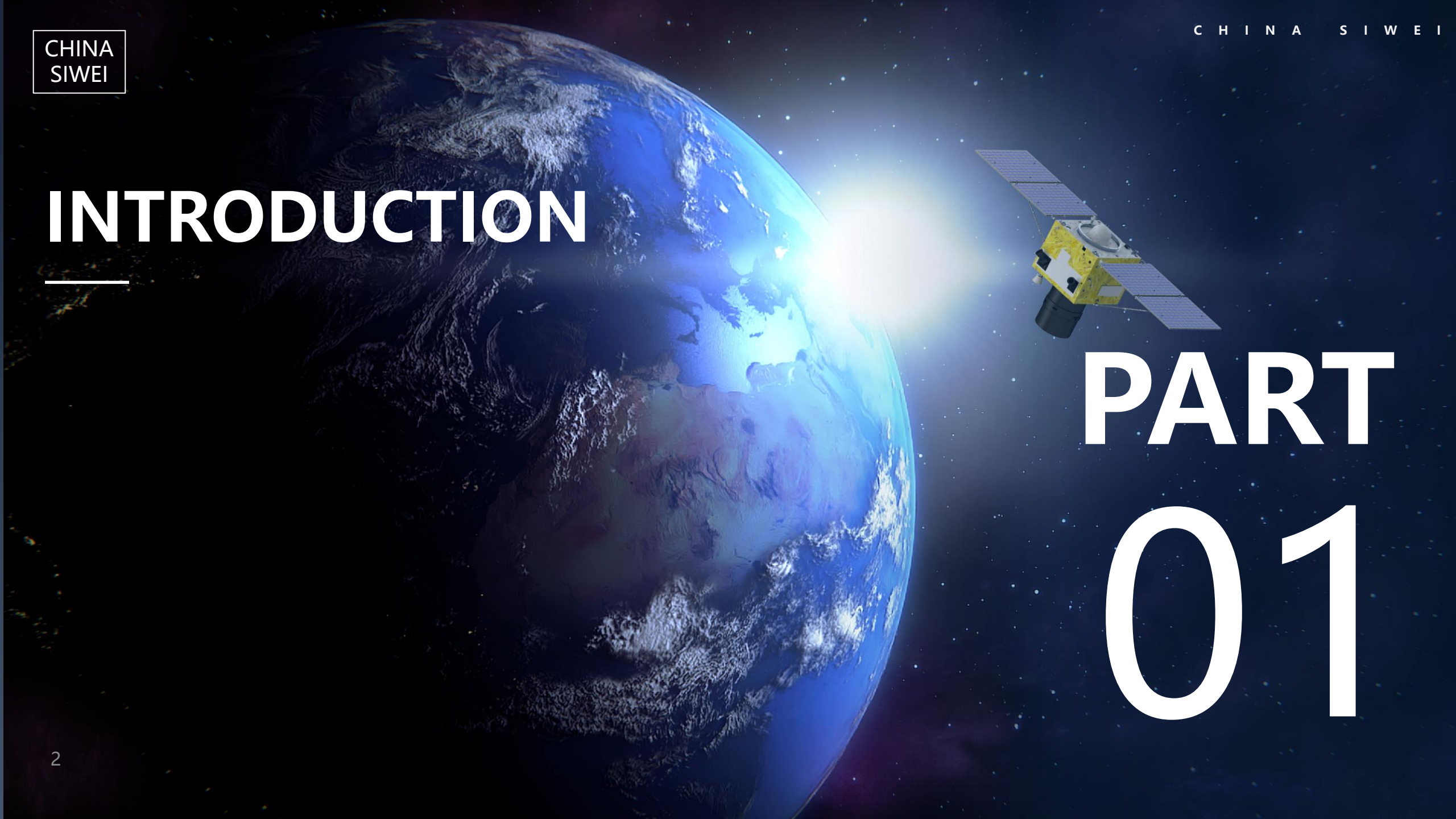
中国四维测绘技术有限公司
中国航天 China Siwei Surveying and Mapping Technology Co. Ltd.

The Remote Sensing Satellite Industry: Key Insights From Siwei

CHINA SIWEI

INTRODUCTION



PART 01

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Most Popular Sensors for Commercial Earth Observation Satellites

