



# PXC WHITE PAPER



## **STAR SHIELD PROGRAM PERSISTENT CYCLE SATELLITE CONSTELLATION WHITE PAPER**

THIS WHITE PAPER SYSTEMATICALLY EXAMINES THE STAR SHIELD PROGRAM'S INDUSTRIAL CONTEXT, PROJECT ARCHITECTURE, CORE BUSINESS FRAMEWORK, PERSISTENT CYCLE BUSINESS MODEL, VALUATION GROWTH RATIONALE, TOKEN ECONOMY DESIGN, AND LONG-TERM DEVELOPMENT ROADMAP.

# INTRODUCTION

In the era of accelerated convergence between global digitalization, networking, and space infrastructure, low Earth orbit (LEO) satellite systems are evolving from traditional aerospace engineering into strategic infrastructure with strong commercial attributes, asset value, and long-term cash flow capabilities. The boundaries between communication, data, computing power, and space resources are being redefined. Aerospace systems are no longer merely symbols of national capabilities but are becoming critical foundational structures supporting the global digital economy, intelligent societies, and cross-regional collaboration. The Star Shield Program was proposed at this historical juncture, aiming to build a future-oriented LEO satellite and space data infrastructure system through systematic, sustainable, and scalable approaches.

The Star Shield Program, centered on the Persistent Cycle satellite constellation framework, redefines the growth logic and value structure of commercial space projects through an infinite-loop model of “continuous deployment, continuous operation, and continuous value recovery.” Diverging from traditional one-time construction or phased launches, this initiative adopts a long-term asset management perspective, treating satellite constellations as scalable, replaceable, and upgradable systems that generate sustainable service revenue. By implementing large-scale deployment, standardized design, and periodic renewal mechanisms, the program creates a positive flywheel effect that balances coverage scope, system stability, and unit cost control.

At the business model level, the Star Shield Program does not focus on single products or short-term market opportunities, but rather emphasizes the long-term supply of foundational capabilities such as communication capacity, data acquisition capabilities, and space transportation capacity. The project does not build an isolated technical system, but rather an aerospace platform with infrastructure attributes, capable of providing stable, predictable, and subscription-based space services to governments, enterprises, and cross-industry clients. Through long-term contracts, continuous subscriptions, and a multi-tiered service structure, the program aims to establish a highly visible revenue curve and a robust cash flow foundation.

In the realm of asset and value systems, the Star Shield Program implements equity tokenization and asset mapping mechanisms to explore deep integration between aerospace infrastructure and blockchain technology. PXC, serving as a key component for value anchoring and ecosystem operation, is designed to connect physical aerospace assets, corporate valuation, and ecosystem participants. This framework transcends mere digital asset issuance by establishing a transparent, traceable, and scalable value representation system centered on tangible assets, long-term operational capabilities, and the growth potential of unlisted aerospace enterprises.

This white paper systematically examines the Star Shield Program’s industrial context, project architecture, core business framework, Persistent Cycle business model, valuation growth rationale, token economy design, and long-term development roadmap. The content presented transcends short-term market narratives, offering a holistic solution grounded in aerospace industry development principles, commercial infrastructure evolution logic, and long-term asset management perspectives. Through rational, disciplined, and long-term-oriented design, the Star Shield Program seeks to establish a sustainable, verifiable, and replicable reference paradigm for integrating commercial aerospace with digital assets globally.

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PERSISTENT CYCLE  
SATELLITE  
CONSTELLATION WHITE  
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# 01 GLOBAL LOW EARTH ORBIT SATELLITE AND COMMERCIAL SPACE INDUSTRY ENVIRONMENT

## 1.1 Current Status of the Global Low Earth Orbit Satellite Communication and Data Services Market

Low Earth Orbit (LEO) satellites are increasingly becoming a vital component of global communication and data infrastructure. Compared to traditional ground-based communication networks and high Earth Orbit (HEO) satellite systems, LEO satellites offer distinct advantages, including extensive coverage, low latency, flexible deployment, and high scalability. These features make them particularly suitable for global broadband access, remote area communications, maritime and aviation networks, as well as real-time data acquisition and transmission applications.

Currently, global communication and data demand is undergoing three major structural changes:

- **First**, while the global internet user base continues to expand, terrestrial network coverage faces inherent limitations in both geographical reach and cost efficiency.
- **Second**, the demand for data services is evolving from static transmission to real-time, low-latency, and highly reliable systems.
- **Third**, the demand for secure communications and independent data links from governments, enterprises, and key industries has increased significantly.

In this context, low-orbit satellite communications and data services are gradually transitioning from “complementary solutions” to core infrastructure. Their service targets not only individual users but also encompass:

- Aviation, shipping, and global logistics
- Energy, mining, and remote industrial facilities
- Defense, security, and emergency communication systems
- Global data collection, environmental monitoring, and space information services

The commercial nature of the low-orbit satellite market is becoming increasingly evident, with its revenue model evolving from early single-project systems to long-term subscription-based, contract-based, and service-packaged models. This evolution provides commercial space enterprises with predictable and scalable cash flow foundations.

## 1.2 Scale Development Trend of Commercial Space Infrastructure

Commercial spaceflight is undergoing a paradigm shift from “single-point engineering projects” to “systemic infrastructure.” Previously, space activities were characterized by high costs, low frequency, and customized missions, primarily led by national entities or large institutions. At this stage, commercial space enterprises are building sustainable space infrastructure networks through large-scale deployment and systematic operations.

The core features of this shift are:

- The number of satellites has increased from single-digit and tens-level deployments to thousands and tens of thousands.
- Launch frequency has shifted from annual cycles to monthly and even weekly deployments.
- The system design has evolved from single-task operations to a sustainable maintenance framework.

The direct outcome of large-scale deployment is the continuous reduction of both per-satellite costs and per-service costs, while simultaneously enhancing overall system stability, redundancy, and service capability. As satellite constellations gradually take shape, commercial space enterprises are beginning to exhibit attributes similar to terrestrial communication operators. Their value is no longer determined solely by single-mission revenue, but rather by overall system scale, coverage capacity, and service stability.

