



**CHINA TOWER**  
**中国铁塔**

# 2023 Annual Results

18 March 2024



# Management



**Mr. Zhang Zhiyong**

Executive Director and Chairman

**Mr. Gao Chunlei**

Executive Director

**Mr. Hu Shaofeng**

Chief Accountant

# Content



## 01

Overall  
Performance



## 02

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Performance



## 03

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Performance



CHINA TOWER  
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**01**

# Overall Performance

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**Zhang Zhiyong**  
**Executive Director and Chairman**



# Highlights

01

Sound operational performance,  
achieved double-digit growth of 11%

02

Supported by multiple pillars, Two Wings business'  
revenue increased to 12.2% of the total operating revenue

03

Smart Tower serving digital governance, 217,000  
“telecommunication towers” upgraded to “digital towers”

04

Accelerated technological innovation,  
R&D investment increased 38%

05

Sharing fruitful results with shareholders,  
dividend payout increased 15.7%

# Key Indicators

**RMB94,009 million**

Operating Revenue

▲ **2.0%**

**RMB63,551 million**

EBITDA\*

▲ **1.1%**

**RMB32,840 million**

Operating Cash Flow

▼ **49.6%**

**RMB9,750 million**

Profit attributable to the  
Owners of the Company

▲ **11.0%**

**3.658 million**

Tenants

▲ **2.1%**

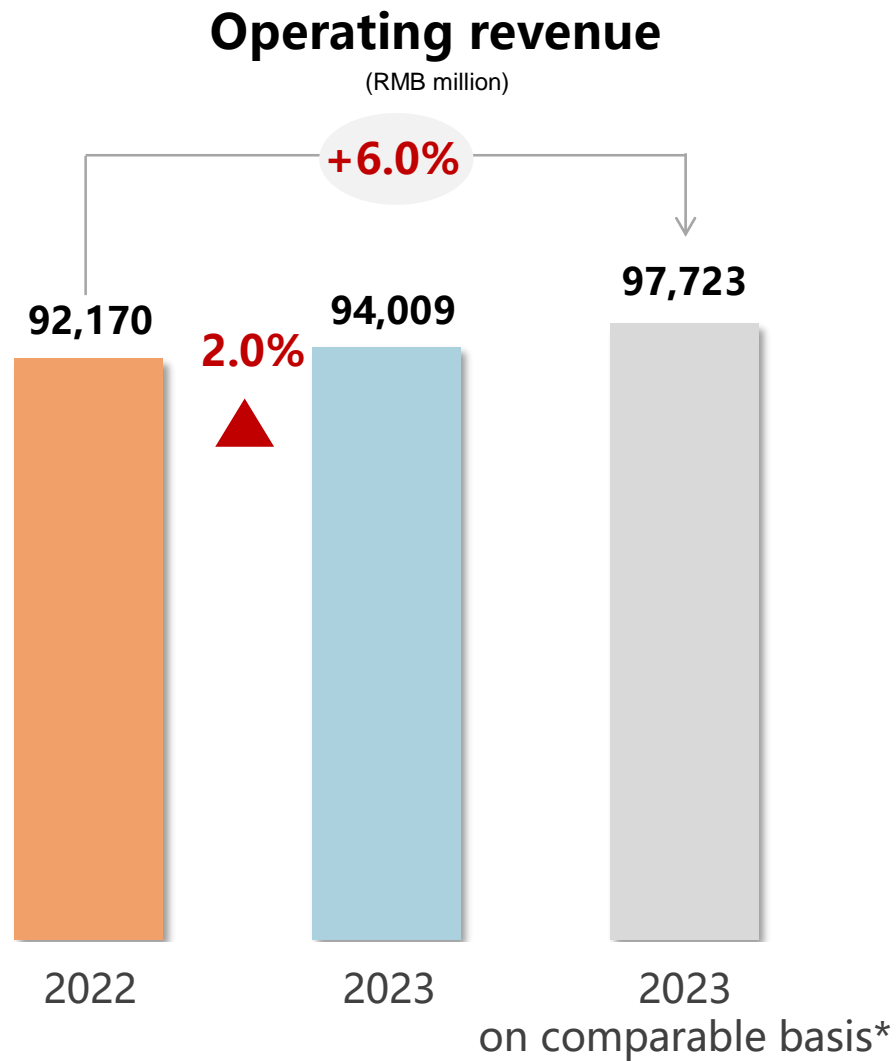
**1.79 tenants/site**

Tower Tenancy Ratio

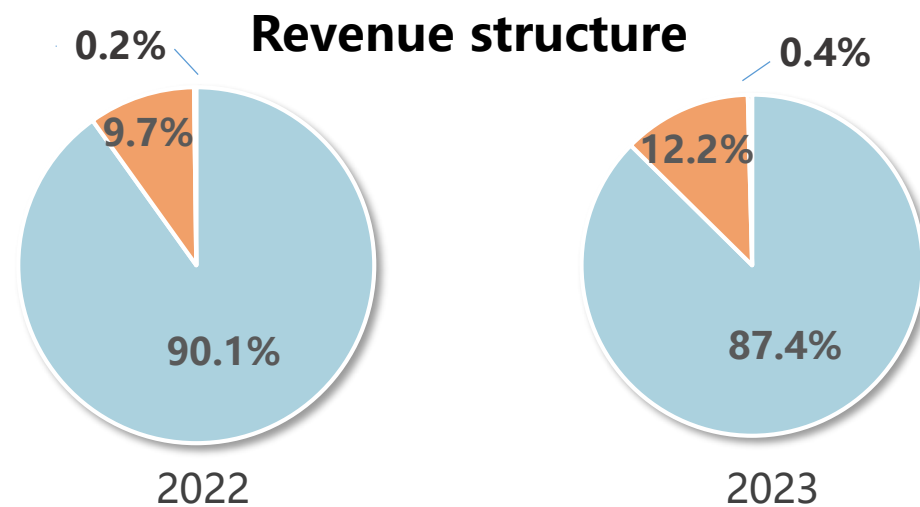
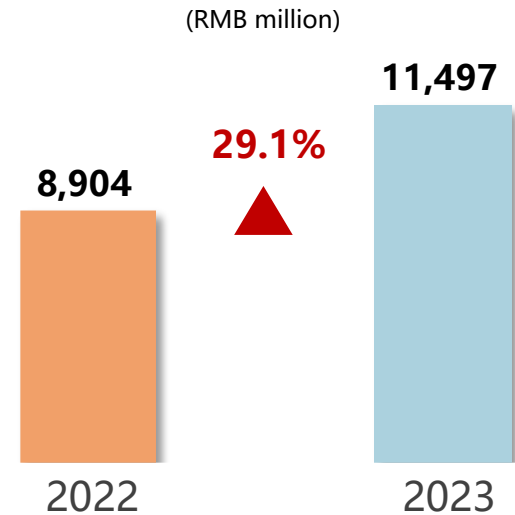
▲ **2.9%**

*Note: EBITDA is calculated by operating profit plus depreciation and amortization, the same applies herein after.*

# Deepened "One Core and Two Wings" Strategy



### Two Wings business (RMB million)



■ TSP business ■ Two Wings business ■ Other revenue

\*Comparable basis refers to operating revenue excluding the impacts of new Commercial Pricing Agreements, the same applies herein after.