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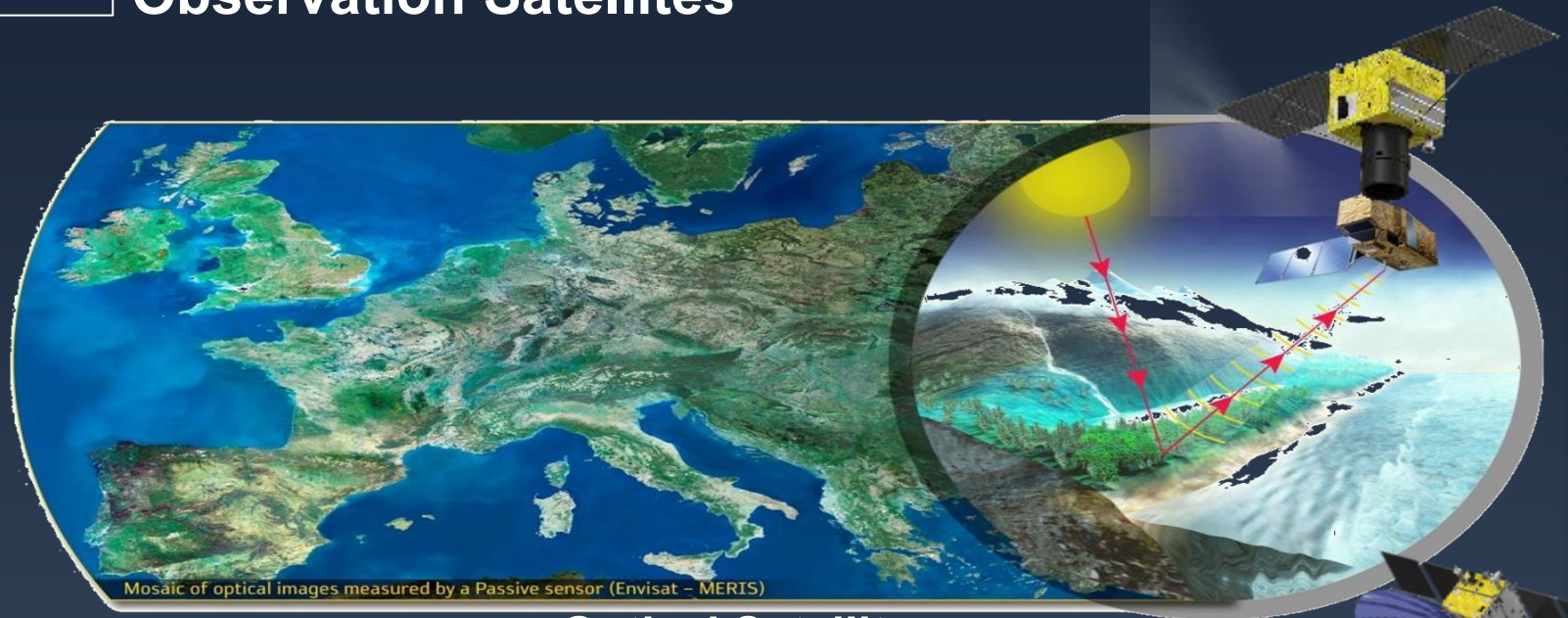
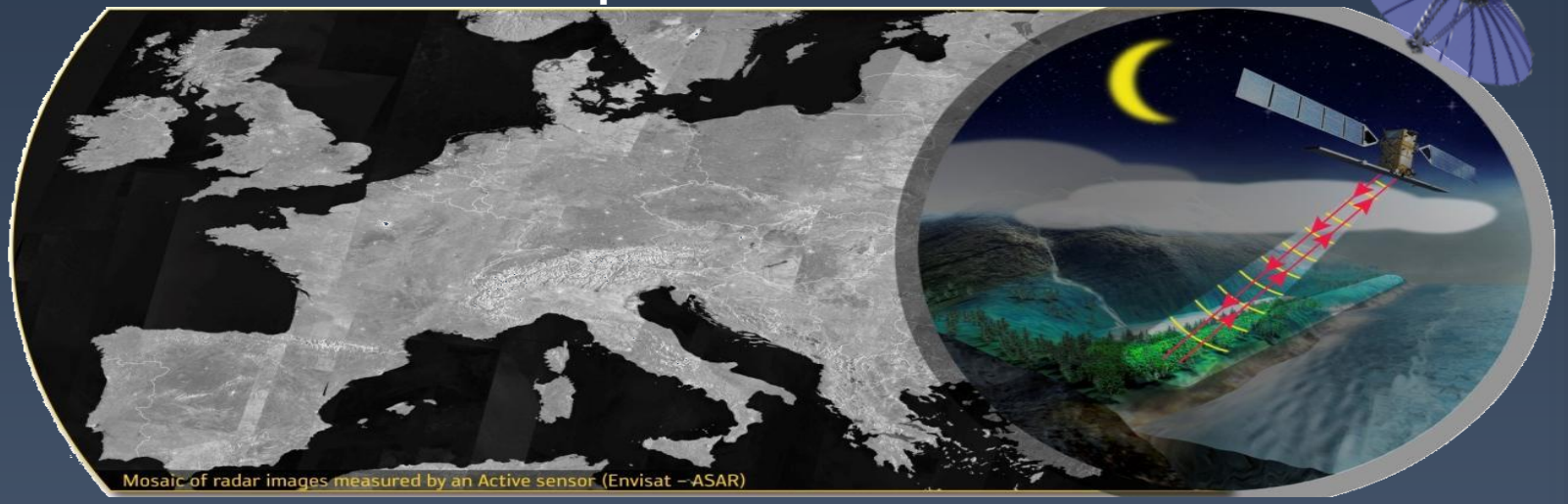
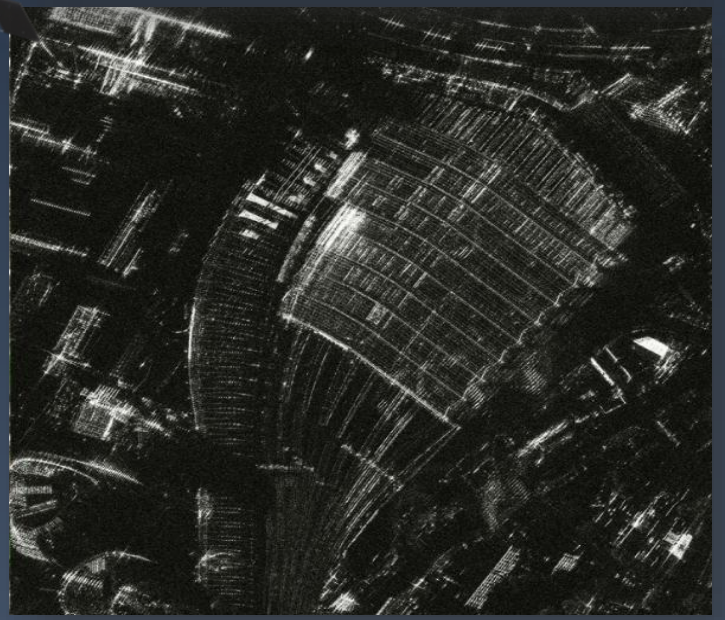


Optical Satellite



SAR Satellite



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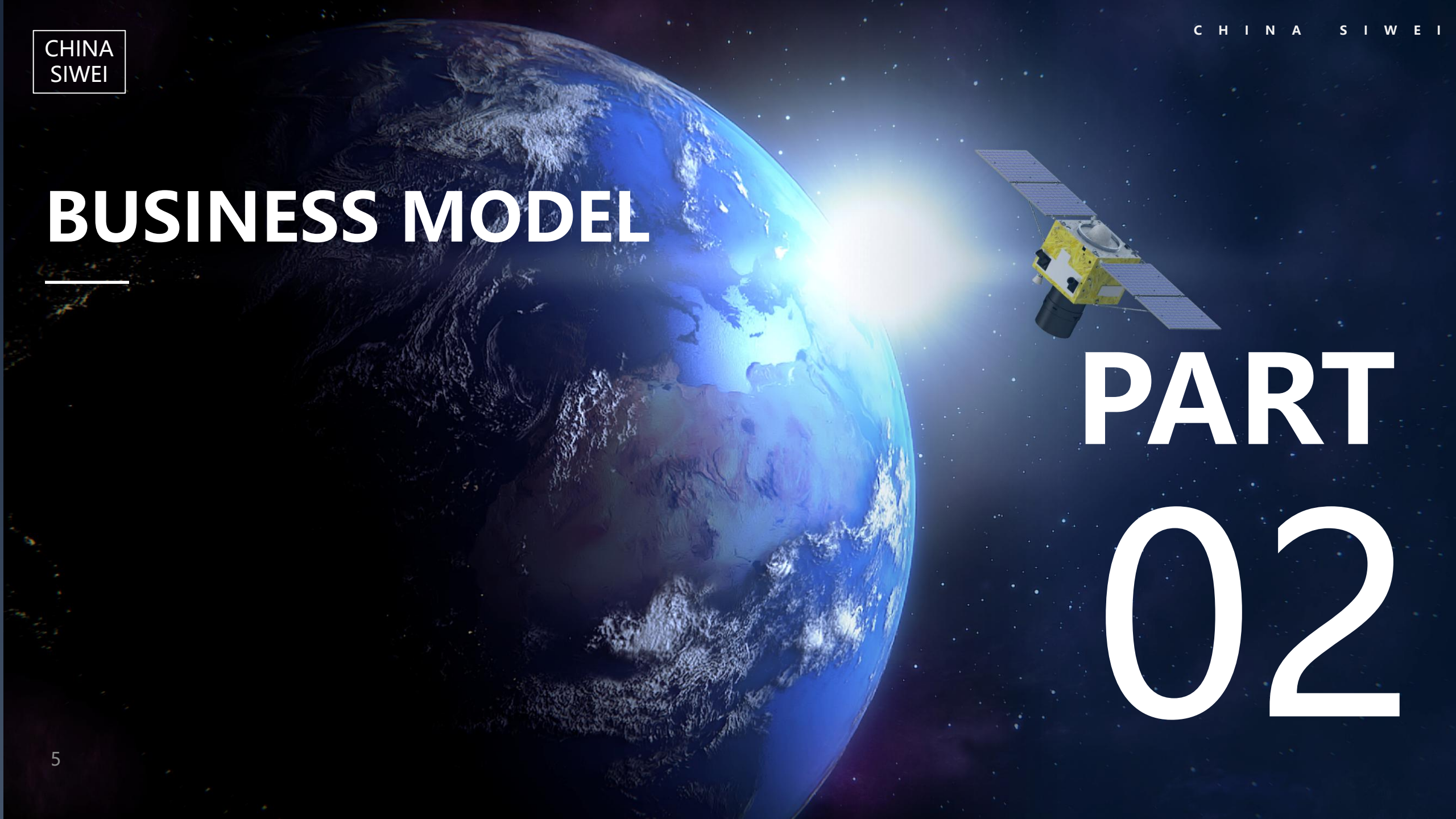
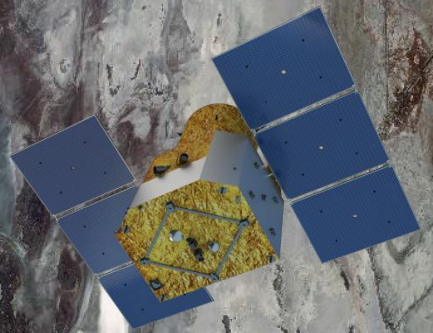
BUSINESS MODEL