As a result, the competitive focus in commercial aerospace has shifted from individual technical metrics to system integration capabilities, sustained deployment capacity, and long-term operational proficiency. Companies that can establish a stable expansion rhythm typically demonstrate significant advantages in valuation and market recognition.

### 1.3 Cost Structure and Efficiency Evolution of Aerospace Systems

The cost structure of the aerospace industry is undergoing profound changes. Under the traditional aerospace model, costs were highly concentrated in:

- Cost per launch
- Customized satellite manufacturing
- One-time task execution

In the modern commercial aerospace system, costs are gradually transforming into systematic costs that are both allocable and diminishing, mainly reflected in the following aspects:

- **Firstly**, satellite manufacturing has gradually realized modularization and mass production, which makes the cost of a single satellite continuously decrease with scale expansion.
- **Secondly**, the launch and transportation scheduling system tends to be standardized, and the launch cost is no longer linearly related to a single mission.
- **Thirdly**, the operation and maintenance (O&M) and replacement mechanism are integrated into the overall system design, which avoids the high cost of sudden maintenance.

On this basis, the efficiency gains of commercial space enterprises are not only reflected in “cost reduction” but also in the increased long-term service value generated per unit of assets. When the satellite constellation reaches a certain critical scale, the marginal revenue from additional satellites often exceeds the marginal cost, thereby creating significant economies of scale.

This cost structure and efficiency evolution have endowed commercial aerospace enterprises with economic characteristics similar to those of traditional infrastructure industries, namely:

The initial capital investment is high, but the long-term operation phase yields stable and scalable value returns.

### 1.4 General Law of Valuation Formation of Commercial Space Enterprises

In capital market, the valuation logic of commercial aerospace enterprises has gradually shifted from “technology-driven valuation” to “system- and cash-flow-driven valuation.” The core evaluation factors mainly include:

- **First**, verifiable asset scale, including the number of deployed and planned satellites, coverage scope, and system integrity.
- **Second**, long-term revenue capacity, particularly predictable cash flows generated from subscriptions, contracts, or long-term service agreements.
- **Third**, scalability and replication capability, namely whether the system can expand continuously without significantly increasing marginal costs.
- **Fourth**, the entry barriers and the difficulty of substitution. Once the space infrastructure has formed a scale, it often has a very high competitive barrier.

Under this valuation framework, corporate value typically exhibits non-linear growth patterns, with periodic leaps occurring as system scale expands, service stability improves, and commercialization matures.

Once commercial space enterprises transition from the ‘construction phase’ to the ‘operation phase’, their valuation logic will align more closely with communication infrastructure or global data networks, rather than with traditional engineering projects.

This universal principle establishes a clear and market-understandable theoretical framework for later mapping corporate valuation growth through tokenization.

# 02 PROJECT OVERVIEW

## 2.1 Project Overview

The Star Shield Program is a commercial space infrastructure initiative centered on a low-orbit satellite constellation, designed to establish a global space communication and data service system with long-term operational capacity, scalable expansion capabilities, and systematic value-growth potential.

From its inception, the Star Shield Program has defined its core mission as a long-term space asset management system for the global market, rather than a standalone aerospace project or a temporary technological experiment. Its value stems from the comprehensive coverage, service stability, and sustained revenue generated by the satellite constellation, rather than from short-term events or isolated technological breakthroughs.

As a core methodology, the Star Shield Program adopts the 'Persistent Cycle' framework. This integrated closed-loop structure combines satellite deployment, system operations, service revenue, and reinvestment, enabling the program to progressively reduce reliance on external one-time funding during expansion while establishing a sustainable growth aerospace asset system.

## 2.2 Core Design of the Persistent Cycle Satellite Constellation System

The Persistent Cycle satellite constellation system forms the technical and commercial backbone of the Star Shield Program. Its design philosophy prioritizes long-term, stable, and predictable system scalability over short-term scale expansion.

In terms of system architecture, the satellite constellation adopts a modular and networked design, enabling individual satellites to operate independently while forming a highly coordinated network with ground systems through inter-satellite links. As the number of satellites increases, system performance and service capabilities exhibit network effects rather than linear superposition.

In terms of deployment and operations, the Persistent Cycle framework emphasizes continuous deployment and orderly replacement. Through batch deployment, dynamic supplementation, and incremental updates, the Star Shield Program can avoid the common risks of centralized aging and system fragmentation in traditional aerospace projects, ensuring that the constellation remains in a controllable and stable operational state.

From a business perspective, the system treats service revenue as a key driver for system expansion, transforming new satellites from mere capital expenditures into catalysts for future cash flow and system value. This self-reinforcing mechanism inherently ensures long-term valuation growth for the Star Shield Program.

## 2.3 Space Infrastructure Attributes of the Project

From the perspective of economic attributes and asset structure, the Star Shield Program represents a typical aerospace infrastructure project, fundamentally different in operational logic from traditional internet platforms or light-asset technology companies.

**First**, the Star Shield Program has a solid asset base.

Low Earth orbit satellites, launch, and operational systems form verifiable, quantifiable physical assets that generate service value throughout their lifecycle rather than being consumed in a single instance.

**Secondly**, the service demands addressed by the project exhibit long-term and stable characteristics. Application scenarios such as global communications, data transmission, industry-specific networks, and spatial information services typically operate on a subscription-based or long-term contract model, aligning the revenue structure of the Star Shield Program more closely with an infrastructure operation model.

**Thirdly**, once aerospace infrastructure reaches a certain scale, it naturally creates high entry barriers. The system's scale, coverage, operational experience, and capital investment collectively form a composite competitive barrier, ensuring that mature constellations possess long-term irreplaceability.

Given these characteristics, the Star Shield Program's valuation should focus on system scale, service capacity, and long-term cash flow potential, rather than on short-term market sentiment or single technical metrics.

## 2.4 PXC's Positioning in the Overall Asset and Value System

PXC is a tokenized security designed around the Star Shield Program's comprehensive asset structure and valuation framework. Its core function is to digitally map and facilitate the circulation of unlisted aerospace assets.

