension	Weight
Order Fulfillment and Verification Quality	40%
Commitment Fulfillment and Timeliness	25%
Actual Usable Business Scale	20%
Quality and Completeness of Deliverables	15%

Source: Compiled from Section 12.2 of the CELESTRA White Paper.

Figure 7 Multi-Dimensional Contribution Scoring Model Weights



Source: Compiled from Section 12.2 of the CELESTRA White Paper.

The calculation method for all metrics is publicly disclosed, and each product is matched to the corresponding industry quality standards.

12.3 Reward Allocation Formula

$$R(i) = \min(C(i), B \times S(i) / \Sigma S)$$

R(i) is the actual reward a participant receives. C(i) is the individual reward cap for each participant. B is the total reward budget for the current period. S(i) is the qualified contribution score of the participant. ΣS is the sum of all participants' qualified contribution scores. After a participant reaches their reward cap, any remaining budget will be reserved for the unallocated community pool.

12.4 Reward Delay, Release, and Anti-Abuse Mechanisms

Rewards are calculated monthly and released after a 30-day observation period;

Loop trading, duplicate submissions, and fake orders will not be counted as contributions.

For the same actual control entity, the total rewards from the current service incentive pool must not exceed 10%. Major public projects require separate governance approval.

13 Business Model and Unit Economics

13.1 Diversified Revenue Structure

Table 26 Diversified Revenue Structure

Revenue Source	Description
Standard Market Listing and Agreement Fees	Fixed at 5%
Enterprise Client Subscription and Service Fees	Recurring fees for subscription-based services, monitoring, and other value-added services
Computing Power and API Service Fees	Based on usage, resources, and tiered pricing
Project Integration and Technical Support	In-depth project integration and professional support for enterprises

Source: Compiled from Section 13.1 of the CELESTRA White Paper.

For enterprise-customized projects, the agreed fee rate and total costs are defined in the contract before signing.

13.2 Strict Revenue Recognition Rules

Revenue is only recognized once all services are fully delivered and the acceptance criteria are met. Funds under custody, token sales proceeds, token price fluctuations, and related circular trading are not counted as business service revenue.

13.3 Order Gross Margin Calculation Model

Order Contribution Margin = Agreement Service Revenue − Direct Data Procurement Costs − Direct Computing Resource Costs − Review and Audit Costs − Payment and Transaction Related Costs

Before a product is officially listed in the standard catalog, a full cost assessment must be completed. For products with ongoing token incentive subsidies, the gross margin must be recalculated, and pricing, workflows, or catalog listings must be adjusted.

13.4 Subsidy Management and Control

Subsidies are only used to validate market demand and build public infrastructure. Once a service becomes a stable, recurring business with steady customers, the subsidies will be gradually reduced, and service revenue will return to being paid by customers.

14 Public Fund Structure and Operations

14.1 Multi-Account Segregation and Management

Funds are kept in separate accounts with independent accounting. Client custody funds may not be used for project operations.

Table 27 Fund Segregation by Account Type

Account Type	Purpose
Client Custody Funds	Hold and settle client order funds
Operating Funds	Day-to-day project operations
CELA Rewards Budget	Distribute network contribution rewards
Ecosystem Funding	Ecosystem development and integration grants
Contingency Reserve	Released upon governance approval
Liquidity Reserve	Support for market liquidity

Source: Compiled from Section 14.1 of the CELESTRA White Paper.