# Further Consolidation of TSP Business' Leading Position

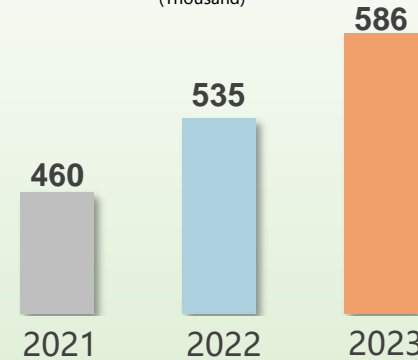
## TSP business revenue

(RMB million)



## Strengthened resources sharing, thoroughly addressed demand and fortified foundation of 5G new infrastructure

Number of 5G base station demand<sup>1</sup>  
(Thousand)



- **Took up all new construction demand:** completed approximately **586,000** 5G construction demand in 2023, increased **9.5%** year on year, cumulative number of 5G base stations reached **2.347 million**
- **Improved level of site co-location:** **95%** of 5G projects delivered through sharing of existing resources

## Seized opportunities from the in-depth coverage of 5G to rapidly expand DAS market



Buildings

**10,150**  
million m<sup>2</sup>

▲ **2,760** million m<sup>2</sup>



Subways

**11,625**  
kilometers

▲ **2,014** kilometers



High-speed railway tunnels

**12,447**  
kilometers

▲ **2,018** kilometers

Note 1: The number of 5G base stations refers to the number of 5G tower base stations

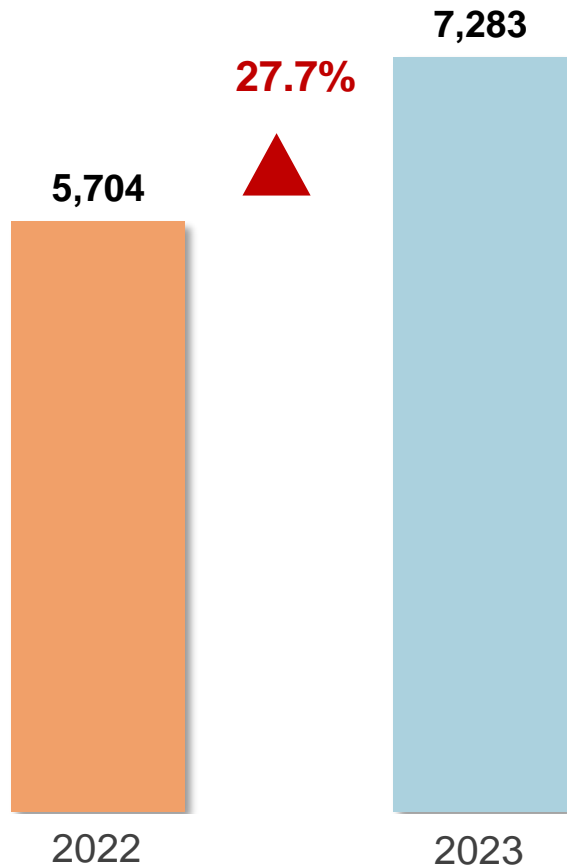
Note: Cumulative data as of 31 December 2023 ▲ Increase in DAS coverage in 2023



# Smart Tower Business Achieved Rapid Growth

## Smart Tower business revenue

(RMB million)



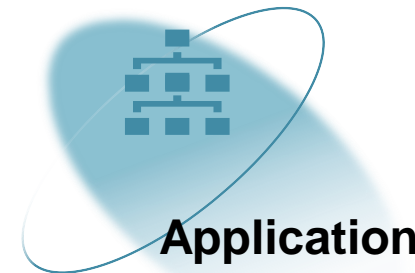
- Established the foundation for **“Unified Nationwide Network”** platform, realized distributed deployment and centralized operation
- Enhanced data interfaces opened to the public to support customers platforms to perform call capability



- Transformed from single-source video data access to **multi-source data access**
- Included videos, sensors, radars, drones, satellite remote sensing, BDS-3 short messaging etc.



- Developed **“self-developed + ecosystem”** algorithm R&D system, provided **100+** distinctive algorithms with mid-to-high point characteristics
- Established **1.3 million** unique sample library with mid-to-high point capabilities



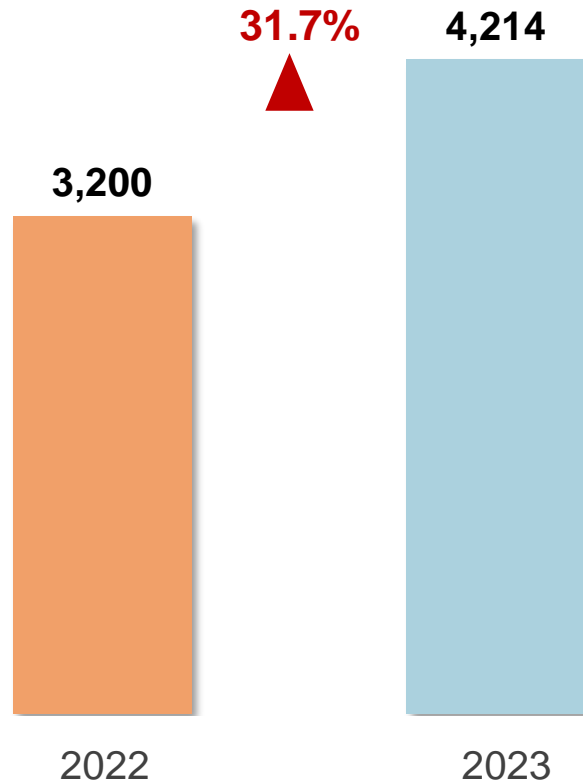
- Enriched **industry and product application system**
- Created professional and leading product applications for top 10 industries



- Initially developed the ability to provide **companion R&D services** to customers
- Fully leveraged its advantage in having **localized technical support**

# Energy Business Continued to Foster Competitive Advantages

## Energy business revenue (RMB million)



### Continued to optimize products and consolidate product advantages

- Optimized and upgraded battery exchange products to improve safety and user convenience
- Developed 12 standardized power backup products to adapt to typical scenarios such as telecommunication base stations, shelters, network outlets, and outdoor monitoring

### Implemented delicate operations and improved asset efficiency

- Leveraged intelligent models to optimize asset allocation and improve efficiency and effectiveness of resource utilization
- Deepened full-cycle management and explored potential value of cascade utilization of battery

### Accelerated platform upgrade and ensured stable support

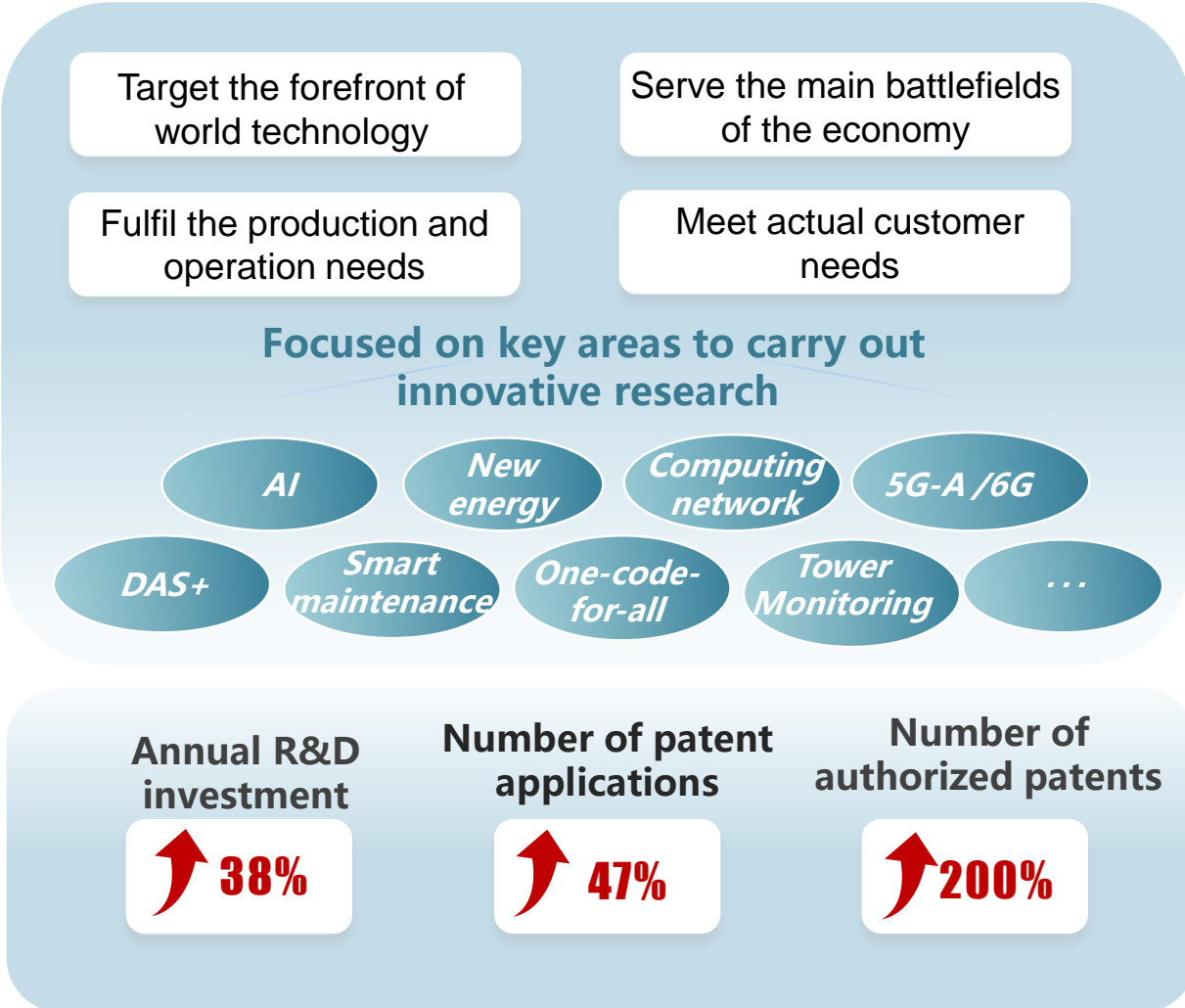
- Accelerated platform iteration and upgrade, continued to improve intelligent support level of battery exchange business
- Centered around market needs to customize industry applications in seven major industries for power backup customers, continued to improve platform supporting capability