At the asset level, PXC establishes a valuation alignment with the Star Shield Program through a compliant equity tokenization framework, enabling the tokenized fragmentation, pricing, and trading of equity originally restricted to private investors and institutional holders.

At the value level, PXC's intrinsic value stems from the overall valuation changes of the Star Shield Program. When the satellite constellation expands in scale, system coverage improves, or service revenue grows, the valuation changes of the enterprise are transmitted to the economic benefits represented by PXC through established mapping mechanisms.

In the market, PXC's trading price is determined by the secondary market, but its long-term value is anchored to the Star Shield Program's asset scale, operational stability, and valuation expansion potential. This positioning makes PXC a securities-type instrument driven by core assets, rather than a functional token reliant on usage scenarios or short-term narratives.

Through PXC, the Star Shield Program bridges aerospace infrastructure assets with global capital markets, enabling investors to participate in the long-term value growth of the company even before its IPO.



# 03 CORE BUSINESS SYSTEM

## 3.1 Low Earth Orbit Communication Satellite Constellation Network

The Star Shield Program's core business is a global constellation network of numerous low-orbit communication satellites. Designed for extensive coverage, low latency, and high availability, it serves users and institutions worldwide with their ongoing needs for stable communication and data transmission.

Low Earth Orbit (LEO) communication satellite constellations achieve continuous coverage of the Earth's surface, oceans, and airspace through coordinated operations across multiple orbital planes. Compared to traditional High Earth Orbit (HEO) systems, LEO constellations demonstrate significant advantages in communication latency and link stability, making them ideal for real-time applications.

In terms of business model, the constellation network is not designed for a single user type but operates through a multi-tiered service structure, encompassing basic communication access, industry-specific networks, and customized network services. As the constellation expands, both network capacity and coverage density increase simultaneously, resulting in network effects that enhance the system's overall service capabilities.

From an asset perspective, the Low Earth Orbit (LEO) communication satellite constellation represents the most critical and long-term value asset of the Star Shield Program.

Its scale and operational stability directly determine the program's overall valuation.

## 3.2 Global Data Acquisition and Satellite Data Services

Building on its communication capabilities, the Star Shield Program has established a global data acquisition and satellite data service system. Through its constellation network, the project continuously collects and transmits diverse data from the ground, oceans, and airspace, providing long-term data support for governments, businesses, and industry users.

The commercial value of satellite data services lies in their sustainability and scalability. Over time, the integration of historical and real-time data significantly enhances the overall value of data assets, transforming data services from one-time deliveries into long-term, subscription-based offerings.

The data services of the Star Shield Program cover multiple application fields, including but not limited to:

- Global Environment and Climate Monitoring
- Logistics and Traffic Condition Perception
- Energy, Resources, and Infrastructure Monitoring
- Regional and Industry-Level Spatial Information Services

In terms of revenue structure, satellite data services primarily rely on long-term contracts and subscription models, which provide stable and predictable cash flow for projects and form a key pillar in the overall valuation.

## 3.3 Launch System and Capacity Dispatching Capability

Stable, high-frequency, and controllable launch capability is the key to sustaining the expansion of Low Earth Orbit (LEO) satellite constellations. The Star Shield Program treats launch and payload scheduling as integral components of its integrated business framework, rather than standalone one-time services.

At the operational capacity scheduling level, the project achieves rhythmic and batched satellite deployment through long-term planning and launch window management. Launch missions no longer aim for single-optimal objectives but prioritize overall system efficiency and cost controllability.

By coordinating launch schedules with deployment plans, the Star Shield Program effectively balances expansion speed and capital expenditure, mitigating systemic risks from concentrated deployments or external uncertainties. This launch and scheduling capability ensures highly predictable constellation expansion, providing stable projections for valuation models.

From a long-term perspective, the capacity scheduling capability itself constitutes a key operational asset of the Star Shield Program, helping to reduce uncertainties during system expansion.

### 3.4 Satellite Operation, Maintenance, Replacement, and Continuous Deployment Mechanism

The satellite operation and maintenance (O&M) and replacement mechanism serves as the cornerstone for the long-term viability of the Persistent Cycle business model. The Star Shield Program incorporates O&M and replacement into its overall design phase, rather than treating them as post facto remedial measures.

At the operational level, the project ensures the constellation's overall stability and high availability through continuous monitoring, remote management, and redundant system design. Performance fluctuations of individual satellites do not substantially impact the overall service.

In terms of replacement and upgrades, the Star Shield Program employs a phased, rolling update strategy, enabling the constellation to continuously introduce next-generation satellites with enhanced performance without service interruptions. This mechanism not only extends the system's overall lifecycle but also improves the long-term service capability per unit of assets.

The continuous deployment mechanism transforms newly acquired satellites from mere capital expenditures into strategic instruments for amplifying system value and revenue potential. This approach enables the Star Shield Program to concurrently achieve scale expansion, service capability enhancement, and valuation growth.



# 04 THE INFINITE LOOP BUSINESS MODEL

The Persistent Cycle business model of the Star Shield Program is a long-term value amplification mechanism built around low-orbit satellite constellations as a “sustainable space infrastructure asset.” Through continuous deployment, scale expansion, stable service revenue, and reinvestment of capital, this model creates a self-reinforcing commercial closed loop. This enables space systems to gradually develop long-term revenue attributes similar to those of communication, power, and cloud computing infrastructure.

## 4.1 Continuous Deployment and Scale Expansion Mechanism

The core principle of Persistent Cycle is “continuous deployment rather than one-time construction.” The Star Shield Program treats the satellite constellation as a dynamically evolving system, continuously scaling its size and capabilities through phased, modular, and batched expansion in response to market demands and technological advancements.

This mechanism ensures the system remains aligned with actual needs, prevents overinvestment, and provides structural flexibility for future upgrades and new payload deployments.