PART 02

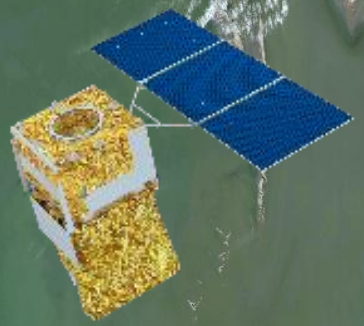
Company Profile



[China Siwei]

Established in 1992. A subsidiary of China Aerospace Science and Technology Corporation（CASC）.

Unique state-owned and leading remotes sensing satellite operator and geospatial service provider in China.



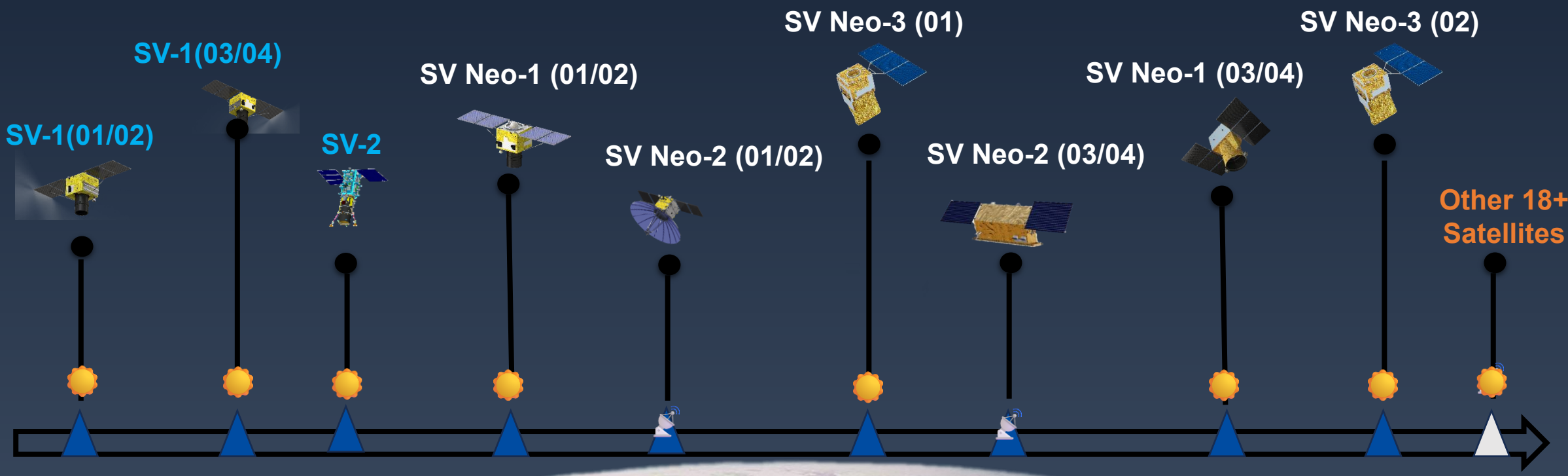
@ SuperView Neo 03

CHINA SIWEI

COMMERCIAL SATELLITES

中国四维测绘技术有限公司
中国航天 China Siwei Surveying and Mapping Technology Co. Ltd.

Besides the first generation 5 optical satellites, China Siwei is building its SV Neo constellation, totally 28 satellites, with already 10 in orbit .



Satellite	SuperView-1	SuperView-2	SuperView Neo-1	SuperView Neo-2 (SAR-X-band)	SuperView Neo-3
Resolution	0.5m	0.42m	0.3m	Up to 0.5m	0.5m (Wide Swath)
QTY	1 (4)	1	4	4	2

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COMMERCIAL SATELLITES

中国四维测绘技术有限公司
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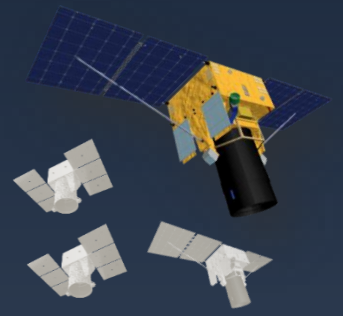
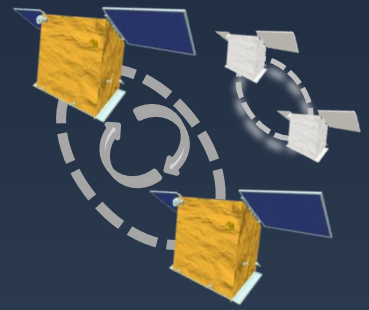
SV Neo Constellation—World class remote sensing satellites with 3 types of Payloads



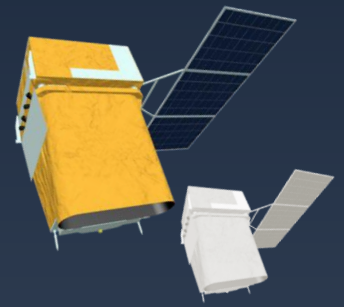
SV Neo-1 series
VHR
Agile, optical

- Agile, with different shooting modes, strip, corridor, etc.
- Stereo imaging capacity
- Ultra stable imaging
- Ultra High Resolution
- High positioning accuracy



SV Neo-2 series
HR SAR

- Global high-precision surveying and mapping
- Global all-weather imaging
- High resolution: Focused beam with the highest resolution in China
- Deformation monitoring of important facilities



SV Neo-3 series
HR
Wide width/8bands

- Wide width: 130 kilometers to support multi period monitoring with high temporal resolution
- Multispectral: 4 additional bands for higher image interpretation capability
- Efficient imaging: achieving rapid coverage of effective weather conditions

