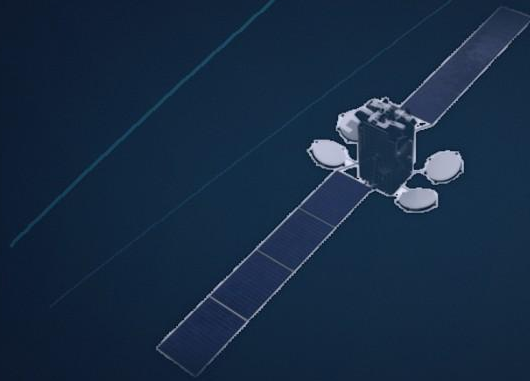


Progress in China's Commercial Space to Empower the Sustainable Development of Developing Countries

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01

Current Status of China's Commercial Space Development

China's commercial space sector is entering the fast track of industrialised, high-quality development.



02

International Integrated Marketing for Developing Countries

One-stop, in-orbit delivery services enable developing countries to build independent space capabilities.



03

Future Outlook and Conclusion

Deeper cooperation and shared development open a replicable path for South-South cooperation.

01

Current Status of China's Commercial Space Development

China's commercial space sector is entering the fast track of industrialised, high-quality development and fostering new quality productive forces.



1.1 High Aspirations: Bringing Space Benefits to Global Livelihoods

"We should continue to open our arms, deepen international space exchanges and cooperation in various forms, share development achievements with all countries, improve outer space governance, and make the achievements of space science and technology better benefit mankind."

President Xi Jinping, Chang'e-6 mission, 23 September 2024



Low-Cost Cooperation as Strategy

This strategy helps Belt and Road partner countries build independent national space capabilities and achieve techno-economic integration.



Cost-Effective Systematic Solutions

High-value commercial space offerings help developing countries close gaps in space infrastructure.



Joint R&D and Technical Training

China transfers space technology experience and cultivates local talent for self-sustained national space industries.



Benefits in Everyday Life

Space achievements serve ordinary people, contributing space strength to a community with a shared future for mankind.

"Let the achievements of space science and technology better benefit mankind."

1.2 A Highly Active Market with a Limited Domestic Scale

~RMB 600 Bn

China's commercial space economy reached this scale in 2025.

During the 14th Five-Year Plan period, commercial launches and satellite deployments hit record highs, and reusable launch vehicle development achieved phased progress.

RMB 575.8 Bn

BeiDou (BDS) revenue from industry and consumer applications accounted for over 95% of commercial space revenue.

50 launches · 54%

The 50 commercial space launches in 2025 accounted for 54% of China's annual total space launches.

311 satellites · 84%

The 311 commercial satellites orbited in 2025 accounted for 84% of China's annual total.



◆ Satellite and launch vehicle manufacturing accounts for nearly 2% of revenue, and the economic value of commercial satellite applications has yet to scale.

1.3 A Rapid Leap in Satellite Manufacturing Capability

30+

Satellite "super factories" have been built or are planned nationwide, for example in Wenchang, Shanghai G60/Gesi, Taizhou/Geely and Wuxi/MinoSpace.

7,000+

Annual satellite production capacity of this scale is now being approached nationwide.

10+

Launch vehicle companies of this number are active in China's commercial space sector.

100-500 kg

Production focuses on the **small-satellite class** within this mass range.

HOW THE CAPACITY IS BUILT

- Digital twins, robotic assembly and automotive-grade pulsed production lines have been introduced across factories.
- Mass production capacity is concentrated on small satellites.



1.4 Launch Vehicles and Constellations Show Broad Momentum

LAUNCH VEHICLES

10+ launch vehicle companies are active. Technical routes are shifting to LOX/methane and LOX/kerosene with reusability, and sea launches are increasing. China is the world's most active in launch vehicle and satellite development, with the most companies, the most launch vehicle types and the most launch vehicle brands.

TECHNOLOGY BREAKTHROUGH

Routine first-stage recovery and reuse have **not yet been achieved**. The sector remains in the technology breakthrough phase.

CONSTELLATION DEPLOYMENT

Xingwang and Qianfan are national LEO broadband constellations in high-density deployment. Commercial navigation augmentation systems (e.g., CentiSpace) are deeply integrating with BDS.

INTERNATIONAL BENCHMARKING

Jilin-1 and Gaojing are internationally advanced in high-resolution optical, C-band SAR and multispectral imaging.

◆ **China is the world's most active developer of launch vehicles and satellites, yet the economic value of commercial satellite applications has yet to scale.**

1.5 Export Profile: A Broad, Hardware-Led Portfolio

01

Hardware-Based Exports

Current exports form a broad portfolio that is led by satellite hardware.

02

Five Process Links

Exports span five segments of the industry chain, namely satellite development & production, launch, TT&C, operation & maintenance, and application.

03

System-to-Components Coverage

The portfolio covers systems, subsystems, components, basic technologies, facilities and equipment, as well as technology transfer for satellite manufacturing and applications.