### Continuous Deployment and Scale-out Mechanism

Dimension	Mechanism design	Trade Drift
Deployment method	Batch, modular launch	Reduce the pressure of one stage capital
Constellation structure	Design of Scalable Track and Node	Support long-term capacity growth
Technological iteration	New and old satellites in parallel operation	Smooth upgrade, avoid system interruption
Investment pace	In step with demand growth	Reduce the risk of idle capacity
System Properties	DEI (Dynamic Evolutionary Infrastructure)	Enhance long-term sustainability

## 4.2 The Diminishing Effect of Satellite Scale on Unit Cost

In the Persistent Cycle business model, constellation size directly determines the system’s unit economics. As the number of satellites increases, the Star Shield Program achieves significant economies of scale across manufacturing, launch, and operations.

The decrease in unit cost is not linear, but rather a structural decrease after reaching a certain constellation density, which makes the profitability of the whole system increase with the increase in scale.

### Analysis of the Impact of Scale Expansion on Unit Cost

Cost link	Pre-scaled feature	Scale change	Long-term effects
Satellite manufacturing	Customization and high single-star cost	Platformization, mass production	The cost of a single star continues to decrease.
Launch cost	Low single-shot efficiency	High-frequency, capacity integration	Decrease in orbital launch cost
Operations Management	High level of human involvement	Automated constellation management	The marginal cost of operations approaches zero
System redundancy	Single star dependability	Reliance on constellation overall redundancy	Reducing systemic risk
Unit service cost	As the scale increases	Downside scale	Gross margin expansion

#### 4.3 Long-term Subscription and Contract Model of Service Revenue

The second pillar of Persistent Cycle is its “predictable long-term service revenue structure.” The Star Shield Program primarily serves governments, multinational corporations, and critical infrastructure operators, whose demand for communication and data services is characterized by a long-term and continuous nature.

Therefore, the project primarily adopts multi-year subscriptions and long-term service contracts rather than one-time transactions, ensuring a stable cash flow from its revenue structure.

##### Service Revenue Model Structure

Income type	Form of contract	Income characteristics	Value and significance
Basic communication service	Long-term subscription	Stable and predictable	Cash flow base
Data service	Charge by capacity or usage	Elastic growth	Upward income potential
Exclusive Resource Service	Customized Contract	High added value	Increase overall ARPU
High reliability assurance	SLA service agreement	Low volatility	Enhance customer retention
Multi-year contract	3–10 year cycle	Long-term lock-in	Supporting capital planning

#### 4.4 Capital Return and Reinvestment Cycle Path

The ultimate goal of Persistent Cycle is to establish a self-sustaining system where service revenue drives reinvestment. As the constellation enters stable operation, the project will progressively fund new manufacturing, launches, and system expansions through its own cash flow, thereby reducing reliance on external financing.

This mechanism has enabled the Star Shield Program to evolve from an early-stage capital-intensive project into an infrastructure asset with long-term compound growth potential.

## Persistent Cycle Capital Cycle Path

Stage	Funds provided	Purposes of funds	Impact on the system
Initial construction	External capital	Satellite manufacturing and first launch	Building a basic constellation
Stable operation	Sales of service	Operations and System Optimization	Improve reliability
Scale expansion	Income plus reinvestment	New deployment	Expand coverage and capacity
Maturity stage	Maturity stage	Autonomous expansion	Deleveraging
Long-term state	Continuous cycle	Infinite iteration	Compound interest assets



# 05 THE RATIONALE BEHIND THE COMPANY'S VALUATION GROWTH

The Star Shield Program's valuation framework is not contingent on short-term market volatility or isolated technological breakthroughs. Instead, it is grounded in a scalable low-orbit satellite asset portfolio, systematic service capabilities, and a long-term stable revenue structure. Its valuation logic aligns more closely with global communication networks, cloud computing infrastructure, and critical public utility systems than with traditional high-volatility aerospace technology companies.

## 5.1 Space Assets and Systematic Valuation

Within the valuation framework of the Star Shield Program, individual satellites are not treated as standalone pricing units. Aerospace assets only gain full valuation significance when satellites are integrated into unified scheduling systems, enabling coordinated operations and sustained service capabilities.

Therefore, the project valuation is based on three key components:

- **First**, the operational in-orbit assets, i.e., deployed satellite constellations with service capabilities;
- **Second**, the system capability, including constellation redundancy, scheduling algorithms, and continuous coverage capabilities;
- **Third**, the commercialization capacity, which refers to transforming aerospace systems into an operational and delivery framework that generates long-term revenue.

These three factors collectively determine the project's system-level valuation, rather than a simple sum of assets.

## 5.2 Relationship Between Satellite Quantity, Coverage, and Valuation Growth

With the increase in satellite numbers, the valuation growth of the Star Shield Program does not expand linearly but exhibits distinct phased characteristics. When the constellation size surpasses a critical threshold, the system transitions from a “local capability provider” to a “global continuous service network.”

This transition brings not only expanded service coverage but, more importantly, a fundamental shift in system reliability and customer structure. Enhanced coverage eliminates the need for backup systems, while constellation redundancy reduces single-point failure risks, thereby significantly lowering overall business uncertainty.

At this stage, the valuation model undergoes a fundamental transformation:

Phasic change	Impact on business	Impact on Valuation
From regional to global coverage	Service continuity has been significantly enhanced	Risk premium decline
Redundancy enhancement	Enhanced system stability	Discount rate reduction
Customer structure upgrade	Extend the contract	Increase the valuation multiple

This process makes the valuation growth presents the characteristics of "jump release".

## 5.3 Impact of Income Stability on Valuation Multiplier

In capital markets, valuation multiples are typically determined by revenue quality rather than revenue scale. The Star Shield Program employs a revenue structure dominated by long-term subscriptions and multi-year contracts, ensuring high business predictability.

When revenue streams are stable, contract terms are well-defined, and customer retention is strong, the market typically offers a lower risk discount rate and higher valuation multiples. This principle has been consistently validated across the telecommunications, cloud computing, and public infrastructure sectors.

As the constellation enters its mature operational phase, the project valuation will gradually shift from “future growth expectation pricing” to “stable cash flow pricing,” with the overall valuation benchmark rising accordingly.