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SuperView Neo-1

中国四维测绘技术有限公司
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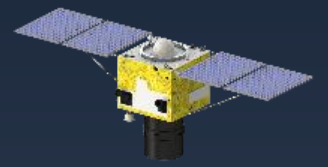
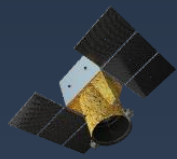
0.3m Optical Satellite



SuperView Neo-1 01/02
Launched in 2022



SuperView Neo-1 03/04
Launched in 2025

Satellite	NO	QTY	Orbit	Pan Resolution	MS Resolution	Band	Spectral range	Swath width	MS Band Registration Accuracy	Imaging Mode	Accuracy (without GCP)
SV Neo-1	01/02	2	500km	0.35m	1.2m	P	450nm ~ 800nm	12km	≤0.3 pixel	➢ Continuous strip ➢ Multi-target ➢ Multi-angle ➢ Multi-strip ➢ Stereo	11m (CE90)
						B1	450nm ~ 520nm				
						B2	520nm ~ 590nm				
	03/04	2		0.3m	1m	B3	630nm ~ 690nm				5m (CE90)
						B4	770nm ~ 890nm				


@ SuperView Neo-1
30cm_DOM
Saudi Arabia

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SuperView Neo-2

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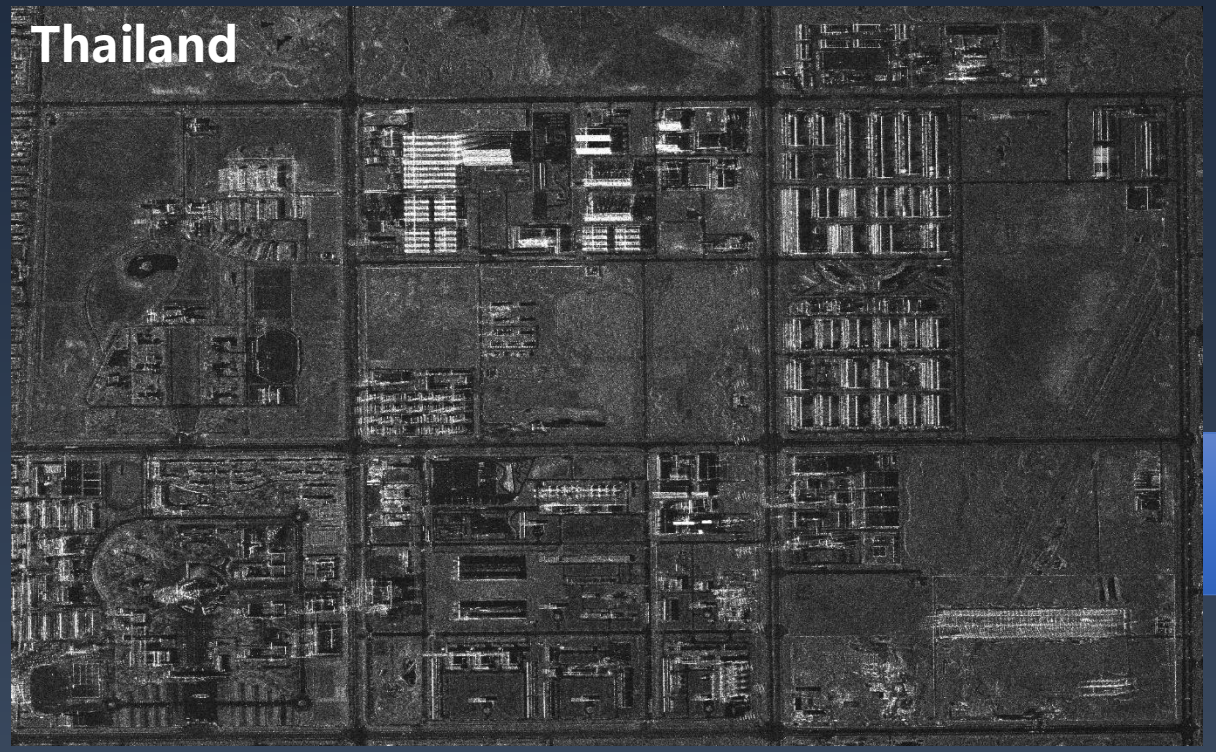
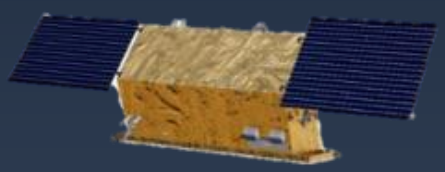
0.5m SAR Satellite