### Enhanced customer service system and service capabilities

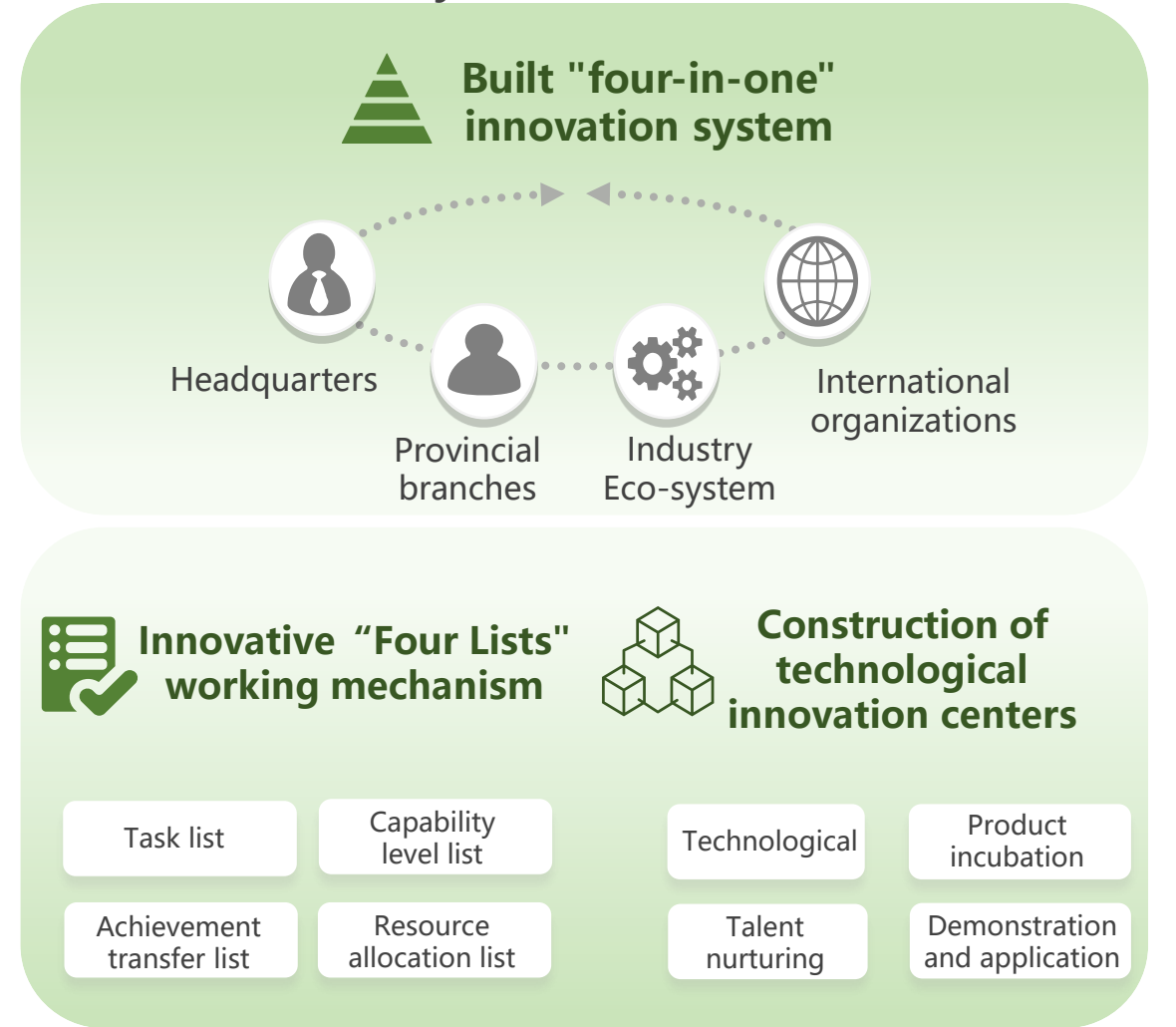
- Strengthened intelligent customer service to improve online service experience for consumer market
- Built companion service system for corporate customers, enhanced customers' value perception and the brand influence of the Energy business

# Strengthened Technological Innovation Capabilities

## Continued to forge core capabilities in technological innovation



## Deepened reform of technological innovation systems and mechanisms



## Enhanced digital operation capabilities

- Carried out “intelligent operation and maintenance” and deepened the “one-code-for-all” , to strengthen digital management capabilities throughout the full life cycle of assets
- Promoted the single-site single-project accounting system to support the full-cycle assessment of project effectiveness
- Accelerated the construction and application of the treasury system with tower features and improved centralized fund management capabilities



## Enhanced reform and innovation capabilities

- Deepened the tenure system and contract management, strengthened incentives system to stimulate corporate motivation
- Innovated “Election, Education, Deployment and Retention” and the “Recruitment, Training, Management and Application” practices, pushed forward “strengthening enterprise through talents” strategy to boost vitality

## Enhanced resources coordination and sharing capabilities

- Utilized more than 2 million sites and supporting resources as foundation, continued to deepen sharing, with **95%** of 5G projects delivered through sharing of existing resources
- Promoted the sharing of social resources with the support of policies, **36.3%** of new ground tower sites were constructed by utilizing social resources
- Fully leveraged the advantages of resource coordination to achieve shared construction