04

Launch vehicle Export control

Launch vehicle manufacturing and launch-site construction & operation fall under strict export control administration, so these areas are not yet covered by commercial space internationalisation.

05

Future Directions

An industrial ecosystem driven by satellite applications and space-asset utilisation has yet to form.

1.6 Rapid Development, Aligned with International Market Demand

15th Five-Year Plan period: mass deployment of large LEO constellations will release RMB 100-billion-level demand across satellite manufacturing, launch vehicle manufacturing and launch services, with downstream satellite applications at a still higher order of magnitude.

INDUSTRIAL EXPANSION

Intelligent, large-scale manufacturing is bringing down costs. Cost-effective launch services covering multiple orbital altitudes, especially rapid constellation deployment, will keep improving.

TECHNOLOGICAL BREAKTHROUGH

Low-cost reusable launch vehicles continue to achieve technical breakthroughs. Commercial communication and remote sensing constellations, space microgravity and space situational awareness are advancing in step with global commercial space.

MARKET EXPANSION

Chinese firms are bringing satellites, satellite systems and application services to international markets, meeting demand for independent national space capabilities.

FRONTIER EXPLORATION

Space tourism, on-orbit services, space manufacturing and lunar/deep-space commercialisation have **not yet formed**.

◆ The goal is a dual-circulation development pattern linking domestic and international markets, sustaining market revenue and capital investment.

02

International Integrated Marketing for Developing Countries

CGWIC aggregates the quality resources of China's space industry chain and delivers one-stop, in-orbit solutions for developing countries.



2.1 Emerging Space Nations: Real Constraints

Most emerging space nations are developing countries that build space capabilities from application upward, with long-standing reliance on international cooperation.



Rising sovereign demand

Countries in Asia-Pacific and Africa seek **independent capabilities**, local industries and talent, as well as independent satellite system operation.



High cost sensitivity

Space budgets are trending upward but remain **limited in scale**.



Weak infrastructure

Space infrastructure is **generally lacking**.



Talent shortages

Professional, engineering-management and operational personnel are **in short supply**.



Capability gaps

These countries have **limited experience** of international rules and norms, and **insufficient capacity** to manage large, complex space projects.

2.2 Why Traditional Cooperation Models Fall Short



Separate procurement

Mature operators select suppliers globally and procure satellites, launch services and ground application systems separately.



Multi-supplier coordination

Coordination is difficult because talent is scarce across space systems engineering, and projects rarely translate into national capability growth.



Primes' core focus

Core businesses focus on high-value, technically complex satellites and medium-to-heavy launch services for mature operators and government users.



Turnkey reluctance

Primes avoid full-life-cycle turnkey services in order to protect their overall margins.



Profit-driven design

They offer no systematic solution for accompanying emerging nations from application to full capability.

2.3 CGWIC's Answer: Aggregating China's Space Value Chain

01 Two decades of delivery

Since the early 2000s, CGWIC has provided [in-orbit delivery](#) of GEO commercial communications satellites, helping emerging space nations build independent operation and application capabilities.

02 Extended business scope

CGWIC has extended its business to remote sensing satellite operation and applications.

03 Transfer & Localisation

Technology transfer and localised space infrastructure help clients master satellite development technology and build national space industry systems.

04 Lower entry thresholds

This model effectively lowers the technical and financial thresholds for entering the space domain.

05 Recognised by developing countries

One-stop in-orbit delivery is a [competitive edge over conventional manufacturers](#) in this market segment.

A Proven Track Record: 21 Satellites Delivered In Orbit

21

CGWIC has delivered GEO communications and remote sensing satellites in orbit for clients, with every project completed on contractual schedule.

Clients Across Multiple Countries and Regions

Nigeria, Venezuela, Pakistan, Laos, Bolivia, Belarus, Algeria, Indonesia, Egypt, Hong Kong (China), and more.



Alcomsat-1 featured on Algeria's 500-dinar banknote

Full Life-Cycle Service Scope

- | | |
|---|--------------------------------------|
| Space strategy planning | In-orbit management |
| Frequency and orbital-slot coordination | Satellite operation and applications |
| Satellite development | Finance and insurance arrangements |
| Launch services | Technical training |
| Ground TT&C and application systems | |

◆ CGWIC helps clients overcome gaps in engineering management and experience, while cutting transaction costs and coordination difficulty across parties.

2.4 One-Stop Platform Service: Strength Through Ecosystem



- 01** **"Platform + ecosystem" management:** clients interface only with CGWIC, and CGWIC coordinates resources across the whole chain.
- 02** **The platform removes multiple professional thresholds,** complex compliance requirements, heavy coordination workloads, budget-control difficulty and uncontrollable schedules.
- 03** **This approach builds the engineering, commercial and compliance management foundations** for integrated marketing.