## 5.4 Long-term Valuation Expansion Space and Phased Transitions

The long-term valuation expansion of the Star Shield Program is not driven by a single event, but by the continuous release of systemic capabilities. Each constellation-scale expansion, service capability enhancement, or application scenario deepening creates new valuation opportunities.

**At different stages, the capital market’s perception model of projects will also evolve:**

Stage of development	Market awareness focus
Initial deployment	Technological competence and asset formation
Scale formation	System Reliability and Coverage
Stable operation	Cash Flow Quality and Contract Structure
Maturity stage	Global Network Effect and Long-term Compound Interest

The evolution from a “technology project” to a “global aerospace infrastructure asset” has been the key driver behind the sustained valuation growth of the Star Shield Program.



## 06

## EQUITY TOKENIZATION STRUCTURE AND ASSET MAPPING

As an unlisted commercial aerospace company, the Star Shield Program's core assets are primarily valued through equity representing aerospace infrastructure, operational capabilities, and projected future cash flows. PXC's design objective is not to function as an independent token, but rather to achieve blockchain-based mapping and tradable representation of the company's equity value via a compliant Security Token Offering (STO) structure.

This structure makes PXC a value carrier connecting physical aerospace assets and the blockchain financial market.

### 6.1 Tokenization Framework for Assets of Non-listed Aerospace

#### Enterprises

In its unlisted state, the equity of the Star Shield Program is typically restricted to private placements or M&A transactions, with limited liquidity and a prolonged valuation discovery period. By adopting a tokenized structure, the company can split and map part of the equity value into digital securities without altering the legal nature of the physical equity.

**The architecture typically consists of the following layers:**

- The entity operating company (holding aerospace assets, satellite constellations, and business contracts);
- Equity ownership and management vehicle (for asset segregation, unified valuation, and compliance management);
- PXC, a tokenized security, serves as a digital representation of economic entitlements.

In this framework, PXC does not directly represent corporate governance or operational control, but rather economic rights tied to equity value, thereby enabling asset tokenization within legal and regulatory frameworks.

### 6.2 Value Mapping Mechanism for USD 1 Billion Venture Capital Equity

PXC's initial value is anchored to approximately \$1 billion in valuation equity held by existing venture capital investors. This equity portion is not fully tokenized but serves as the underlying reference asset for PXC, supporting the token's economic pricing rationale.

**The mapping mechanism follows these basic principles:**

- **First**, the mapping is based on the overall valuation of the enterprise rather than the valuation of a single asset.
- **Second**, the mapping reflects the economic value relationship, not the direct legal ownership division.
- **Third**, the total token supply is fixed, and changes in equity value will be reflected in the implicit value per token.

When a company's valuation rises, the economic value range anchored by PXC will expand accordingly; conversely, if the valuation declines, the intrinsic value of the token will be adjusted accordingly.

This structure ensures that PXC's value fluctuations are closely tied to the company's long-term growth, rather than being dictated by short-term market sentiment.

## 6.3 The Relationship Between PXC and the Company's Overall Valuation

The valuation of PXC and the Star Shield Program is not based on a fixed exchange ratio, but rather operates through a dual mechanism of “valuation anchoring and market pricing.”

### Under this mechanism:

- The company’s overall valuation forms the intrinsic value basis of PXC;
- Token prices are determined by secondary market transactions;
- The two maintain dynamic linkage through information disclosure, valuation updates, and market expectations.

As the satellite constellation expands in scale, coverage capacity improves, and service revenue grows steadily, the company’s overall valuation will strengthen PXC’s value foundation, thereby driving the token’s price upward over the long term.

This design mitigates compliance and liquidity risks associated with rigid exchange commitments, while preserving pricing flexibility for the company’s growth potential.

## 6.4 STO Attributes and Rights

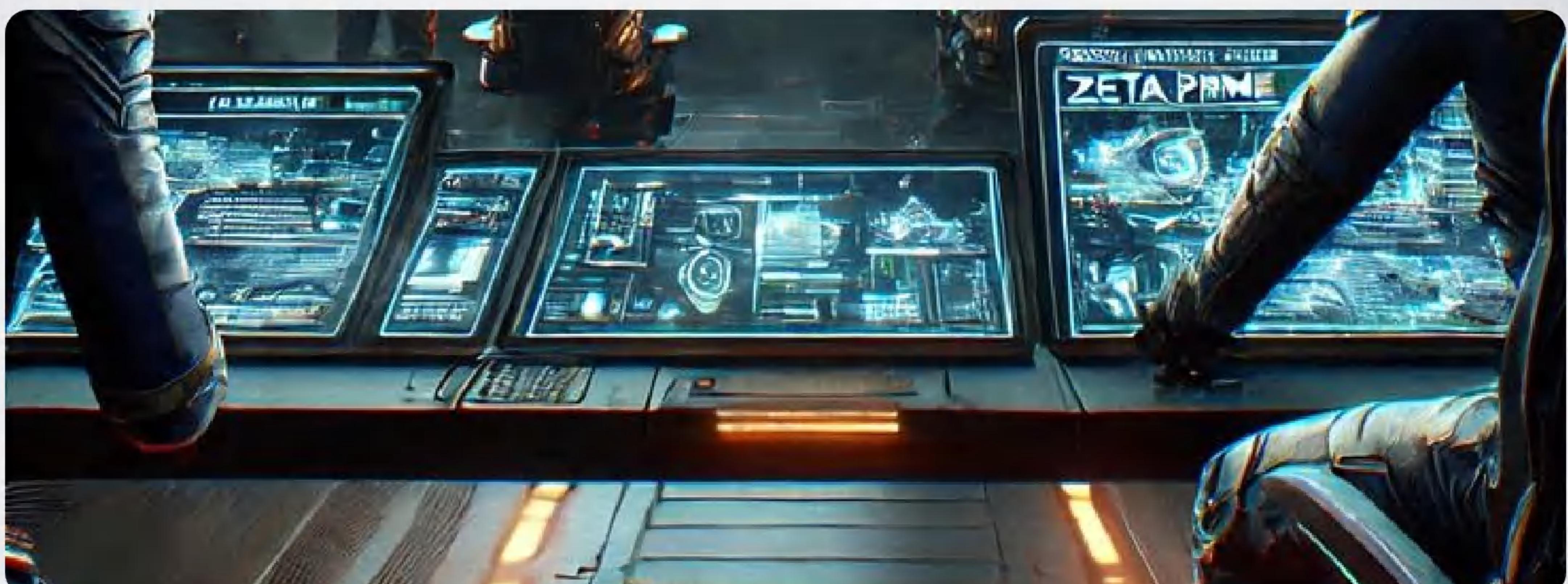
From a legal and regulatory perspective, PXC is explicitly classified as a securities token. It represents economic rights tied to a company’s equity value, rather than physical usage rights or purely functional tokens.