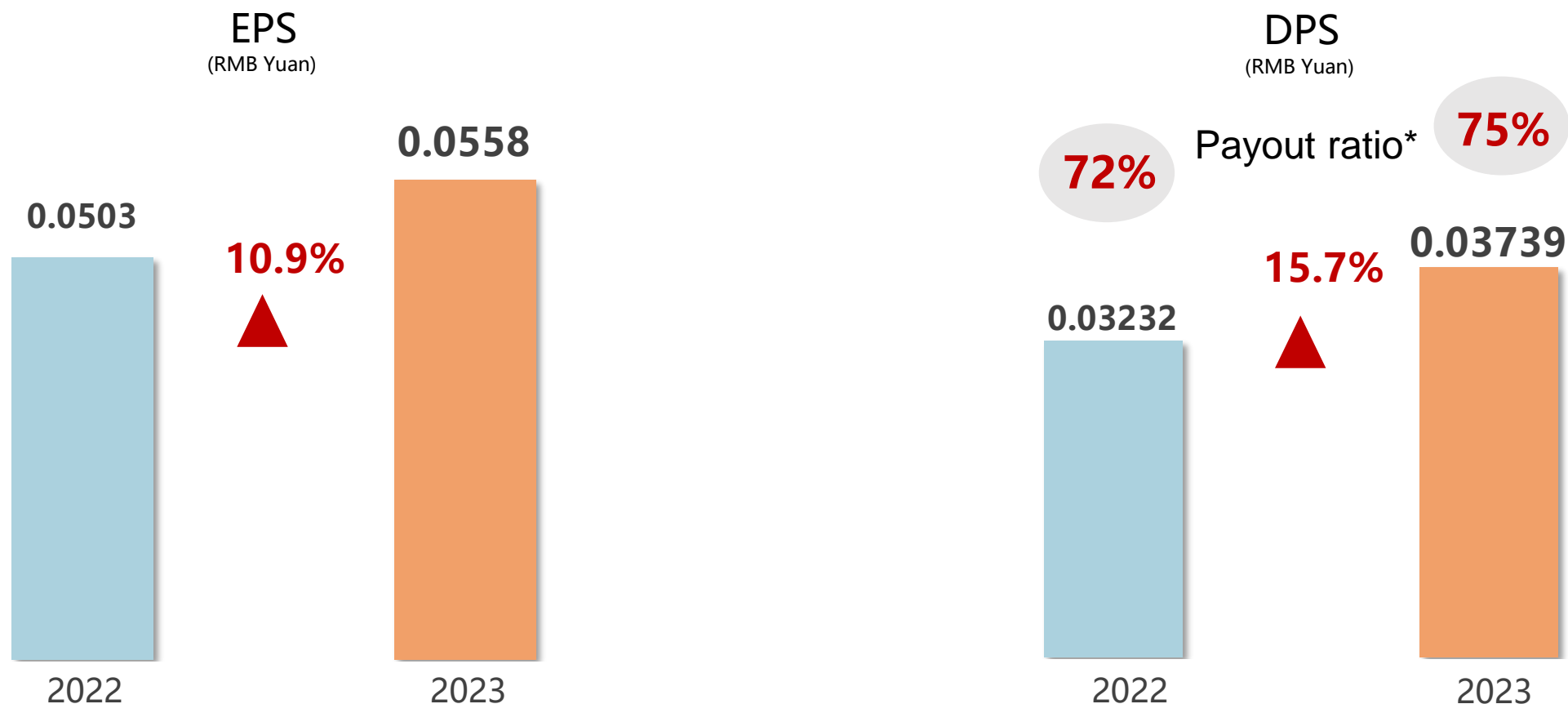


## Enhanced collaborative development capabilities

- Transformed **217,000** telecommunication towers into digital towers, successfully had power exchange cabinets to provide reverse power supply to base stations, and deepened the resource sharing capabilities
- Established a large-scale operation and maintenance system connecting all customers, access and maintenance, monitoring and orders dispatching, and improved collaborative service capabilities

# Consistent Increase in Dividend Payout Ratio

The Board recommends a final dividend of RMB0.03739 per share (before tax) in 2023



Note: Dividend payout amount/distributable net profit for the year

# Actively Implemented ESG Concepts



## Environment

### Effectively implemented the concept of green sharing

- Reduced redundant investment construction in the industry through co-built and co-sharing, saving **62,000 mu** of land and reducing carbon emissions by **29.8 million tons**
- Transformed the traditional tower construction model, shared social resources at low cost, and realized low-carbon, harmonious and green development

### Strengthened the promotion of green and high-quality development

- Battery exchange business serving light electric vehicles cumulatively travelled over 90 billion kilometers, which is equivalent to reducing carbon emissions by over **3 million tons**
- Explored the potential of clean energy, such as solar and wind power, and established a total of **21,000** clean energy sites



## Social

### Fully support emergency communications

- Completed emergency communication tasks with high quality for more than **20** large-scale events such as Hangzhou Asian Games, Shanghai International Import Expo and Chengdu World University Games
- Actively assumed emergency response in extreme weather to promptly re-connect of “communication lifelines”

### Actively contributed to rural revitalization

- Facilitated implementation of universal telecom services, improved construction of communications infrastructure in remote areas, and continuously narrowed the “digital divide”
- Utilized the “Tower Monitoring” big data integration platform to facilitate construction of digital villages and helped improve the capabilities of digital governance in rural areas



## Governance

### Continued to improve corporate governance mechanism

- Continued to optimize governance mechanisms and systems to maintain corporate governance at a high standard
- Adhered to a diversified board policy, fully leveraged the expertise of independent directors
- Actively responded to shareholders' concerns and safeguarded the rights and interests of all shareholders
- .....

# High-quality Development with the Support of Strategy

## Deepening implementation of “Cyberpower” strategy

Policies on “**dual-gigabit network joint entry and challenging project**” and special projects such as **signal strength upgrades and extension of broadband coverage to all border areas**, as well as 5G-A commercial deployment will deepen the construction of 5G networks; stronger policy support also accelerated 5G+ industrial internet construction, reflecting the **huge potential of 5G dedicated network market**

## Accelerating the upgrade of “digitalization”

The “Digital China” , “ Beautiful China” and rural revitalization strategies set higher requirements on digital governance, **and digital demand from the government projects** will reach nearly **RMB400 billion in 2024**. The market space for key sectors such as environmental protection, forestry and grassland, land, agriculture, emergency response have an **overall informatization market of nearly RMB100 billion**

## Accelerating green and low-carbon transformation

Continues to push forward the “**dual carbon**” **strategy**, creating promising market outlook for industries such as energy conservation, environmental protection and clean energy. The instant delivery market is rapidly developing, **achieving a CAGR of 23.6%**. Under the “no home-charge” policy, the penetration rate of light electric vehicles is rising

## Sound Opportunities Allowing Room for Future Development

**Adhere to scientific and innovation-led development; Anchoring the strategic position of “One Core and Two Wings” ; Accelerate its course to build a world-class enterprise**



### Accelerate development of TSP business

- Leverage resource coordination advantages to consolidate market leading position
- Build a reputation for unrivalled advantages in integrated costs, project delivery and maintenance service, as well as low management risk



### Specialize in Smart Tower business

- Strengthen products, with a significant enhancement in innovation
- Deepen industry engagement, to enhance market competitiveness stably
- Provide excellent services, with a more refined companion service system



### Enhance Energy business

- Deeply cultivate the light electric vehicle battery exchange market and consolidate market leadership
- Deepen the four-in-one solution covering “power backup, power generation, monitoring, and maintenance” to ensure quality services



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# 02 Operational Performance

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**Gao Chunlei**  
**Executive Director**