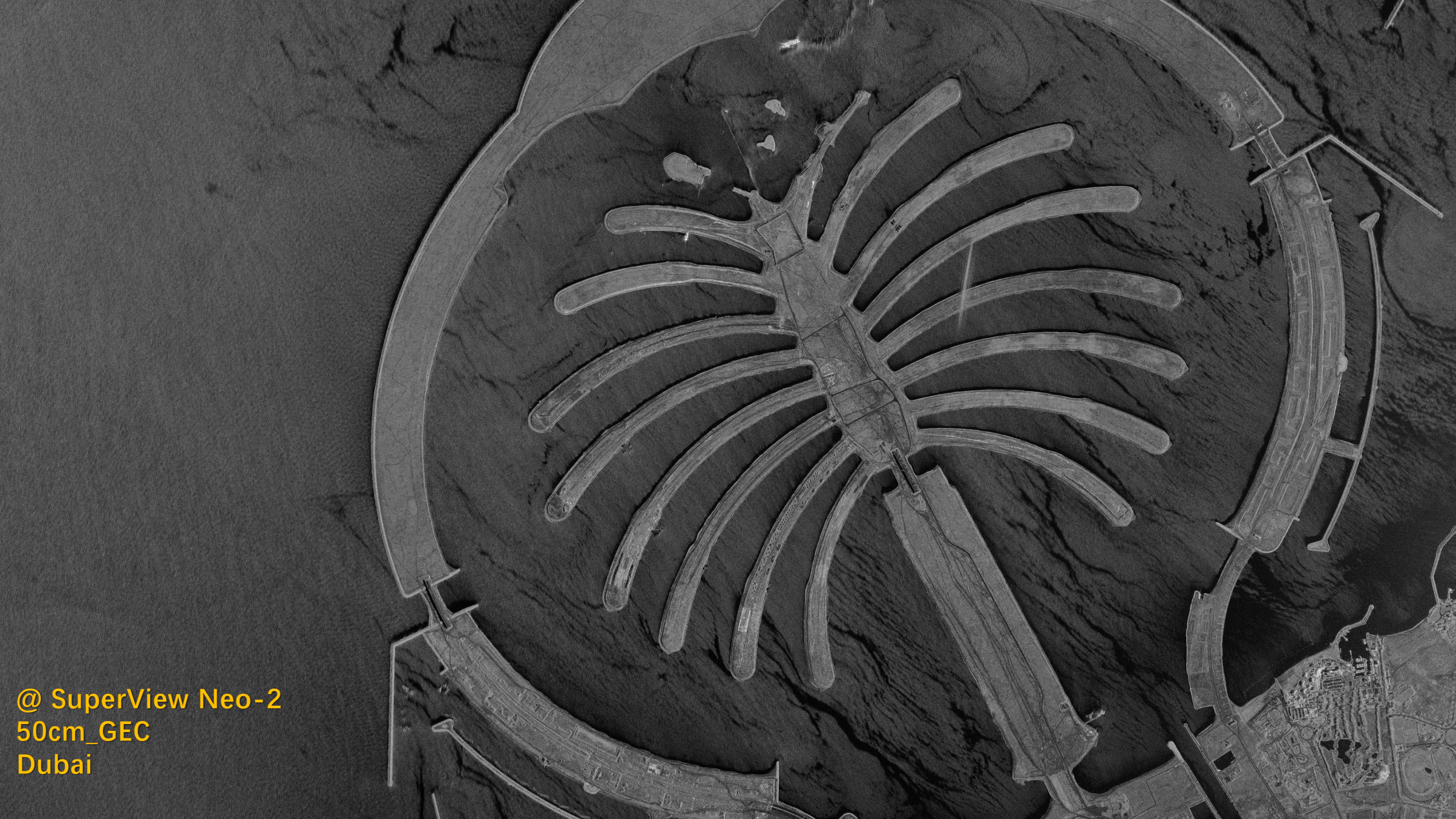




SuperView Neo-2 03/04

Launched in 2024

Satellite	NO	QTY	Orbit	Band	Resolution	Swath	Regression Period	Accuracy
SV Neo-2	03/04	2	510km	X-band	Spotlight: **0.5m**	10km	17 days	5m (CE90)
					Strip: **2m**	25km		
					Scan: 15m	100km		


@ SuperView Neo-2
50cm_GEC
Dubai

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SuperView Neo-3

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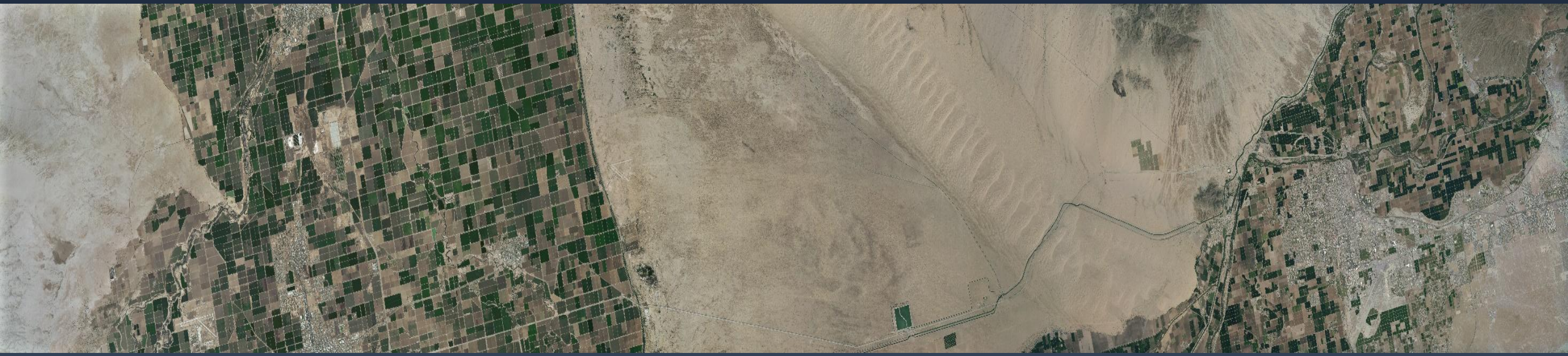
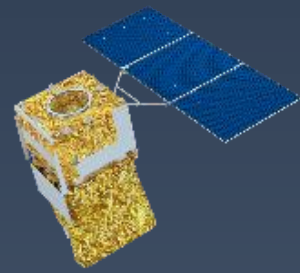
China Siwei Surveying and Mapping Technology Co. Ltd.

0.5m Wide-Swath Optical Satellite



Satellite	QTY	Orbit	Pan Resolution	MS Resolution	Band	Spectral range	Swath width	MS Band Registration Accuracy	Imaging Mode	Accuracy (without GCP)
SV Neo-3	2	500km	0.5m	2m	P	450nm ~ 800nm	130km	≤0.3 pixel	➢ Long Strip ➢ Multi-target	10m (CE90)
					B1	450nm ~ 520nm				
					B2	520nm ~ 590nm				
					B3	630nm ~ 690nm				
					B4	770nm ~ 890nm				
					B5	400nm ~ 450nm				
					B6	585nm ~ 625nm				
					B7	705nm ~ 745nm				
					B8	860nm ~ 1040nm				



SuperView Neo-3


@ SuperView Neo-3
50cm_DOM
Qatar

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Remote Sensing Data Services

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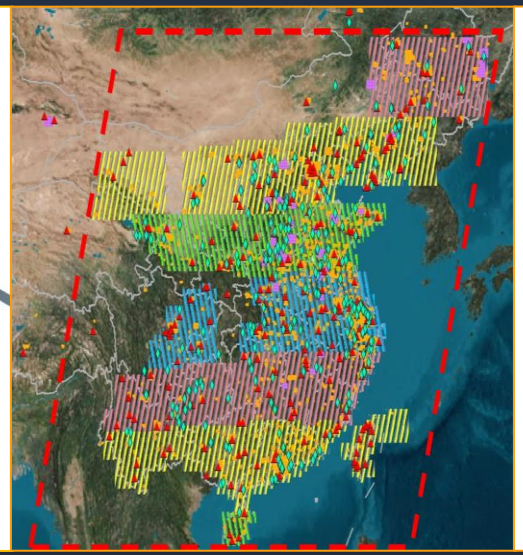
Demand Analysis	Task Planning	Data Acquisition	Data Processing	Data Distribution
				
• Requirement Consolidation • Feasibility Analysis	• Resource Estimation • Task Plan • Feasibility Analysis	• Command Upload • Imaging • Date Receiving	• Basic Data Product • Value-added (VAD) Data Product • Geo Service	• QA & QC • Product Delivery

Remote Sensing Data Product Chain

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Value Added Products For Mapping

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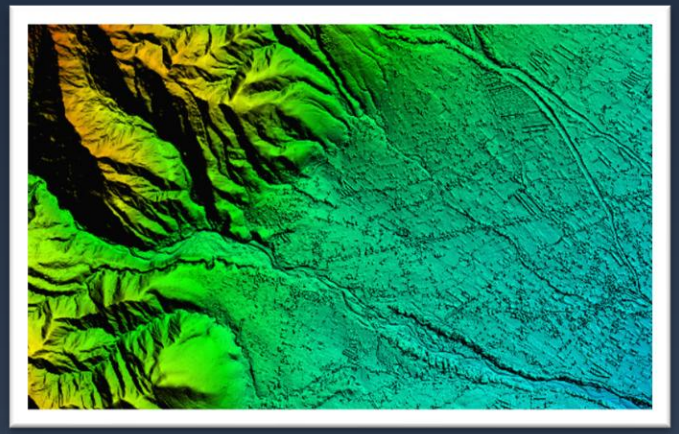
Type	Accuracy (Up to)
0.3m DOM	1m (1σ)
0.5m DOM	1.5m (1σ)
0.8m DOM	2m (1σ)
2m DOM	5m (1σ)