### The potential benefits for PXC holders include, but are not limited to:

- Fluctuations in economic value linked to shifts in the company’s overall valuation;
- The possibility of participating in dividend distribution, profit sharing, or buyback mechanisms under the compliance framework;
- Access to economic arrangements based on tokenized structures during future liquidity events.

It should be noted that PXC does not constitute a direct grant of management rights, voting rights, or board seats. The specific scope of its rights will be strictly limited by applicable laws, offering documents, and regulatory approvals.

By explicitly classifying PXC as an STO, the Star Shield Program provides investors with a compliant pathway to participate in the value growth of commercial space infrastructure, ensuring legal compliance, transparency, and auditability.



# 07

## PXC TOKEN ECONOMIC MODEL

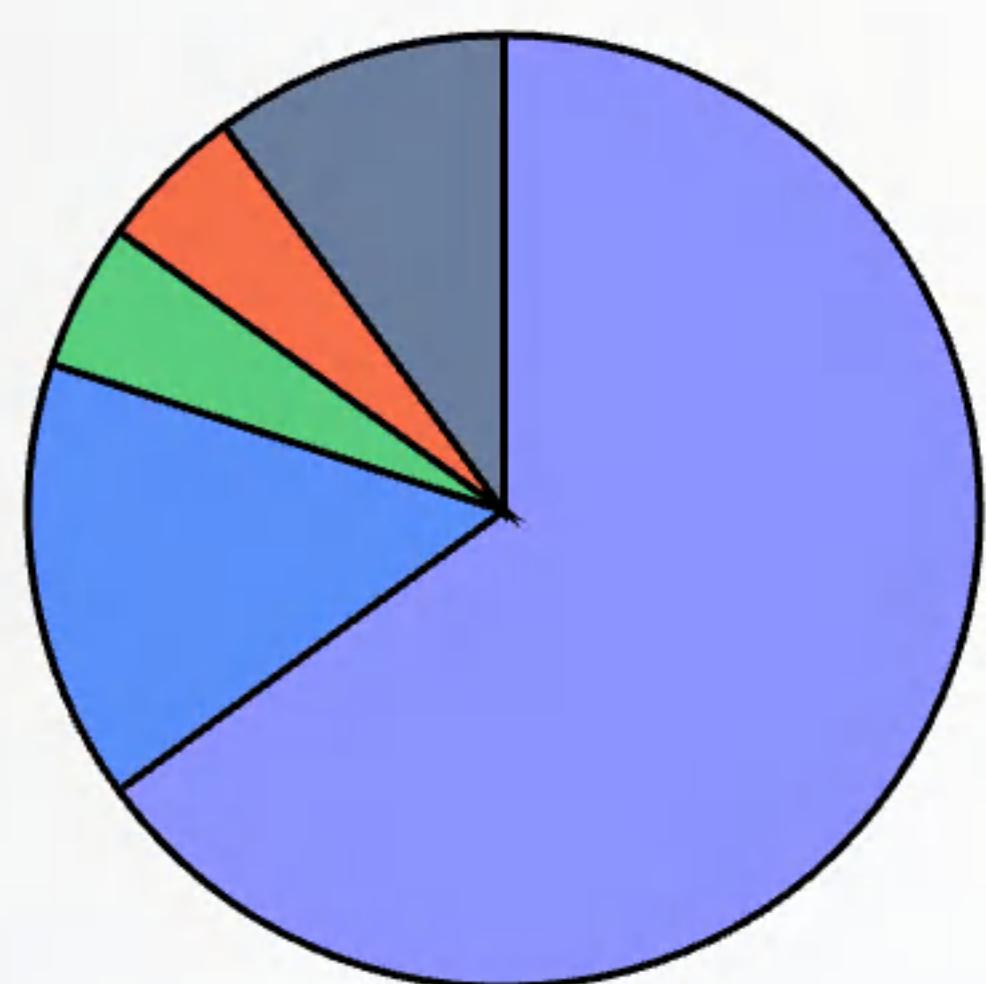
The PXC token economy model is designed around three core principles: long-term value anchoring, predictable supply, and manageable circulation. It serves the Star Shield Program, a long-term space infrastructure project. By avoiding short-term incentives and aligning closely with the company's overall valuation growth, the model ensures the token system remains stable and sustainable across all development stages.

### 7.1 Basic Parameters of PXC Token

Token name: **PXC**

Total print run: **1 billion copies**

Token allocation



- STO public offering: 65%
- Ecosystem and Community Development Team: 15%
- Eco-contributors: 5%
- Strategic Partner: 5%
- Market Marketing Drop: 10%

### 7.2 Description of Locking and Unlocking Mechanism

To ensure the long-term stability of the PXC token system and align its circulation rhythm with the actual business development and valuation growth cycle of the Star Shield Program, the project has implemented clear and strict token lock-up and unlock mechanisms for the privately issued portion.

**The core objectives of lock-up design are:**

- Prevent the early circulation of the stock from causing market shock;
- Restrict the short-term transaction behavior of internal stakeholders;
- Strengthen the long-term participation and the long-term value growth of the project by maintaining benefit consistency.

Token Lockup Arrangement for Team and Ecosystem Development

The tokens allocated to the ecosystem and community development team account for 15% of the total token supply. These tokens enter a five-year lock-up period from the completion of issuance, during which they cannot be transferred, traded, or circulated in any form.