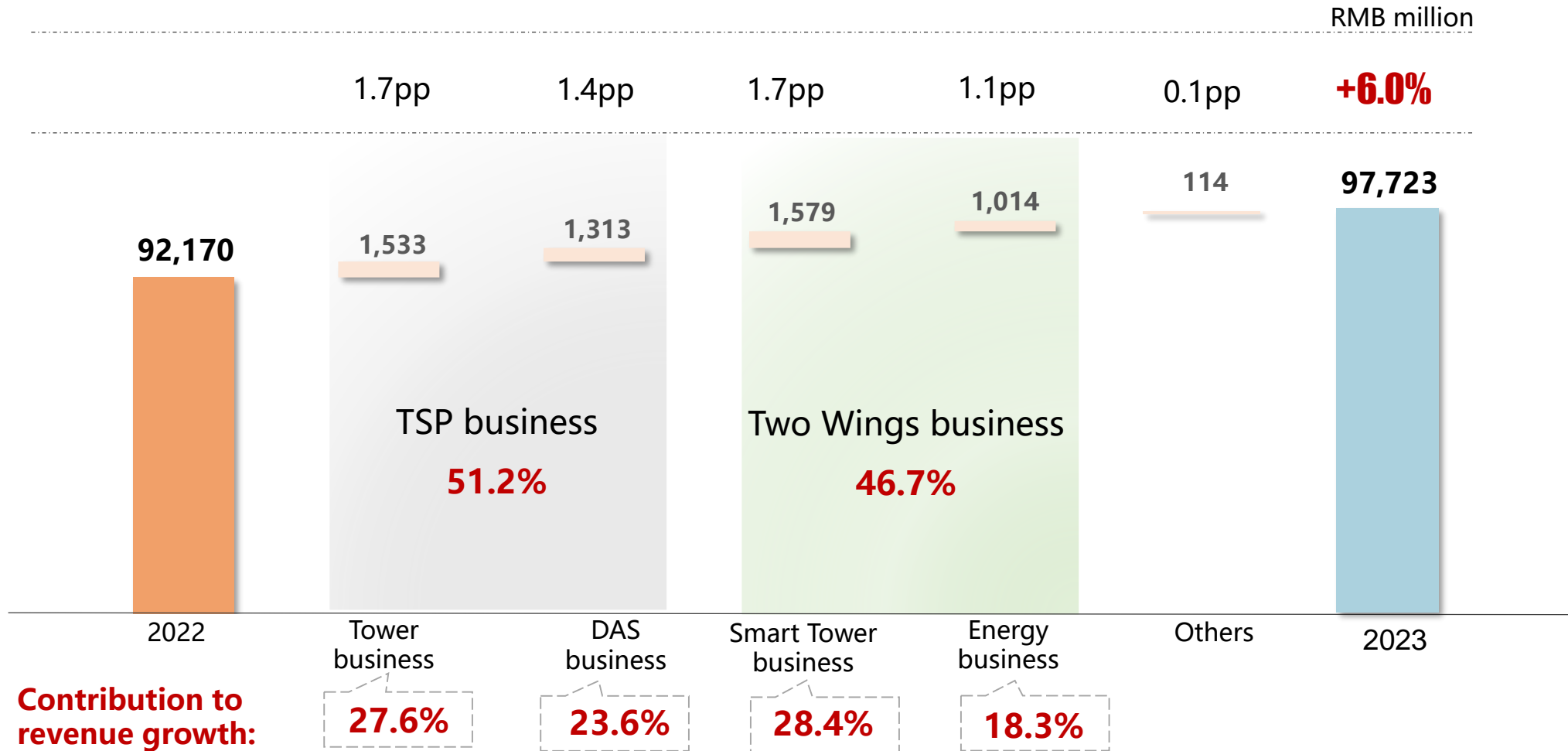


# Key Operational Indicators

Indicators	2022	2023	Change	Change On comparable basis*
<b>Operating Revenue (RMB million)</b>	<b>92,170</b>	<b>94,009</b>	<b>2.0%</b>	<b>6.0%</b>
TSP Business	83,031	82,163	-1.0%	3.4%
Smart Tower Business	5,704	7,283	27.7%	
Energy Business	3,200	4,214	31.7%	
<b>Number of Tower Tenants (thousand)</b>	<b>3,583</b>	<b>3,658</b>	<b>2.1%</b>	
TSP tenants	3,362	3,424	1.8%	
Smart Tower Tenants	221	234	5.9%	
<b>Number of Tower Sites (thousand)</b>	<b>2,055</b>	<b>2,046</b>	<b>-0.4%</b>	
<b>Tower Tenancy Ratio (Tower Tenant/ Tower Site)</b>	<b>1.74</b>	<b>1.79</b>	<b>2.9%</b>	
TSP tenancy ratio	1.65	1.68	1.8%	
Average annual revenue per site (RMB)	40,512	40,139	-0.9%	3.6%

\*Comparable basis refers to the operating revenue, TSP business' revenue and average annual revenue per site after excluding the impacts of new Commercial Pricing Agreements

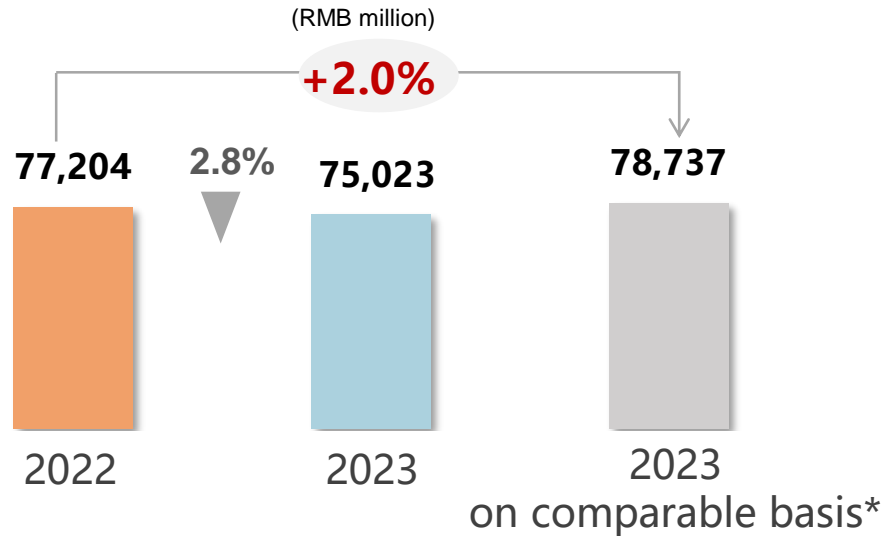
# Supported by Multiple Pillars, Sustainable Development Capability Continued to Grow



Note: Calculated based on the actual amount on comparable basis after excluding the impacts of new Commercial Pricing Agreements

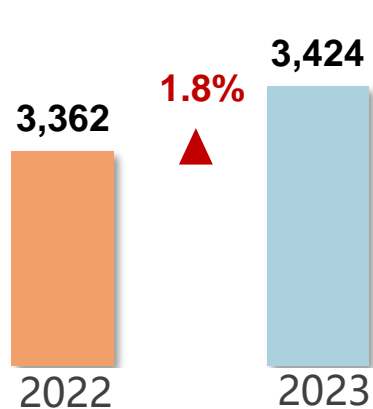
# Tower Business Maintained Steady Growth

## Revenue from Tower business



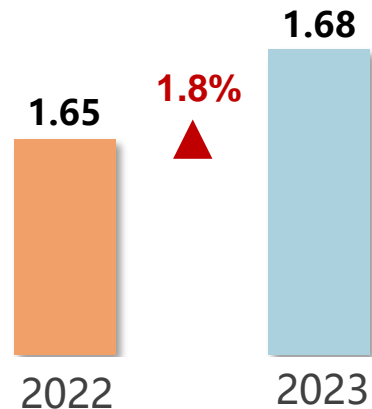
## TSP tenants

(thousand)



## TSP Tower tenancy ratio

(Tower Tenants / Tower Site)



**Accelerated the construction and delivery of tower sites, and improved investment efficiency**

Continued to improve tower site selection, construction and delivery capabilities to fully met customers' construction needs, and shortened the demand-delivery-lease cycle to accelerate rental income collection



**Further developed the new service model and strove to grasp demand from customers**

Leveraged the integrated advantages of "construction, maintenance and optimization", through innovative products and technical solutions, we collaborated with operators to promote network optimization and further enhance our ability to meet customer needs



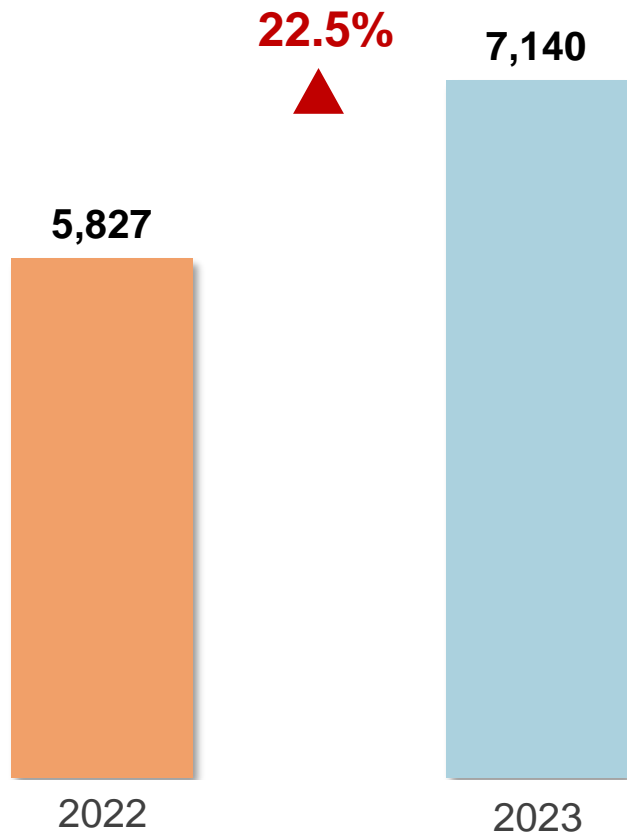
**Explored 5G+ industrial Internet services and to develop new markets**