2.5 One Country, One Policy: Tailored, Adaptable Solutions



Open collaboration

Open innovation

This approach breaks boundaries across enterprise, group and industry levels.

Inside CASC

CGWIC forms an industrial consortium with satellite and launch vehicle development, operation and application units, enabling shared resources and complementary strengths.

Outside CASC

CGWIC builds market-based links with high-end manufacturers, financial & insurance institutions, and vocational colleges.



Flexible configuration

Standardised basis

Solutions draw on CASC's mature satellite product family, tailored to each client's budget, technical targets, application goals and infrastructure conditions.



Module-based adaptation

Modular decomposition

Complex needs are broken down into visible, combinable business modules, balancing standardisation with personalisation.



◆ CGWIC will strengthen overseas investment and joint-operation modules to meet rising demand for local capability building.

2.6 "Triple Controllability": A Self-Reliant Full Chain

Amid de-globalisation and geopolitical volatility, a self-controlled full industrial chain is the core asset for international market development.

Supply Chain Controllable

CGWIC avoids disruption risks from export controls on core components and key equipment, and stability extends from construction through the whole on-orbit life.

Full Life-Cycle Controllable

CGWIC provides end-to-end management across development, launch, in-orbit testing and operation, and all in-orbit delivery projects advance strictly on contractual schedule.

Cost Controllable

The integrated supply chain cuts unnecessary R&D, production and coordination costs, and constellation-scale production further dilutes satellite and launch costs.

◆ **Supply-chain security is converted into dual assurance of time and cost, delivering reliability and cost-effectiveness that win client trust and lay the foundation for long-term cooperation.**

2.7 Long-Term Win-Win: Extending One-Stop Solutions



Private capital admitted

Since end-2014, private capital has been fully admitted to space manufacturing, and China's space sector has entered a new, market-oriented stage.



Tailable in-orbit delivery

CGWIC offers tailable in-orbit delivery for emerging Chinese commercial space firms, easing barriers in industry norms, finance & insurance, launch scheduling and satellite and launch-vehicle selection, and improving project schedules and success rates.



Application-oriented remote sensing

Low-cost systems are becoming a highly competitive "red ocean" market.



Supply-chain resilience management

CGWIC aggregates technical, product and business-model strengths across market players, avoiding fragmented overseas expansion and disorderly competition.

◆ CGWIC aims to foster a healthy co-opetition landscape of resource sharing and mutual benefit across China's commercial space industry chain.

03

Future Outlook and Conclusion

CGWIC will unswervingly deepen international space cooperation and share the fruits of development with emerging space nations.



3.1 Future Directions: From Delivery to Co-Development

Localised infrastructure

Build localised space infrastructure and conduct joint operations with partner countries.

Supply & industrial chains

Co-build supply chains and industrial chains while practising cross-border knowledge management.

Extended cooperation

Extend cooperation to satellite renewal, application-scenario expansion and joint talent cultivation.

Chinese standards abroad

Advance the overseas adoption of Chinese space standards and systems while shouldering the responsibilities of a major country.

Iterating one-stop solutions

Continuously iterate its one-stop solutions and optimise the dual-circulation development pattern.



3.2 Conclusion: A Replicable Path for South-South Cooperation

01 A systematic undertaking

Space internationalisation is a complex and systematic undertaking.

02 Essence of integrated marketing

Integrated marketing precisely matches the systemic strengths of China's full space industrial chain with emerging space nations' needs for independent capability building.

03 Customer-centric empowerment

Customer-centric, full-chain, one-stop empowerment injects new momentum into the diversified and open development of the global space industry.

04 A replicable path

This model offers a replicable and scalable new path for South-South cooperation in high-tech fields.

05 CGWIC's commitment: strategy

CGWIC is committed to platform services plus ecosystem building, and to standardisation plus customisation.

06 CGWIC's commitment: management

Through supply chain resilience management, life-cycle service management and customer success management, CGWIC will deepen international space cooperation with a more open and inclusive approach.



China's Programme Empowering the Global South

The successful application of integrated marketing precisely matches the systemic strengths of China's full space industrial chain with the independent capability needs of emerging space nations.

Pattern innovation

The one-stop empowerment model injects new momentum into the diversified and open development of the global space industry.

South-South cooperation

The model explores a replicable and scalable new path for South-South cooperation in high-technology fields.

Strategic commitments

CGWIC adheres to its platform positioning, combining platform services with ecosystem building, and standardisation with customisation.

Supply Chain Resilience Management

Full Life-Cycle Service Management

User Success Management

With a more open and inclusive approach, CGWIC will deepen international space cooperation, provide higher-quality and more reliable space products and services, and help more emerging space nations realise their aspirations for independent space development.



Thank You!

From the "Made in China" to the "China Program", one-stop space services are putting the wings of independent development into the global South. China's aerospace, with the advantages of the entire industrial chain to enable the world, so that space technology truly benefits every country pursuing development.

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China's Space, Serving the World