After the lock-up period ends, these tokens will be released annually at a 2% rate through a linear and auditable process.

This mechanism directly links the core team's earnings to the project's long-term success, rather than short-term market performance.

Token Lockup Arrangement for Strategic Partners

The tokens allocated to strategic partners constitute 5% of the total token supply. These tokens are subject to a four-year lock-up period, designed to establish long-term industrial partnerships and resource synergy rather than short-term financial engagement.

After the lock-up period ends, the tokens will be released in phases at a rate of 1% per quarter, allowing a smoother transition into the market and preventing liquidity volatility caused by concentrated unlocking.

#### Principle of Token Release for Ecological Contributors

The eco-contributor tokens constitute 5% of the total token supply. Their release is not scheduled uniformly but determined by the project foundation based on actual contributions. This portion of tokens will be distributed prudently to ensure that token incentives align with genuine, long-term value creation activities.

#### The Significance of Locking Mechanism in Market Stability

By implementing long-term lock-up and phased unlocking for tokens related to the team, strategic partners, and ecosystem, PXC's circulating supply will grow progressively with the project's maturity, rather than being released in a concentrated manner during the early stages.

##### This mechanism helps:

- Reduce early market selling pressure;
- Enhance investors' confidence in the long-term supply structure;
- Ensure the token price movement more accurately reflects the business progress and valuation changes of the Star Shield Program.

All lock-up and unlock arrangements will be recorded on-chain and subject to audit and disclosure requirements under applicable laws and regulatory frameworks.

### 7.3 Circulation Management and Market Stability Mechanism

To ensure the long-term stable operation of PXC in the secondary market, the Star Shield Program will implement a multi-tiered management mechanism for token circulation, balancing liquidity and price stability while complying with regulations.

##### The main measures include:

- Progressive unlocking mechanism: All private placement tokens are subject to defined lock-up periods.
- Information disclosure mechanism: Regular disclosure of the company's operational progress, constellation deployment status, and valuation changes for reference.
- Market behavior constraints: Setting transaction compliance and disclosure obligations for internal entities.
- Under legal and financial conditions, the company may use its surplus to repurchase tokens or conduct value management operations.

Through this mechanism, PXC's circulation structure will consistently align with the Star Shield Program's actual development phase, preventing the token system from becoming disconnected from real-world operations.



# 08

## ECOSYSTEM AND STRATEGIC COLLABORATION

The long-term competitiveness of the Star Shield Program stems not only from its satellite constellation and technological framework, but also from the multi-tiered industrial ecosystem it has established. As a global low-orbit space infrastructure initiative, its ecosystem spans aerospace manufacturing, launch services, communication operations, data applications, and capital support. Through institutionalized collaboration mechanisms, it has formed a sustainable and scalable industrial network.

This ecosystem is not a loose collaboration network, but a long-term collaborative framework built around the Persistent Cycle business model.

### 8.1 Aerospace, Communication and Data Ecosystem Participants

The Star Shield Program ecosystem comprises multiple stakeholders, each with clearly defined roles within the system, where long-term collaboration amplifies value.

**Key participants include:**

- Space manufacturing and engineering services provider: responsible for the R&D and production of satellite platforms, payload systems, and ground equipment.
- Launch and orbital service provider: delivers continuous, high-frequency launch capabilities and orbital management support.
- Telecommunication and network operators: engaged in the construction of satellite-to-ground links, network access, and service distribution.
- Data and Application Service Provider: provides data processing, analysis, and industry-specific solutions through satellite networks.
- Corporate clients and public sector: as primary beneficiaries of long-term service contracts, they provide the system with a stable revenue stream.

The Star Shield Program establishes an infrastructure-centric ecosystem through its unified system coordination and commercial framework, integrating diverse stakeholders.

### 8.2 Value Synergy Mechanism of Strategic Partners

Strategic partners in the Star Shield Program ecosystem serve as long-term collaborators and resource complementers, rather than short-term market participants. Through structured collaboration mechanisms, the program integrates the technical capabilities, market channels, and industry resources of partners into the overall value chain.

**Value synergy is mainly reflected in the following aspects:**

- Competency complementarity: Through collaboration, we can address critical gaps in satellite manufacturing, launch operations, communication systems, and data processing capabilities.
- Demand lock-in: Strengthen revenue predictability by maintaining service relationships with key customers or channels during their growth phase.
- Cost optimization: Reduce unit manufacturing, launch, and operation and maintenance costs through large-scale collaboration.
- Ecosystem expansion: Accelerate global deployment and market penetration by leveraging partners' regional and industry resources.

Through long-term lock-up and phased release mechanisms, strategic partners maintain strong alignment with the project development cycle in terms of economic incentives.

## 8.3 Incentive and Audit System for Ecological Contributors

To align ecological incentives with genuine value creation, the Star Shield Program has implemented a foundation-led review and reward system for ecosystem contributors. This mechanism prevents arbitrary incentives and short-termism, ensuring token resources are dedicated to long-term ecosystem development.

### Potential areas of contribution by ecological contributors include:

- Core technology R&D and system optimization;
- Development of automated tools for constellation operation and maintenance;
- Industry application solutions and data service innovations;
- Global market expansion and customer service support.

All ecological incentives must undergo contribution evaluation, compliance review, and phased distribution processes to ensure transparency, traceability, and rationality in incentive distribution.

## 8.4 Globalization Ecological Expansion Strategy

The ecological expansion of the Star Shield Program follows a global strategy of 'regional implementation and gradual collaboration.' The project will progressively introduce local partners based on regional regulatory environments, market demands, and infrastructure conditions, forming regional ecological nodes.

### The core principles of the expansion of globalization ecology include:

- Compliance first: Respect national space, communications and data regulatory frameworks;
- Local collaboration: introduce local manufacturing, operations and service partners;
- Modular deployment: flexibly allocate constellation resources based on regional needs.
- Long-term binding: Strengthen collaboration through long-term contracts and token lock-up mechanisms.