Kept up with the development of the delicate 5G industry trend, and worked with operators to explore opportunities such as intelligent factories, intelligent mining, and intelligent cultural tourism, to expand to new markets

# DAS Business Continued Rapid Growth

## Revenue from DAS business

(RMB million)



### Enhanced resource coordination capabilities

- Focused on key industries such as education, cultural tourism, transportation, and healthcare, further expanded 5G coverage, and enhanced the service and support to the new DAS market

### Tapped into the sharing potential of existing DAS

- Provided differentiated sharing solutions for passive+active DAS to meet the needs of upgrading existing 5G DAS, and furthered sharing to expand the business scale

### Strengthened professional service capabilities

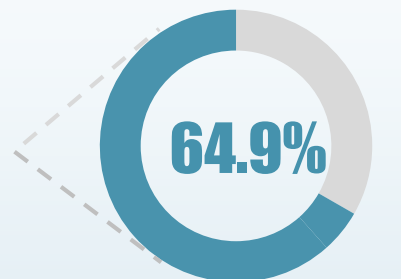
- Continued to improve professional capabilities in solution design and quality management, increased the application of innovative products, and consolidated the advantages of low cost, excellent service, green and low-carbon

# Development of Smart Tower Business is Gaining Momentum

“Relied on the rich resources and platforms from its mid-to high-point positions and edges in algorithms to serve the society with digital governance”

## Tower Monitoring Business Revenue

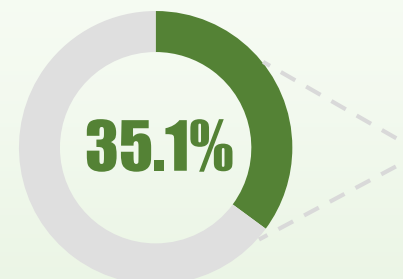
4,727 million



Revenue contribution to Smart Tower Business

## Tower Sharing Business Revenue

2,556 million



Revenue contribution to Smart Tower Business



Environmental protection

Helped to provide early warning of forest fire risks and to supervise forestry resources



Agriculture

Protected and safeguard farmland in China



Digital village

Served the construction of earthquake monitoring and early warning rapid-reporting system to achieve rapid-reporting of earthquake



Transportation

Provided digital monitoring services for rivers, lakes and reservoirs

Monitored straw burning to support blue sky protection



Forestry

Covered districts and counties in the Yangtze River Basin with ten-year fishing ban solutions to enhance the efficiency of fishery law enforcement in the region



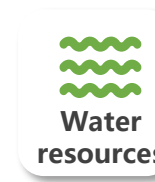
Land

Served digital and intelligent governance of villages, assisted rural revitalization and the construction of beautiful countryside



Emergency response

Monitored the operation of important arterial lines, bridges, tunnels, road networks, etc.



Water resources

# Development of Smart Tower Business is Gaining Momentum (Cont.)

## Enhanced platform construction

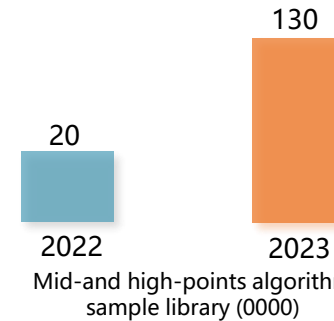
- Deployed provincial nodes in 17 provinces across the country
- Platform-based distributed deployment, centralized data operation



"Unified Nationwide Network" distribution map

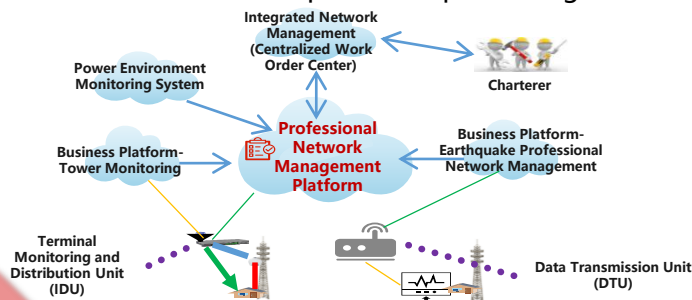
## Improved algorithm capabilities

- Complete spatial governance algorithm training tool
- Rich mid- and high-point data training scenarios across the nation



## Strengthened maintenance system

- Connected the business system and operation and maintenance system to achieve accurate diagnosis, real-time order dispatch and processing



## Expanded industry applications

- Added a number of new industry application products
- Continued to lead in market share across different segments
- Continuously improved product iteration and development capabilities

### Product systems

#### Expanded advantage

- Forest smart protection
- Straw-burning smart protection
- Smart fishery protection
- .....

#### Reinforced advantage

- Farmland smart protection
- River smart protection
- Protection of blue sky
- Village smart protection
- .....

#### Built advantage

- Parks smart protection
- Railway smart protection
- Cultural relic smart protection
- .....

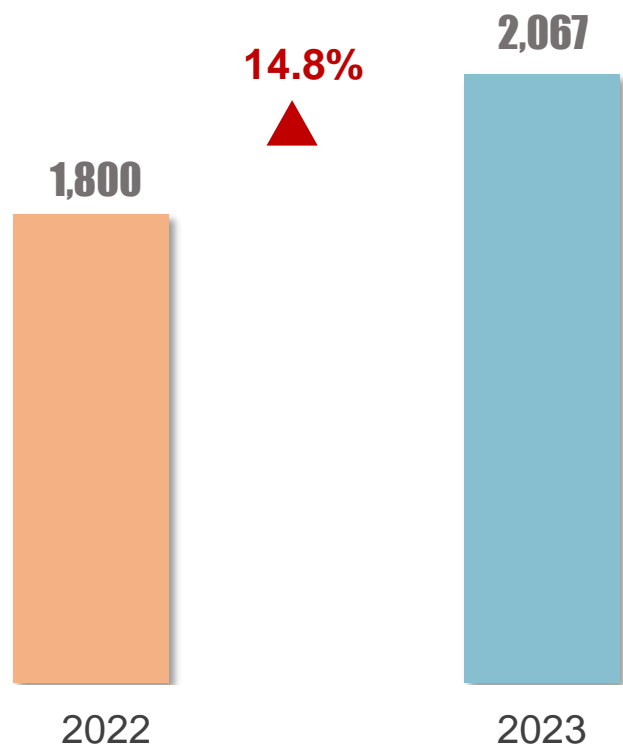
## Intensified collaborative innovation

- Signed strategic cooperation agreements with multiple ministries and provinces, started long-term and intensive cooperation
- Jointly established the "Intelligent Society and Spatial Governance Joint Laboratory" with leading universities; jointly developed unmanned aerial vehicle hyperspectral remote sensing systems with key universities
- Smart Tower company was successfully selected into the first batch of "World-class Professional Leading Demonstration Enterprises"

# Energy Business Grew Bigger and Stronger

## Revenue from battery exchange business

(RMB million)



### Business scale grew rapidly

Battery exchange users



1.145 million

Cities deployed



300+

### Product service capabilities continued to improve



Enhanced product system: battery exchange products iteration and upgrading, promoted standardized power backup and protection products



Improved service level: optimized intelligent customer service triage capabilities, with a triage ratio of nearly 80%