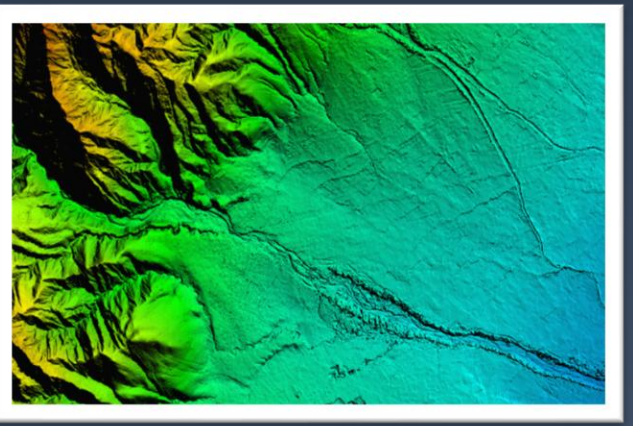
DOM

DSM

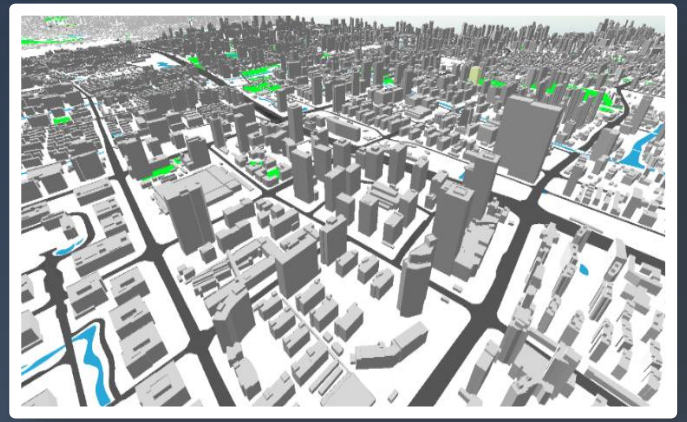


Type	Accuracy (Up to)
1m DEM	Plain Area1.5m, Hill 2.5m,Moutain4m
2m DEM	Plain Area2m,Hill 3m,Moutain 5m
5m DEM	Plain Area 2m,Hill 3m,Moutain5m
10m DEM	Plain Area5m,Hill 8m,Moutain14m

Type	Accuracy (Up to)
1m DEM	PlainArea1.5m,Hill2 .5m,Moutain4m
2m DEM	PlainArea2m,Hill3m ,Moutain5m
5m DEM	PlainArea2m,Hill3m ,Moutain5m
10m DEM	Plain Area5m,Hill 8m,Moutain14m



DEM



3D Model

Type	Relative Accuracy (Up to)
Vector Model	1.5m
3D Mesh	

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Applications and Solutions

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Applications

- Agriculture And Rural Areas
- Water Conservancy
- Energy Minerals
- National Defense
- Natural Resources
- Ecological Protection
- Construction Industry
- Emergency Management
- Transportation

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Use Case: Agriculture

中国四维测绘技术有限公司
中国航天 China Siwei Surveying and Mapping Technology Co. Ltd.

Agriculture Application: Providing data analysis and services for farmland identification, crop management, and harvest decision-making, enabling precision agriculture.

Pre-tillage monitoring

- *Cropland plot identification*
- *Cropland quality assessment*

Planting monitoring

- *Automatic identification of crops*
- *Monitoring of planting changes*

Growth management

- *Growth monitoring*
- *Soil moisture monitoring*
- *Soil fertility monitoring*
- *Disease monitoring*
- *Agrometeorological services*

Harvest services

- *Generate multi-phase DSM for 3D modeling*
- *Quantify earthwork volumes (roads, bridges, tunnels)*

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Use Case: Urban Management

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By utilizing satellites, we can monitor & evaluate the progress & satus of the key infrastructure constructions, ensuring that the projects are carried out according to the expected plans and standards.

Full-Cycle Oversight

- *Project Progress Monitoring*
- *Change detection*
- *Maintenance Support*

Material Inspection

- *Auto-identify*
- *Quality Monitoring*
- *Compliance Checks*

Unauthorized Check

- *Illegal Construction Monitoring*
- *Violation Identification*
- *AI analytics for planning-compliance*

Volume Assessment

- *Construction Volume Estimation*
- *Material Inventory Management*
- *Progress Tracking*

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Satellite As a Service

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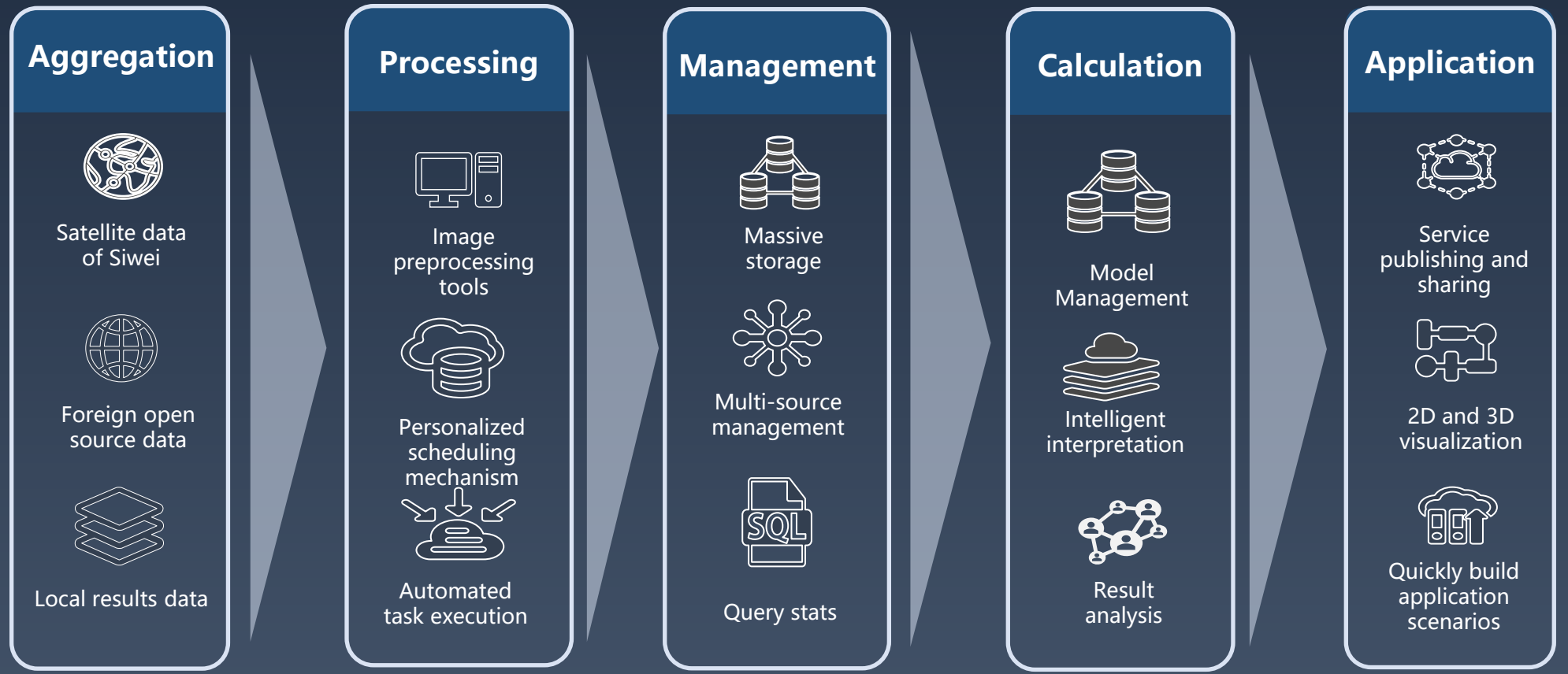
Comprehensive platform that covers the entire workflow from data acquisition to analysis