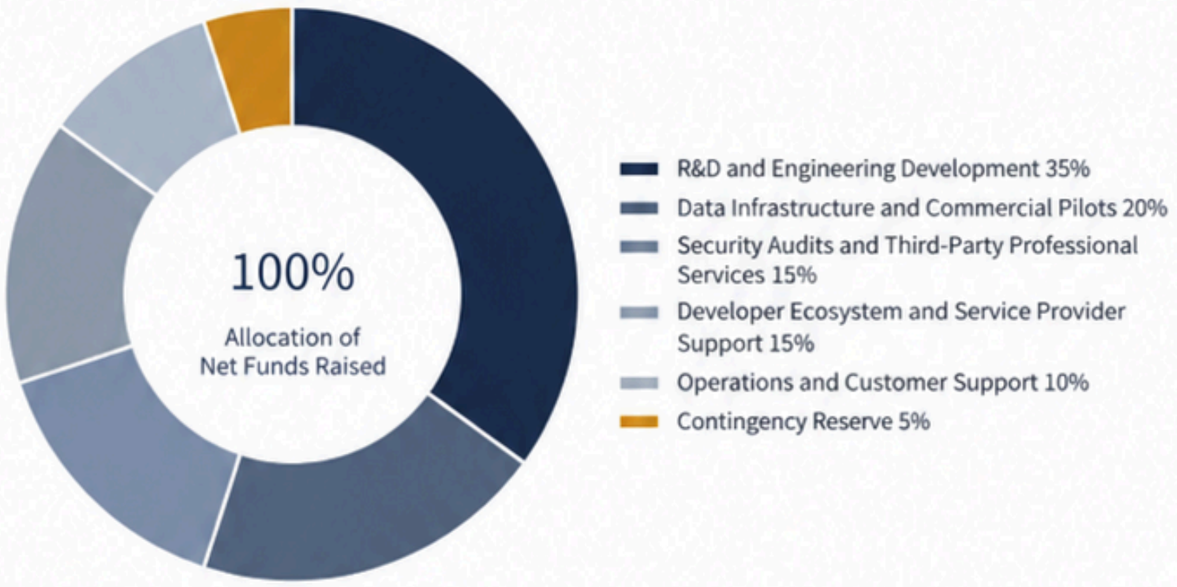
14.2 Allocation of Raised Net Funds

Table 28 Framework for Allocation of Raised Net Funds

Use of Funds	Allocation Percentage
Research and Engineering Development	35%
Data Infrastructure and Commercial Pilots	20%
Security Audits and Third-Party Professional Services	15%
Developer Ecosystem and Service Provider Support	15%
Operations and Customer Support	10%
Contingency Reserve	5%

Source: Compiled from Section 14.2 of the CELESTRA White Paper.

Figure 8 Allocation of Raised Net Funds



Source: Compiled from Section 14.2 of the CELESTRA White Paper.

If there are significant changes to the budget, the reasons and the expected impact must be clearly explained.

14.3 Fund Security Safeguards

Public funds will use multi-signature control, with at least 3 out of 5 designated signatories required for any transaction. Financial execution, technical management, and business review will be separated with clear checks and balances. The budget requires a minimum of 12 months of basic operating cash for the project. Any unrealized gains from the CELA tokens are not allowed to be used as cash.

15 Decentralized Governance Rules

15.1 Scope of Governance Authority

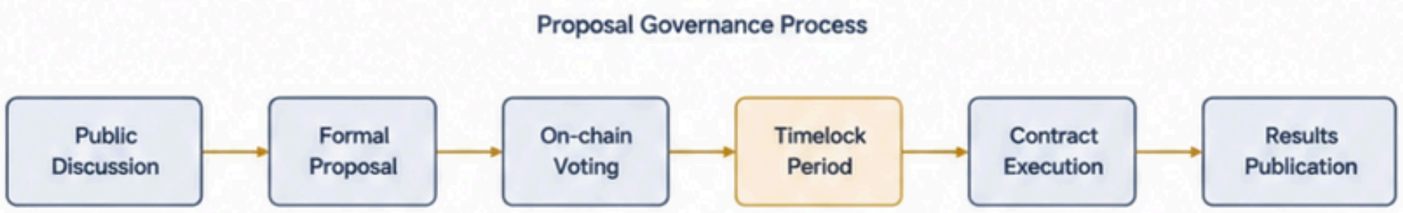
Table 29 **Scope of Governance Authority**

Category	Scope
Covered (Governable)	Public budget, reward parameters, service quality collateral parameters, protocol fees, contract and technology upgrades, and ecosystem funding policies
Not Covered (Non-governable)	Commercial client contracts, internal HR management, and legal entities' statutory responsibilities

Source: Compiled from Section 15.1 of the CELESTRA White Paper.

15.2 Complete Proposal Process

Figure 9 Proposal Governance Process



Note: 2-day discussion period, followed by a minimum 72-hour timelock.

Source: Compiled from Section 15.2 of the CELESTRA White Paper.

Table 30 Initial Parameters for Governance Proposals

Initial Parameter	Value
Public discussion period	≥ 7 days
Formal voting period	7 days
Timelock for routine upgrades	72 hours
Minimum threshold to submit a proposal	1,000,000 CELA tokens (held or delegated)
Voting quorum	10% of total eligible votes
Passing threshold for regular proposals	> 50% support
Passing threshold for core rule changes	≥ 2/3 support

Source: Compiled from Section 15.2 of the CELESTRA White Paper.

The eligible voting supply excludes unallocated tokens in the public pool and unlocked tokens in the treasury. Voting power is calculated based on the balance before the voting period begins.

15.3 Conflict of Interest Avoidance Mechanism

When a proposal involves grants, penalties, or related-party transactions, all relevant parties must proactively disclose potential conflicts of interest and recuse themselves from voting. Proposals must go through an independent technical security review, and the implementation team will be held accountable.