Through this strategy, the Star Shield Program will progressively establish a global aerospace infrastructure ecosystem, providing robust support for long-term business expansion and valuation growth.



# 09 TEAM INTRODUCTION

The core team of the Star Shield Program comprises members with expertise in aerospace engineering, infrastructure operations, and capital structure design.

Their backgrounds span commercial aerospace system development, global communication network deployment, and long-term asset management, enabling them to sustain the implementation of the Persistent Cycle's infinite-loop business model.

## CEO — Thaddeus Cole Harper

Thaddeus Cole Harper brings extensive experience in managing large-scale infrastructure and high-capital-density projects, specializing in transforming complex engineering systems into sustainable, scalable commercial assets. In the Star Shield Program, he leads strategic planning, capital structure design, and global business deployment.

His management philosophy prioritizes long-term vision and systematic expansion, dedicated to developing low-Earth orbit satellite constellations into a space infrastructure platform with stable cash flow and sustained valuation growth potential.

## COO — Montgomery Reed Ellison

Montgomery Reed Ellison has extensive experience in global operations, complex system scheduling, and cross-regional project management. In the Star Shield Program, he oversees constellation deployment timelines, the development of operational systems, and cross-party collaboration management.

His core mission is to ensure the operational stability of the Persistent Cycle business model, maintaining high consistency between satellite deployment, service delivery, and capital utilization, thereby reducing systemic operational risks.

## CTO — Alastair Vaughn Mercer

Alastair Vaughn Mercer is a senior aerospace and communications systems engineering expert with extensive experience in low-orbit satellite architecture, constellation scheduling algorithms, and high-reliability system design. In the Star Shield Program, he spearheads the development of satellite platform technologies, constellation network architectures, and system-level redundancy and upgrade solutions.

The technology concept emphasizes modularization, iterability, and long-term maintainability, which provides a solid technical foundation for the continuous deployment and scale expansion of the constellation system.



# 10

## PROJECT DEVELOPMENT ROADMAP

The Star Shield Program's development roadmap centers on low Earth orbit (LEO) satellite constellations as a long-term space infrastructure asset, guided by the principle of "capability-first, scale progression, and value realization." Rather than focusing on single milestones or short-term events, the program advances through phased capability-building, achieving a step-by-step evolution from system maturation to valuation leap. The overall strategy is guided by the Persistent Cycle business model, ensuring alignment between technology deployment, business expansion, and capital structure.

### **The first stage: the construction of basic system and the ability verification**

In its initial phase, the Star Shield Program prioritizes establishing the constellation infrastructure while validating the stability and scalability of low-orbit communication and data services.

#### **The focus of this phase includes:**

- Standardized design of satellite platforms and payload systems;
- Deployment and in-orbit validation of the initial low Earth orbit constellation;
- Establishment of ground control systems and constellation scheduling capabilities;
- Availability verification of core communication and data services.

This phase signifies the project's transition from conceptual and R&D stages to an operational aerospace system, establishing the technical and engineering foundation for subsequent large-scale deployment.

### **The second stage: constellation scale expansion and service capability formation**

After completing the basic capability validation, the project will enter the constellation-scale expansion phase. The core objective of this phase is to enhance coverage, redundancy, and service continuity through continuous deployment, thereby enabling the system to achieve stable commercial delivery capabilities.

#### **The main directions of advancement include:**

- The number of satellites continues to increase, resulting in regional to trans-regional coverage;
- The redundant constellation architecture is well-designed to reduce single-point failure risks;
- Standardized service products for institutional clients are launched;
- A preliminary model of long-term subscription and service contracts is established.

At this stage, the valuation logic of the Star Shield Program will shift from "assets in the construction phase" to "systems in the operational phase."

### **The third stage: global coverage and long-term contract lock-in**

When the constellation scale and scheduling capacity reach critical thresholds, the project will enter the phase of global continuous coverage. The core of this phase is the comprehensive enhancement of system reliability and commercial stability.

#### **The focus of this phase includes:**

- Continuous communication and data coverage in key regions of the world;
- Sign multi-year contracts with governments, multinational corporations, and critical infrastructure clients;
- Enhance Service Level Agreements (SLAs) and high-reliability assurance mechanisms;
- Enhance system automation, maintenance, and intelligent scheduling capabilities.

This phase marks a pivotal moment for the company's valuation to undergo a significant leap, with the system now officially attaining infrastructure-level capabilities.

## The Fourth Stage: Endogenous Cash Flow Driven Continuous Expansion

With steady growth in service revenue, the Star Shield Program will gradually fund its next phase of constellation expansion and system upgrades through internal cash flow, reducing reliance on external financing.

### The main features of this phase include:

- Service revenue becomes the main source of reinvestment;
- The constellation deployment enters a sustained, rhythmic cycle;
- Further reduction in unit costs with scale;
- The overall risk structure of the project has been significantly optimized.

At this stage, the Persistent Cycle business model begins to fully leverage its self-reinforcing effect.

## The Fifth Stage: Mature Infrastructure and Long-term Value Release

Through sustained operation, the Star Shield Program will evolve into a global aerospace infrastructure platform. At this stage, the project's focus will shift from scale expansion to value-driven development.

### This phase includes:

- Diversified data and communication service scenarios are further developed;
- The network of ecological partners and regional nodes continues to expand;
- Long-term stable operation of the system and generational upgrades;
- The company's valuation and PXC's value are in a long-term compound interest relationship.

This phase signifies the project's complete transition from a space engineering initiative to a long-term asset-based infrastructure platform.



# 11 DISCLAIMER

This white paper is intended solely to outline the overarching vision, technical framework, business model, token economy design, and potential development directions of the Star Shield Program (hereinafter referred to as “the Program”). It serves as informational guidance for potential participants and does not constitute any form of investment advice, offer, invitation, commitment, guarantee, or legal, financial, or tax opinion. The content herein shall not be construed as a basis for purchasing, subscribing to, trading, or holding any tokens, securities, or assets, nor shall it constitute a guarantee of any returns, profits, or asset appreciation.

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