- One-stop service
- Integrated modules
- Modular and flexible
- Supports secondary development
- Intelligent processing and analysis
- Efficient data management and scheduling



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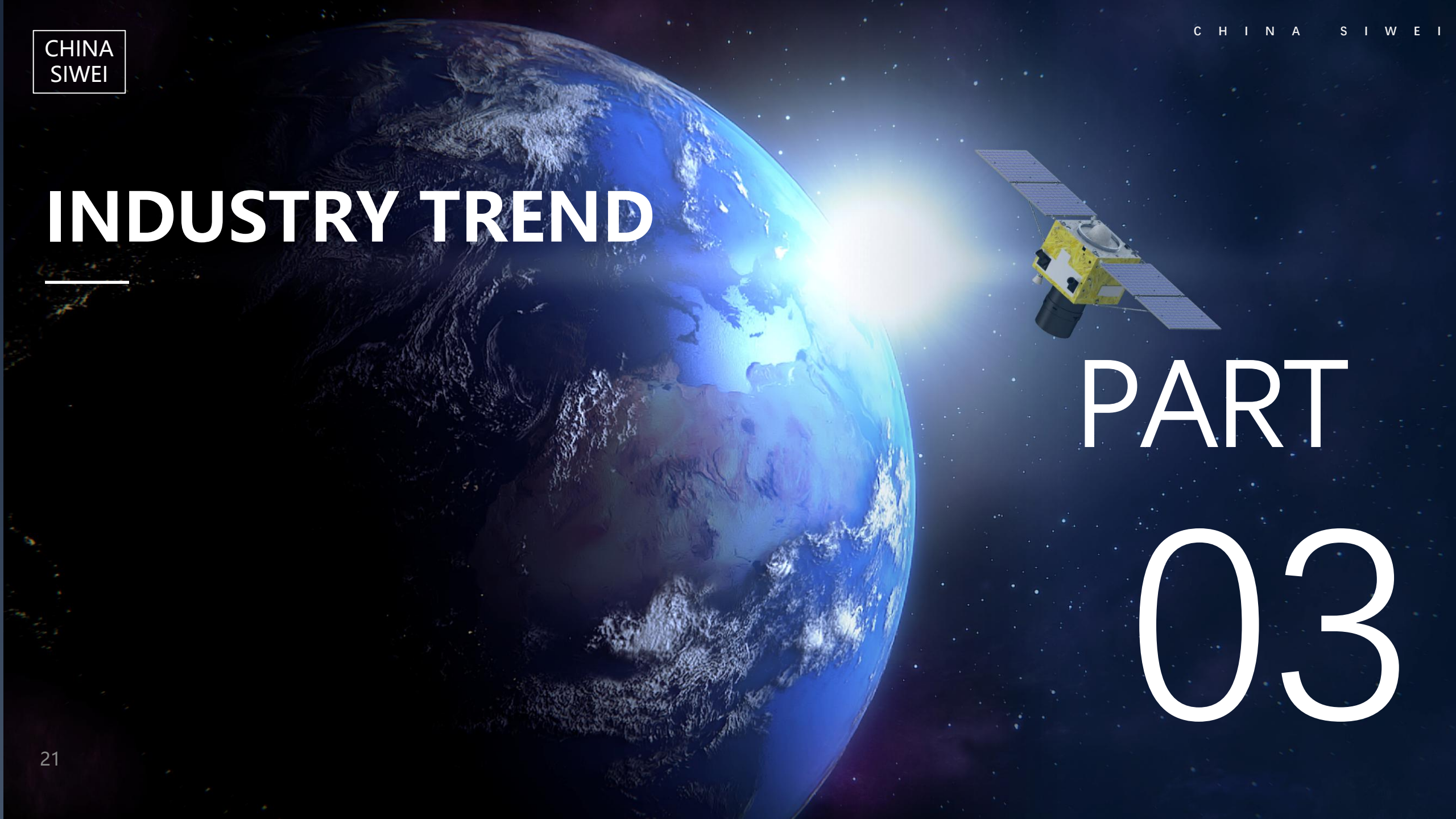
INDUSTRY TREND



PART 03

CHINA SIWEI

From Changing to Revolution

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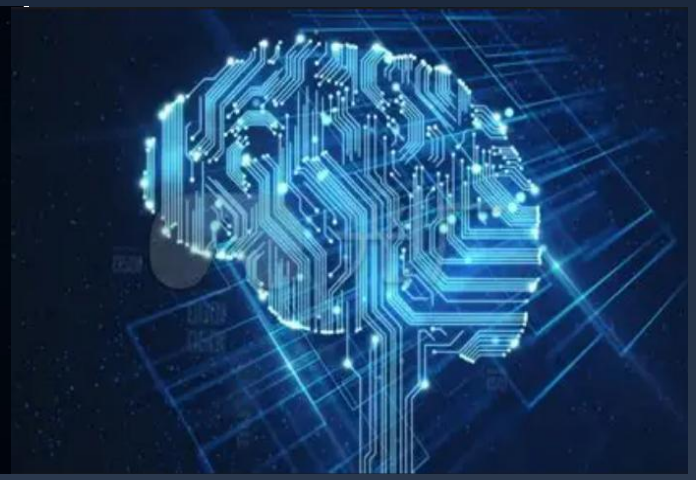
中国航天 China Siwei Surveying and Mapping Technology Co. Ltd.



Industrialization

Key contributor for Nation GDP

V1: By Project

V2: GDP Engine

Multi-Players

Supplier & User Extension

V1: Traditional User

V2: New Use Cases

Network Service

Satellite to Constellation

V1: Few satellites

V2: Satellite Systems

ImageToDecision

Data Flow From Space to Ground

V1: Isolated

V2: Integration

AI Satellite

AI Processing in Satellite

V1: Processing on the ground

V2: Computing in Orbit

From isolated development to systematic synergy

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Remoting Sensing Satellite × LEO Internet Satellite

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China Siwei Surveying and Mapping Technology Co. Ltd.