16 Security Framework and Ongoing Operations

16.1 Contract and Business Launch Requirements

Table 31. Launch Readiness Checklist

No.	Requirement
1	Access Control Review
2	Core Functionality Testing
3	Independent Third-Party Security Audit
4	Vulnerability Remediation
5	Emergency Drills

Source: Compiled from Section 16.1 of the CELESTRA White Paper.

Before any asset-related module goes live, the full process above must be completed. The scope of the security audit and any unresolved risks must be publicly disclosed.

16.2 Critical Vulnerability Emergency Response Process

When a high-risk vulnerability is discovered, suspend the affected functionality, preserve evidence, and notify relevant users. An initial emergency suspension may last up to 72 hours. Any extension must be accompanied by a public explanation of the reasons, impact, and recovery conditions.

16.3 Business Continuity Plan

Users have the right to access their own order records, authorization materials, and payment deliverables. On-chain systems should maintain multiple backups. If operations are interrupted, unfinished tasks and custodial assets will be handled according to the publicly disclosed contingency plan.

16.4 Data Rights and Ownership Boundaries

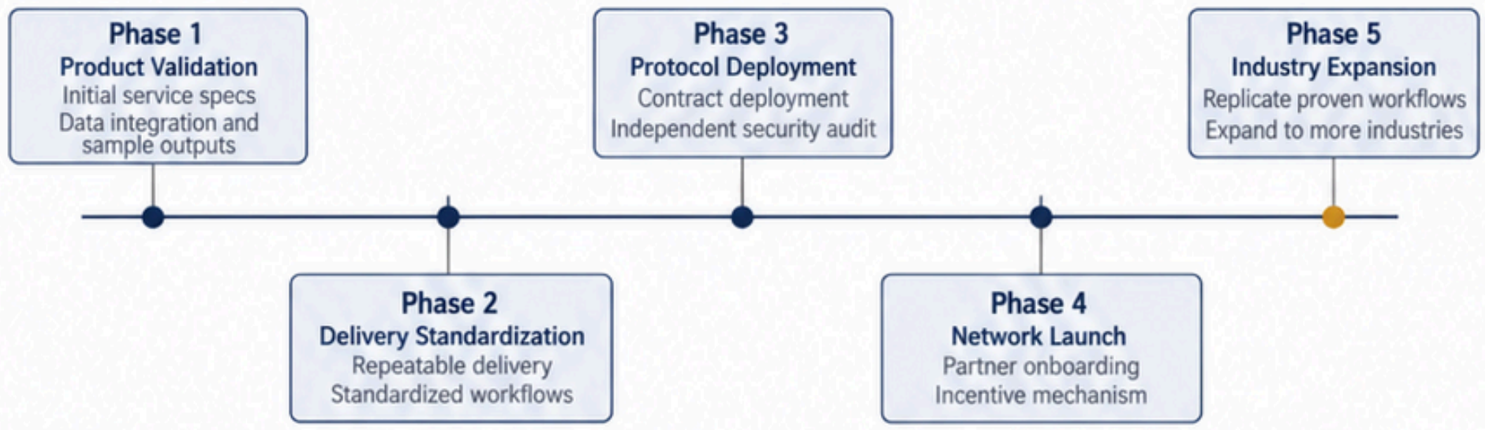
Holding CELA tokens does not grant any ownership rights to satellite data. Data display, AI training, resale, and internal business use are all strictly governed by the original data licensing agreement.

17 Phased Implementation Roadmap

CELESTRA follows a deliverables-based rollout. Each phase must meet its hard delivery milestones before the project can move on to the next phase; progress is not based on time alone.

Figure 10. Phased Implementation Roadmap

Phased implementation roadmap (deliverables-driven, not time-driven)



Each phase must meet its hard entry criteria before the project can move to the next phase.

Source: Compiled from Chapter 17 of the CELESTRA White Paper.

Table 32. Phased Implementation Roadmap and Entry Criteria

Phase	Phase Objectives	Hard Requirements to Enter the Next Phase
Phase 1 | Product Validation	Complete initial service specifications, compliant data integration, sample deliverables, and cost accounting.	At least 3 independent paying pilot customers; at least 20 completed and valid business transactions; refund rules fully implemented.
Phase 2 | Delivery Standardization	Launch the service marketplace, task platform, and acceptance-verification module.	Core products delivered repeatedly over multiple cycles; all cost and quality issues traceable; customers show repeat-purchase demand.
Phase 3 | Protocol Deployment	Deploy tokens, lockups, collateral guarantees, and public-fund agreements; complete an independent security audit.	All contracts audited; all identified risks remediated and closed.
Phase 4 | Network Launch	Onboard qualified service providers and developers; launch contribution rewards within budget limits.	Provider onboarding system fully operational; anti-fraud mechanism effective.
Phase 5 | Industry Expansion	Replicate proven service workflows and expand into additional industry use cases.	New use cases meet requirements for demand, authorization, cost, and quality validation.