### Industrial cooperation continued to deepen

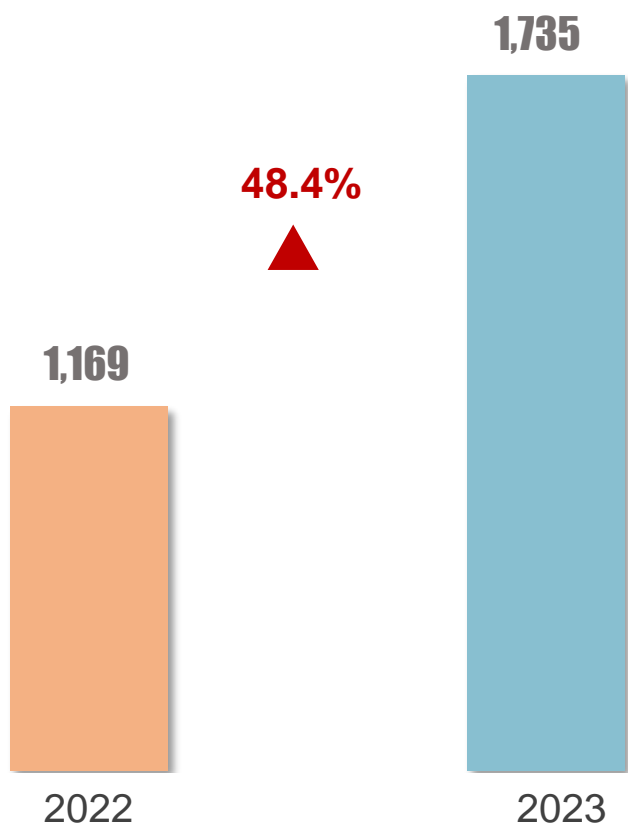


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# Energy Business Grew Bigger and Stronger (Cont.)

## Revenue from power backup business

(RMB million)



### Integrated "Four-in-One" Solution

Deepened the integrated four-in-one solution of "power backup, power generation, monitoring, and maintenance", and vigorously promoted standardized power backup products



### Focused on important events in key industries

Accelerated the expansion of customer base in key industries such as telecommunications, healthcare, and finance, and actively built the "energy butler" service model to push forward the expansion of the power backup business



Healthcare



Finance



Transportation



Major events





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# 03 Financial Performance

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Hu Shaofeng  
Chief Accountant



# Key Financial Indicators

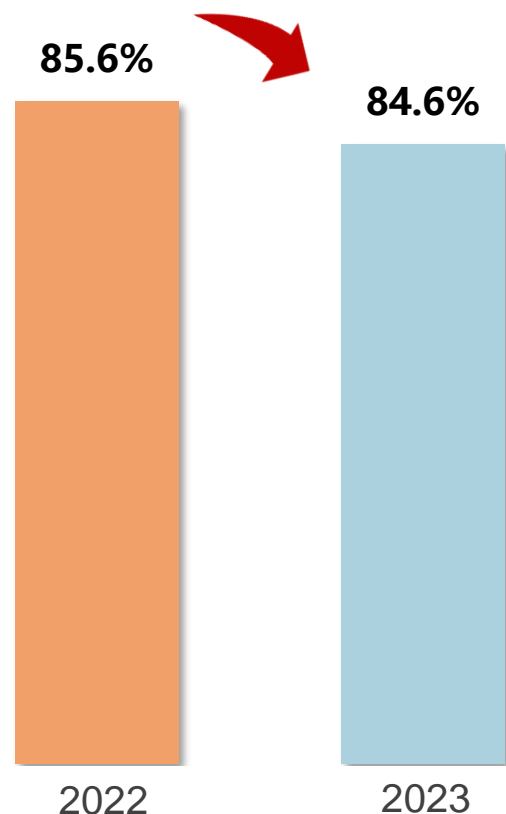
(RMB million)	2022	2023	Change	Change On comparable basis*
Operating revenue	92,170	94,009	2.0%	6.0%
Operating expenses	78,858	79,507	0.8%	
Operating profit	13,312	14,502	8.9%	
EBITDA	62,844	63,551	1.1%	
Net profit	8,787	9,750	11.0%	
Operating cash flow	38,927	1,125	-97.1%	
Gearing ratio <sup>1</sup>	27.7%	31.4%	3.7pp	

Note: Comparable basis refers to operating revenue excluding the impacts of new Commercial Pricing Agreements

Note 1: Net debt leverage ratio is based on net debt (interest-bearing liabilities less cash and cash equivalents) divided by the sum of total equity and net debt multiplied by 100%

# Sound Cost Control

## Operating expenses to revenue ratio



(RMB million)	2022	2023	Change
<b>Operating expenses</b>	78,858	<b>79,507</b>	0.8%
Depreciation and amortization	49,532	<b>49,049</b>	-1.0%
Repairs and maintenance	7,593	<b>7,408</b>	-2.4%
Employee benefits and expenses	7,940	<b>8,844</b>	11.4%
Site operation and support expenses <sup>1</sup>	5,857	<b>5,393</b>	-7.9%
Other operating expenses	7,936	<b>8,813</b>	11.1%
of which: business development expenses <sup>2</sup>	4,256	<b>5,637</b>	32.4%
other expenses <sup>3</sup>	3,680	<b>3,176</b>	-13.7%
<b>Net finance costs</b>	<b>2,879</b>	<b>2,784</b>	-3.3%

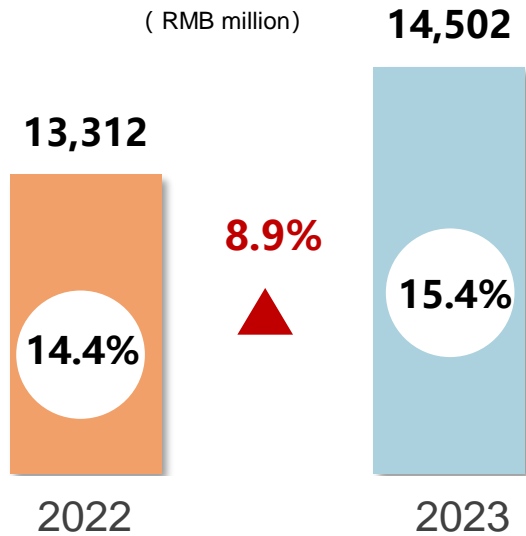
Note 1: Site operation and support expenses: Mainly includes short-term site rental fees, electricity fees, maintenance fees directly incurred by site operation, as well as IT service fees, vehicle usage fees, site planning and management fees related to site operation, etc.

Note 2: Business development expenses: Mainly includes technical support charges, utilities in other business operation, marketing expenses, cost of equipment sold.

Note 3: Other expenses: Mainly includes losses on disposal of fixed assets, asset impairment losses, property, water, electricity and administration expenses, etc.

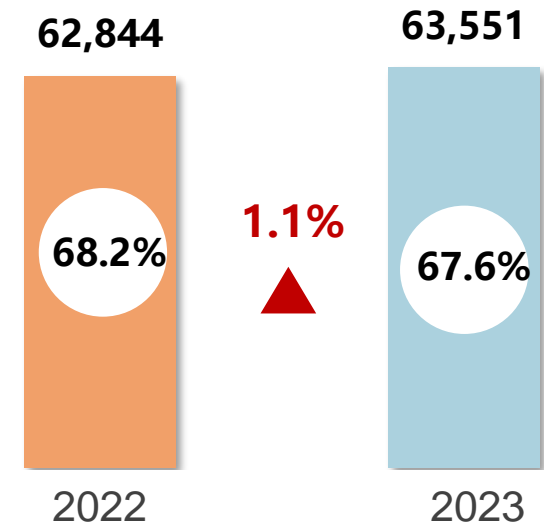
# Profitability Continued to Improve

## Operating profit and operating profit margin

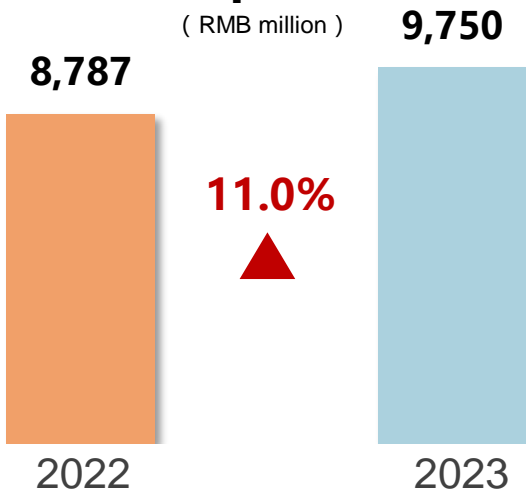


## EBITDA and EBITDA margin

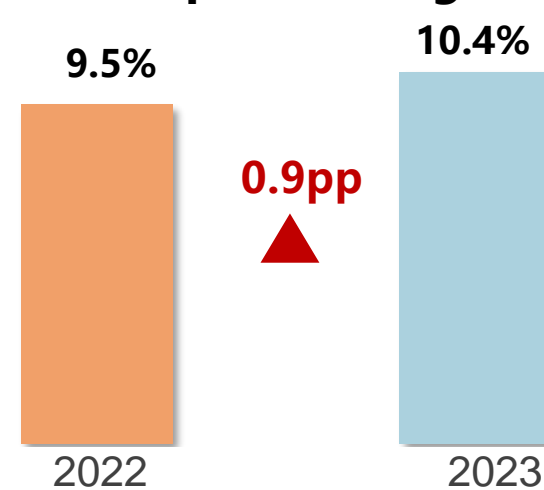
( RMB million )