Remote Sensing×AI Satellite

Intelligence From Space

Fast Transition

SatToSat+ SatToG

Deliver to User

API、Platform and Device

Synergy Fusion

Image×Computing

Connectivity

LEO Satellite Internet

From Connectivity to Business Value

High-Valued Added

Boost continuous network resource utilization

Motivate New Demands

Build an intelligent operation and service model

Synergy Goal: Establish a sustainable closed-loop for spatiotemporal information services

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Remote Sensing + AI Satellite

中国航天 中国四维测绘技术有限公司 China Siwei Surveying and Mapping Technology Co. Ltd.

Building a globally covered, space-ground coordinated space AI infrastructure with minute-level response and direct service delivery, achieving continuous global perception, space-based intelligent computing, intelligent synergy of a thousand satellites, and spatiotemporal intelligent services.

1000+

27Billion

杭州四维太空智能公司成立｜以“天数天算”加快建设实时数智地球，服务人类高效利用太空

中国四维 2026年8月17日 10:00 北京

13人

近日，杭州四维太空智能科技有限公司（简称杭州四维）在杭州市云栖小镇登记设立，注册资本金20亿元。在中国航天科技集团有限公司战略部署下，由中国四维测绘技术有限公司（简称“中国四维”）牵头，联合航天投资控股有限公司，与杭州西湖云创集团、杭实创新（杭州）投资发展集团有限公司、浙江省金投科创母基金三期创业投资合伙企业（有限合伙）、浙江省创新数字发展有限公司等地方国有企业共同发起设立。

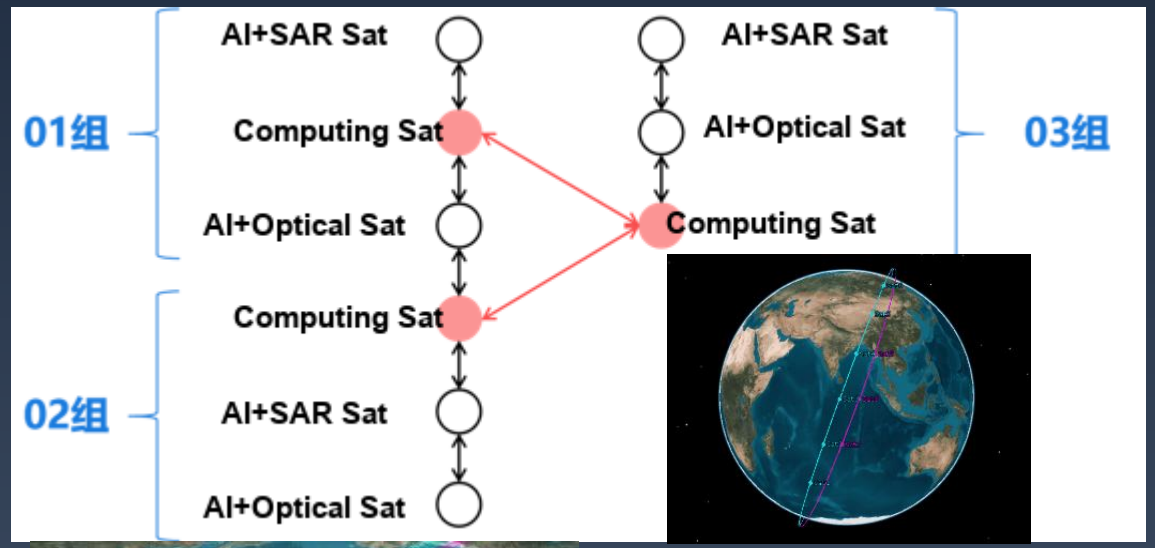
9 Testing Satellites and PoC For Service	60 Satellites Constellation	120 Satellites Constellation	240 Satellites Constellation	580 Satellites Constellation
Design + Pilot 2027.03	Phase 1 2027.12	Phase 2 2028.12)	Phase 3 2029.12	Phase 4 2030.12

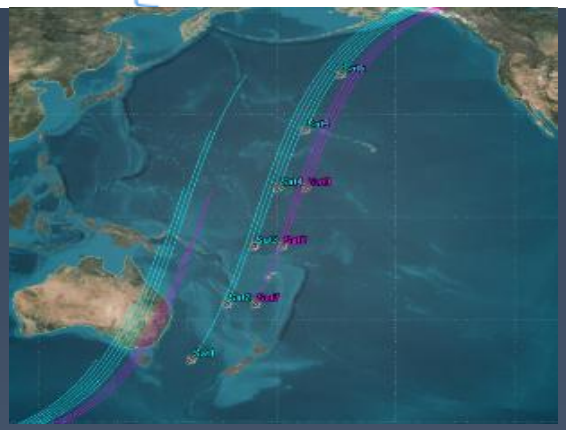
CHINA SIWEI

Remote Sensing + AI Satellite

中国四维测绘技术有限公司
中国航天 China Siwei Surveying and Mapping Technology Co. Ltd.

Plan to launch a **nine-satellite test system** in early **2027** to validate key technologies, including **models, communications, and computing capability**. The mission will also verify critical operational links such as in-orbit AI inference, inter-satellite communication, and space-ground coordination.





IP-based Space-Ground Network & Inter-satellite Laser Links:
Access One, Connect All

CHINA SIWEI

From Fixed at Launch to Growing in Orbit

中国四维测绘技术有限公司
China Siwei Surveying and Mapping Technology Co. Ltd.

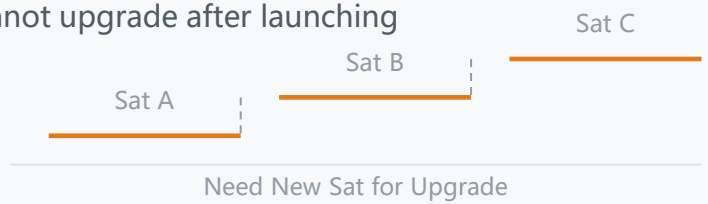
Current Satellite • Static System

New AI Satellite• Dynamic System

Capability

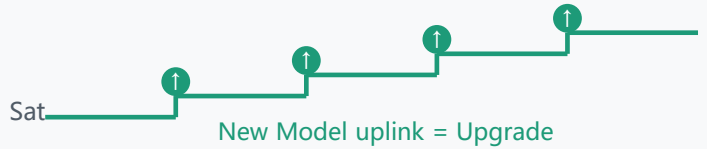
Fixed — Update: few years

Cannot upgrade after launching



Continuous Upgrading — Update: months

Keep Update in orbit



Driving Mechanism

Manual Driving — Manual Operation

Every Execution – Manual

Demand ▶ Plan ▶ Do ▶ Deliver

Self Driving — AI

Sumit demand, AI handled

Demand ▶ Plan ▶ Do ▶ Deliver

Data Flow

Unidirectional Link — Few Improvement

Data from Sat to Ground

Imaging ▶ Process ▶ Deliver

No feedback uplink

Bidirectional Link — Keep Learning

Model/Tools from Ground to Sat

Imaging ▶ Process ▶ Deliver

Need → Train → Uplink

CHINA SIWEI

Our Vision

- Sharing Our Resource and Knowledge in Geospatial
- Creating Value For Global Clients & Partners