Source: Compiled from Chapter 17 of the CELESTRA White Paper.

18 Core Network Business Evaluation Metrics

Token price and trading activity on secondary markets are not used as a measure of network development. The network's real value is evaluated across four business dimensions.

Table 33. Core Network Business Evaluation Metrics

Metric Category	Key Metrics
User Metrics	Number of paying customers, customer repeat purchase rate, subscription status, customer engagement and concentration risk
Transaction Metrics	Payment success rate, verification pass rate, refund rate, and dispute rate
Financial Metrics	Net revenue from network operations, gross profit from orders, cash burn rate, and percentage of incentive costs
Protocol Ecosystem Metrics	Number of active service providers, total collateral size, governance participation, and security incident statistics

Source: Compiled from Chapter 18 of the CELESTRA White Paper.

The specific definition, actual data, and calculation method for each external disclosure metric will be updated and explained on a quarterly basis.

19 Project Risk Management Matrix

Table 34. Project Risk Management Matrix

Risk Category	Specific Control Measures
Inability to Obtain Satellite Data as Planned	Verify data availability before launch; include alternative solutions and refund trigger conditions in orders.
Algorithm Performance Does Not Meet Quality Standards	Conduct regular testing, multi-disciplinary review, and an iteration and rollback mechanism.
Service Provider Non-Compliance	Tiered onboarding and review, order escrow guarantees, and CELESTRA participation in collateral penalties.
High Volatility in CELA Token Price	Price quoted and settled in a stablecoin; customers are not required to use the token as a form of payment.
Fraud and Abuse in Incentive Program	Real-business verification, delayed reward disbursement, and a cap on single-entity rewards.

Risk Category	Specific Control Measures
Governance Power Concentration Risk	Snapshot voting, public disclosure of delegated voting, conflict-of-interest safeguards, and execution time locks
Smart Contract Vulnerabilities	Independent third-party security audits, least-privilege access, and an emergency pause switch
Insufficient Project Cash Reserves	Segregated accounts, budget constraints, and a minimum 12-month operating cash target

Source: Compiled from Chapter 19 of the CELESTRA White Paper.

Risk controls reduce the likelihood and impact of incidents; they do not guarantee full compensation for all losses.

20 Standardized Disclosure Policy

Table 35. Standardized Disclosure Policy

Disclosure Schedule	Information Disclosed
Monthly Disclosure	Token release records, reward distributions, major ecosystem investments, and key network incidents
Quarterly Disclosure	Business quality metrics, public-fund expenditures, asset holdings, related parties, and the next-period budget
Immediate Disclosure of Material Events	Security incidents, changes to core permissions, critical service outages, changes to core parameters, and material changes affecting user rights

Source: Compiled from Chapter 20 of the CELESTRA White Paper.

All partnership announcements must be based strictly on formally authorized documents. Draft memoranda of understanding must not be presented publicly as finalized partnerships.

21 Brand Philosophy and Core Network Commitments

CELESTRA's brand is built around connecting space-based capabilities with real-world industrial applications. CELA is the protocol token of this collaborative network.

Table 36. Four Long-Term Network Commitments

Commitment	What It Means

Commitment	Meaning
Clearly Define Product Scope	Ensure customers fully understand the service scope before purchase, including deliverables and limitations.
Maintain Complete Accountability Records	Each task has a responsible owner, and every rule change is traceable.
Allocate Resources for Effective Delivery	Public funds are prioritized to support actual service delivery and the development of public infrastructure.
Drive Real Usage and Growth Through Well-Defined Use Cases	Paying customers, repeat purchases, and transaction quality are the true indicators of network growth.

Source: Compiled from Chapter 21 of the CELESTRA White Paper.

22 Conclusion

Space infrastructure can create new capabilities and deliver real commercial value through vertical, professional services. CELESTRA will integrate satellite data, computing resources, algorithm analysis, and payment processes into a sustainable commercial service ecosystem.

Customers gain clearly defined products and accountability. Service providers receive clear orders and settlement. Developers get reusable tools. Public ecosystem contributors are incentivized based on openly disclosed rules.

CELA participants take on the roles of staking, verification, contribution allocation, and governance, and its value comes from real business use within the network. CELESTRA will remain committed to: meeting genuine industry demand with space-based capabilities, generating reliable commercial revenue through real transactions, and supporting long-term collaboration among diverse partners through open protocols.

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