## Net profit

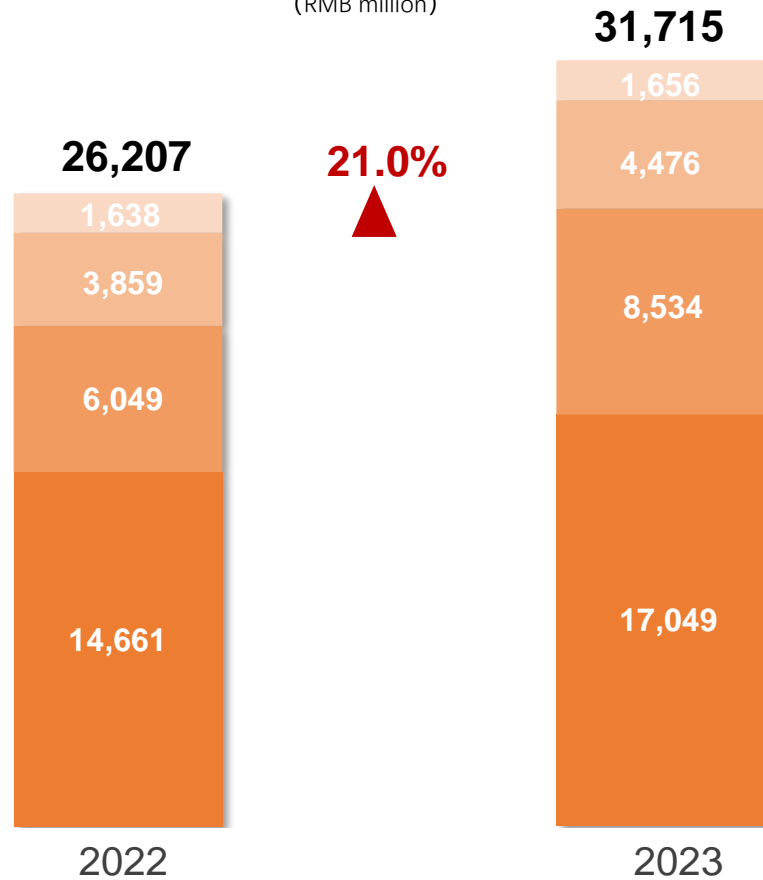


## Net profit margin



# Effective Allocation of CAPEX

## CAPEX (RMB million)



- IT support and purchase of comprehensive building for production
- Two Wings business
- Site replacement and improvement
- New site construction and augmentation

## Coordinated deployment of investment direction and actively supported the needs for business development and construction capabilities



Closely aligned with operators' network construction plans, and the demand for new sites has increased. Accelerated construction, project delivery and leasing progress



Precisely upgraded and reformed the quality of asset operations, rationally arranged investments in enhancing the access of potential safety hazards, and the the capability to supply power backup under important scenarios, etc.

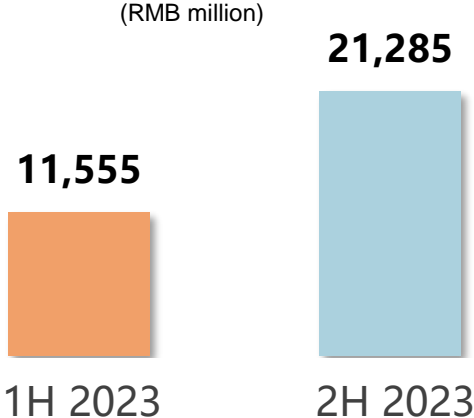


Adapted to the business development needs of Two Wings, increased investment in key areas such as industry product R&D, platform iterative and upgrades, etc.

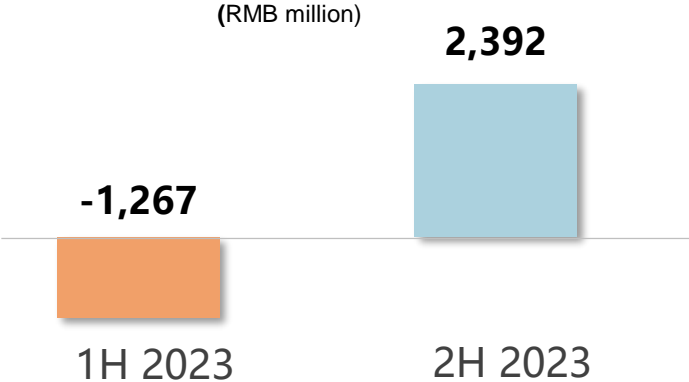
# Cash Flow is Temporarily under Pressure

(RMB million)	2022	2023
Operating cash flow	65,134	32,840
Free cash flow	38,927	1,125

## Operating cash flow



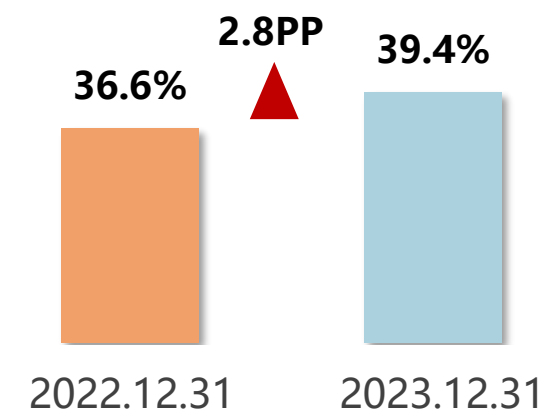
## Free cash flow



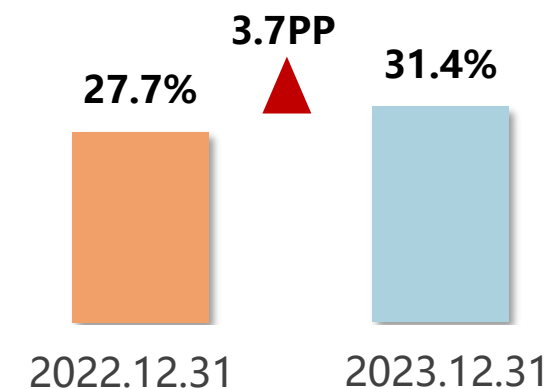
# Capital Structure Remained Stable and Healthy

(RMB million)	As at 31 December 2022	As at 31 December 2023
<b>Total assets</b>	305,560	326,007
<b>Cash and cash equivalents</b>	5,117	3,955
<b>Total liabilities</b>	111,969	128,313
<b>Interest-bearing debt</b>	79,119	94,626
<b>Total equity</b>	193,591	197,694

## Liabilities to assets ratio



## Gearing ratio



# Appendix: Extracted from Audited Consolidated Statement of Financial Position as at 31 December 2023

(RMB million)	2022.12.31	2023.12.31
<b>Total assets</b>	<b>305,560</b>	326,007
Current assets	49,706	78,083
Non-current assets	255,854	247,924
Property, plant and equipment	209,377	201,542
Construction in progress	12,339	12,313
<b>Total liabilities</b>	<b>111,969</b>	128,313
Current liabilities	65,158	63,934
Borrowings	25,597	23,786
Accounts payable	26,646	28,286
Non-current liabilities	46,811	64,379
<b>Total equity</b>	<b>193,591</b>	197,694



# Q&A

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